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NEW SOUTH WALES.

VOTES

AND

PROCEEDINGS

OF THE

LEGISLATIVE ASSEMBLY

DURING THE SESSION

OF

1896,

WITH THE VARIOUS DOCUMENTS CONNECTED THEREWITH.

IN FIVE VOLUMES.

VOL. III.

SYDNEY :

WILLIAM APPELEGATE GULLICK, GOVERNMENT PRINTER, PHILLIP-STREET.

1896.

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LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

VOTES AND PROCEEDINGS.

SESSION 1896.
(IN FIVE VOLUMES.)

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1896.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

MUNICIPALITIES.

(RETURN SHOWING AMOUNT OF SPECIAL GRANTS TO, FROM 1st JANUARY, 1895, TO 30th JUNE, 1896.)

Printed under No. 13 Report from Printing Committee, 18 August, 1896.

[Laid upon the Table of the House in answer to Question No. 19 of the 3rd June, 1896.]

Question.

19. SPECIAL GRANTS TO MUNICIPALITIES:—MR. CHAPMAN asked THE SECRETARY FOR PUBLIC WORKS,—

- (1.) The total amount of money granted as special grants to municipalities since 1st January, 1895?
- (2.) The name of each municipality that has received a special grant or subsidy, and amount of same?
- (3.) For what purpose granted, and whether expended in daywork or by contract labour?

Answer.

RETURN of money granted as special grants to municipalities from the 1st January, 1895, to 30th June 1896:—

	£	s.	d.
1st January to 30th June, 1895	7,095	12	9
1st July, 1895, to 30th June, 1896	3,927	11	11
Amount issued	11,023	4	8
Not issued	9,724	7	2
	£1,298	17	6

The Councils were not restricted as to the method of expenditure either on day or contract work.

STATEMENT of Special Amounts granted to Municipalities from 1st January, 1895, to 30th June, 1896.

Municipality.	Grant from 1 January, 1895, to 30 June, 1895.	1 July, 1895, to 30 June, 1896.	Total Grant.	Amount Issued.
Armidale	Main Northern Road	£ s. d. 300 0 0	£ s. d. 300 0 0	£ s. d. 300 0 0
Ashfield	Old Canterbury Road	256 14 2	256 14 2	256 14 2
Albury	From Albury-Cookardina Road to railway line. Council to perform work to value of £50.	25 0 0	25 0 0	25 0 0
Auburn	Roads within Municipal limits of Auburn	55 0 0	55 0 0	55 0 0
Adamstown	Road, Glebe to Adamstown	36 0 0	36 0 0	36 0 0
Aberdeen	Road, Aberdeen to St. Hilliers. Council to perform work to value of £100.	66 0 0	66 0 0	66 0 0
Bathurst	Main West Road to Cemetery. Council to perform work to value of £44.	22 0 0	22 0 0	22 0 0
Blayney	Main West Road to Cemetery. Council to expend £30 in addition.	15 0 0	15 0 0	15 0 0
Berry	Main South Coast Road, £126 8s. 7d. Bomaderry Station to Nowra Bridge, £55 9s.	126 8 7	55 9 0	181 17 7
Broughton Vale	Kangaroo Valley to Woodhill	180 0 0	180 0 0	180 0 0
Balranald	Roads within Municipal limits	100 0 0	100 0 0	100 0 0
Bourke	Bourke to North Bourke. Council to take control of road.	2,000 0 0	2,000 0 0	2,000 0 0
Bowral	Centennial Road. Council to expend a like amount.	50 0 0	50 0 0	50 0 0
Braidwood	Culvert, North Creek, Nerriga Road. Council to construct approaches.	50 0 0	50 0 0	.....
Balmain	Alteration in approach to wharf foot of Cove-street.	50 0 0	50 0 0	50 0 0
Cooma	Roads within Municipal limits to afford relief to unemployed.	100 0 0	100 0 0	100 0 0
Canterbury	Improving grades, old Canterbury Road, at Prout's Bridge.	116 3 0	116 3 0	.....
Coonamble	Repairs to roads within Municipal limits	134 18 4	134 18 4	134 18 4
Carrington	Carrington to Wickham Bridge	50 0 0	50 0 0	50 0 0
Deniliquin	Heriot's Bridge, moiety of cost not to exceed £450.	450 0 0	450 0 0	.....

Municipality.		Grant from 1 January, 1895, to 30 June, 1895.	1 July, 1895, to 30 June, 1896.	Total Grant.	Amount issued.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.
Five Dock	Bay-street to Lyons Road, £1 for £1 up to £100.	100 0 0	.....	100 0 0	100 0 0
Goulburn	Roads within Municipal limits; Council to carry out work to value of £345 4s.	.....	172 12 0	172 12 0	75 0 0
Grafton	Bridge, Christopher Creek, £100. Flood Embankment, Carr's Creek, £100.	100 0 0	100 0 0	200 0 0	100 0 0
Gerrington	Main South Coast Road	.....	115 10 0	115 10 0	115 10 0
Gulgong	Cudgegong to Home Rule	25 0 0	.....	25 0 0	25 0 0
Granville	Repairs to roads, Municipal limits, £72. Woodville Road, Council to expend like amount, £150.	72 0 0	150 0 0	222 0 0	222 0 0
Hurstville	Forest Road	50 0 0	.....	50 0 0	50 0 0
Hamilton	Newcastle to Plattsburg	.....	50 0 0	50 0 0	50 0 0
Central Illawarra	Marshall's Mount to Yallah Platform, £50, as an act of grace. Roads within Municipal limits, £100.	150 0 0	.....	150 0 0	150 0 0
Jamberoo	Repairs to roads within Municipal limits, £58; further sum, £42. Main South Coast Road, £71 6s. 6d.	58 0 0	113 6 6	171 6 6	171 6 6
Kiama	Main South Coast Road	.....	27 3 6	27 3 6	27 3 6
Kogarah	Kogarah and Woniara Roads	.....	250 0 0	250 0 0	250 0 0
Liverpool	Moiety of cost—bridge, Brickmakers' Creek, and diverting drain.	25 0 0	.....	25 0 0	25 0 0
Lismore	Roads within Municipal limits	350 0 0	.....	350 0 0	350 0 0
Lambton (New)	Glebe to Adamstown	36 0 0	.....	36 0 0	36 0 0
Lane Cove	Burns Bay Road, Council to carry out work to value £360.	.....	180 0 0	180 0 0	180 0 0
Morpeth	Roads within Municipal limits, to provide employment, £100. Morpeth to Four-mile Creek, £1 for £1.	100 0 0	50 0 0	150 0 0	150 0 0
Maitland, East	Maitland, towards Waratah, £50. Pitnacree Bridge to Dunmore Bridge, £100. Pitnacree Bridge to Dunmore Bridge, £27 5s.	150 0 0	27 5 0	177 5 0	177 5 0
Mittagong	Repairs to dam, £50; Council to expend like amount.	.....	50 0 0	50 0 0	50 0 0
Moruya	Repairs to bridge, Araluen and Moruya Road, via Kiara, to Moruya.	.....	12 0 0	12 0 0	12 0 0
Moree	Moree to Mangindi, £152. Temporary crossing, Broadwater Creek, Moree, £25.	177 0 0	.....	177 0 0	134 2 0
Moss Vale	Repairs to roads. Council to expend a like amount.	.....	50 0 0	50 0 0	50 0 0
Moama	Half-cost repairs, No. 24 Lane, near Moama, £30. Lowering culvert, Berringha-street, £50.	80 0 0	.....	80 0 0	80 0 0
Merewether	Glebe to Adamstown	120 0 0	.....	120 0 0	120 0 0
Marsfield	Roads, Field of Mars	700 0 0	.....	700 0 0	700 0 0
Nowra	Roads within Municipal limits	150 0 0	.....	150 0 0	150 0 0
North Sydney	Milson's Point and Lane Cove Road to Peat's Ferry. Tar-metalling Walker-street. Council to take over control of road.	450 0 0	.....	450 0 0	450 0 0
Orange	Main Western Road	50 0 0	.....	50 0 0	50 0 0
Penrith	Penrith and Richmond Road to Upper Castle-reegh. Council to expend £100.	50 0 0	.....	50 0 0	50 0 0
Prospect and Sherwood.	Metalling Park Road, Council to carry out work to like amount, £100. Metalling south approach, Wentworthville Station, £35.	.....	135 0 0	135 0 0	135 0 0
Parkes	Cleaning out Bushman's Tank, half-cost	.....	150 0 0	150 0 0	143 4 6
Petersham	Old Canterbury Road	.....	172 4 7	172 4 7	172 4 7
Rockdale	Forest Road, £75. West Botany Street, £100	75 0 0	100 0 0	175 0 0	175 0 0
Redfern	Sydney to Banks Meadow, Botany Road	.....	200 0 0	200 0 0	200 0 0
Raymond Terrace	Stroud Road, Deviation Road. Raymond Terrace to Stroud.	150 0 0	.....	150 0 0	150 0 0
Rookwood	Roads within Municipal limits, £50. Bridge at Platform-street, £100. Auburn Park Road, £100. Auburn and Rookwood Council to each contribute £50.	50 0 0	200 0 0	250 0 0	50 0 0
Shellharbour	Repairs to roads, Municipal limits	100 0 0	.....	100 0 0	100 0 0
Taree	Culvert, Pultney-street	.....	100 0 0	100 0 0	100 0 0
Temora	Loftus-street, Temora, £200. Hoskins-street, Temora, £100.	300 0 0	.....	300 0 0	300 0 0
Uralla	Roads within Municipal limits	25 0 0	.....	25 0 0	25 0 0
Wagga Wagga	Metalling approaches, Hampden Bridge	.....	130 0 0	130 0 0	.....
Wingham	Nowendoc Road to Wingham Cemetery, £30. Wingham Ferry approaches, £35.	65 0 0	.....	65 0 0	65 0 0
Wollongong	Repairs to roads, Municipal limits, Gipps Road. Council to perform work to like amount.	100 0 0	100 0 0	200 0 0	200 0 0
Wickham	Roads within Municipal limits. Council to provide like sum.	25 0 0	.....	25 0 0	25 0 0
Wentworth	Alteration to approach, bridge, Sandwych-street, Wentworth, £72 10s. Repairs to roads, Municipal limits, £150.	222 10 0	.....	222 10 0	222 10 0
Young	Footway to Burrangong Creek Bridge, Hume-street.	.....	44 0 0	44 0 0	44 0 0
		7,095 12 9	3,027 11 11	11,023 4 8	9,724 7 2

THOMAS R. STEEL,
Accountant, Public Works.

1896.

—
LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

SIXTEENTH ANNUAL REPORT

OF THE

DEPARTMENT OF LANDS,

BEING FOR THE YEAR

1895.

Printed under No. 27 Report from Printing Committee, 13 November, 1896, A.M.

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1896.

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1896.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

DEPARTMENT OF LANDS.

(SIXTEENTH ANNUAL REPORT.)

Printed under No. 27 Report from Printing Committee, 13 November, 1896, A.M.

To The Hon. J. H. Carruthers, Esq., M.P., Secretary for Lands.

Sir, Department of Lands, Sydney, 12th October, 1896.

I have the honor to submit, for your information, the Annual Report of the Department, relating to the business transacted during the year 1895.

The chief event of the year was the addition to the Statute Book of the Crown Lands Act of 1895, which came into operation on the 1st June. This is not a mere Amending Act, but a comprehensive measure, which, in addition to providing remedies for anomalies in the existing law, has introduced new systems of tenure, accommodated to the necessities of the times, and aiming more particularly at providing land for the *bonâ fide* settler on terms and conditions of the most liberal character.

A reference in detail to its many provisions is not perhaps necessary here, but a brief mention of some of its salient features should not be omitted. Prominent among these is the provision for the classification, survey, and valuation of land before selection, which is designed to afford protection to the public estate, and at the same time promote the interests of the settlers themselves, and of the Colony at large, by the concentration of settlement upon specially chosen areas.

In connection with these classified areas, two forms of tenure have been created, viz., Homestead Selection and Settlement Lease. The first may be briefly described as a freehold tenure, with condition of perpetual residence and perpetual rent. The second is a leasehold, with a term of 28 years, and a condition of residence during the whole period. Both of these systems offer special advantages to the small capitalist, inasmuch as the rate of rental is low, being limited, in the case of homestead selection, to $1\frac{1}{4}$ per cent. of the capital value of the land for the first five years, with a subsequent increase to $2\frac{1}{2}$ per cent., while in the case of settlement lease a uniform charge of $1\frac{1}{4}$ per cent. is maintained during the whole period of lease. The right of transfer exists in connection with both these tenures, and the conditions are few in number and capable of easy fulfilment. Homestead selection is confined to lands that are classified as suitable for agriculture, whilst a settlement lease may not only be granted over lands of that description, but also over farms, the greater proportion of which could only be classed as suitable for grazing purposes. Grazing farms may contain an area of 10,240 acres; but where agricultural lands are concerned the maximum limit of area in both classes is 1,280 acres.

Notwithstanding that it was only during the last quarter of the year that land was made available for application, the transactions during that period soon rendered it evident that all the resources of the Department would be severely taxed to keep pace with the demand.

Another

Another class of holding created by the Act of 1895 is that of Improvement Lease, which, although somewhat similar to the already existing tenures known as scrub leases and leases of inferior lands, is at the same time free from several restrictions which prevented those holdings from being applied for to any extent. The provisions attached to improvement leases offer encouragement to persons possessed of sufficient enterprise to bring under control lands overgrown with scrub; and it is confidently expected that under this tenure much of what are now "waste lands" will be brought under profitable occupation, and ultimately rendered suitable for closer settlement.

Amongst other features of the Act which deserve mention is the power of withdrawing land in the Central and Western Divisions from pastoral lease where the demand is such as to render it necessary that some provision should be made for satisfying the requirements of persons wishing to establish homes for themselves. The Act extends the term of residence attached to conditional purchases from five to ten years. It also confers upon the Minister power to refuse applications for annual leases where public interests render it advisable to do so. The extension to twenty-eight years of the terms of pastoral leases in the Western Division, and conditional, special, and homestead leases, and the provision for the sale of town, suburban, or population-area lands at the original upset price, when such lands have been passed at auction, are other matters of considerable importance.

In connection with many of the lease tenures tenant right in improvements is conferred; as, for instance, in the case of pastoral leases in the Western Division, and conditional, settlement, residential, improvement, and homestead leases. In the case of scrub leases and leases of inferior lands it is optional with the Minister to grant tenant right. The holders of homestead selections are allowed tenant right in improvements, and are permitted in addition to protect themselves by a simple process of registration against the loss of their holdings through bankruptcy or other process of law. The definition of trespass and of the circumstances under which the impounding of stock can be enforced is another useful provision of the Act of 1895; and, further, the concessions in the shape of reappraisal of capital values which have been made to holders of conditional purchases within special areas, and of rental values to pastoral and homestead lessees in the Western Division, will serve to show that the interests of all classes have been considered.

The extension of the provisions relating to the surrender and exchange of lands has also rendered it possible to entertain proposals that would previously have had to be declined—apart from any question as to their merits, simply on account of their being outside the somewhat limited scope of the then existing laws.

It is fitting that mention should be made of the initiation during the year of an Information Bureau for the purpose of distributing information respecting the Crown lands of the Colony available for settlement and assisting people to obtain lands suitable for their requirements. Its establishment proved most opportune in view of the passing of the Act of 1895, and the lines laid down for its working by the Board appointed for that purpose have been found to answer satisfactorily. The volume of business transacted during the comparatively short period it has been in existence affords strong evidence of the usefulness of this new branch of the Department.

Another matter to which some reference should perhaps be made is the abolition during 1895 of what had been for so many years known as the Temporary Staff. The anomaly of having a staff of so-called temporary officers, many of whom could point to lengthy periods of continuous service, had long been recognised. The Board appointed to consider and report upon the matter, consisting of the Secretary to the Civil Service Board and two senior officers of the Department, after a very careful consideration of the claims of each officer, found themselves in a position to make recommendations which led eventually to the transfer of 158 officers to the permanent staff.

Judicial Decisions.

Following hereunder is a brief epitome of cases decided by the Supreme Court and Privy Council during the year 1895, affecting the administration of Land Acts :—

Improvements upon forfeited Conditional Purchase and Conditional Lease become vested in Crown.

Re T. H. Mate & Co., Limited (Bank of New South Wales, respondents)—This case was one in which the ownership of certain improvements upon forfeited conditional purchases and a conditional lease was the point at issue. The facts are as follow :—One T. H. Mate (now represented by the appellants) was the lessee from the Crown of a pastoral property upon which he had made certain improvements. Part of the land so improved was taken up by one Louisa Dennis by way of conditional purchase, additional conditional purchase, and conditional lease, and subsequently T. H. Mate erected a dividing fence between his land and that selected by Dennis. The improvements on the additional conditional purchase only were duly appraised by the Local Land Board, and Dennis was directed to pay Mate their value. These selections and the conditional lease afterwards became forfeited to the Crown before Dennis had completed her payments to Mate with respect to the improvements on the additional conditional purchase, and the lands so forfeited were taken up by the respondents under conditional purchase. All the improvements on the land were then appraised by the Local Land Board, and the respondents were directed to pay their value to the Crown. Against this direction by the Local Land Board an appeal to the Land Appeal Court was lodged which, however, was dismissed, the Court holding that under the 44th section of the Crown Lands Act of 1889 all improvements which were on the lands at the time that Louisa Dennis' interest became forfeited passed to the Crown. The Supreme Court held that the Land Appeal Court was correct in its decision, and the appeal was therefore dismissed. The Court, however, regarded it as unfortunate that Mr. Mate did not obtain either an appraisal or an agreement with respect to the improvements, and on the whole considered the case to be hard, and one which had not been contemplated by the Legislature. (It may be here mentioned that section 52 of the Crown Lands Act of 1895 in a measure provides a remedy for any similar cases which may arise in future.)

Claim for contribution towards cost of Rabbit-proof Fence on a common boundary sustained.

Re C. P. Davis (London Bank of Australia, respondent)—The question in this case turned upon the interpretation of the 20th section of the Rabbit Act of 1890, under which a claim for contribution towards the cost of making the common boundary of their pastoral holdings rabbit-proof had been made upon C. P. Davis by the respondent Bank. The amount of such contribution was duly assessed by the Land Board which, however, rejected certain evidence as to the depreciation of the wire netting between 1889, when it was first erected, and 1893, when the claim was made; and also as to the fence not being perfectly rabbit-proof in consequence of the existence of certain holes left as traps. The Land Appeal Court refused to remit the case back to the Land Board, and dismissed the appeal lodged by Davis, who thereupon brought the matter before the Supreme Court. The decision of the Land Court was, however, upheld by the Supreme Court, and the appeal against that decision was consequently dismissed.

Waiver of objection to Appeal.

Re Fanny Barbour and the Crown Lands Act (Henry Ricketson, respondent)—This was an appeal against a decision of the Land Appeal Court on a point of practice. The Local Land Board had duly assessed the value of some improvements placed by Ricketson on certain land within the Aratula Pastoral Holding, taken up by Fanny Barbour by way of conditional purchase and conditional lease. Miss Barbour appealed against the sum assessed, and the Land Court dismissed the appeal on the ground that notice of the appeal against the Land Board's decision was not received by Ricketson within twenty-eight days of the date of that decision. The Land Court stated a special case setting out the facts, and the questions submitted for the decision of the Supreme Court were whether the notice required by section 17 of the Act of 1884 was properly given if it was posted within twenty-eight days, although it had not reached

reached the respondent until the twenty-eight days had expired, and whether, even if there had not been sufficient notice, it had been waived by Ricketson appearing and pleading.

The matter was decided on the question of waiver, the Supreme Court holding that it was shown that the respondent, Ricketson, had waived his objection to the appeal being heard, not under the case as stated, but by the fact of his having had the hearing of the appeal transferred from Sydney to Hay, and that it was, therefore, competent for the Land Court to hear the appeal.

An Additional Conditional Purchase cannot be made in virtue of an Original Conditional Purchase converted into fee-simple.

Re Mary Ann and Samuel Clift and the Land Acts of 1884 and 1889—This was an appeal from the decision of the Land Appeal Court dismissing an appeal against the disallowance by the Local Land Board of an application for a conditional purchase made by Mary Ann and Samuel Clift, as the executrix and executor of one William Clift. The facts necessary for statement are simple:—A conditional purchase, made by one Peter Duff, in 1871, was duly transferred in 1874 to William Clift, who thereupon paid to the Government the balance of purchase money due upon the land, and obtained a deed of grant. William Clift having died in 1889, Mary Ann and Samuel Clift, as executrix and executor, applied, in 1893, for 137 acres of land as an additional conditional purchase to the original conditional purchase made by Peter Duff.

This application was disallowed by the Land Board on the ground that the original conditional purchase of Peter Duff had been converted into a freehold prior to the date of the application. An appeal against this decision was subsequently dismissed by the Land Appeal Court, and the case was then taken to the Supreme Court, the principal question stated for determination being,—whether, under the circumstances hereinbefore set forth, Mary Ann Clift and Samuel Clift, on the 12th day of January, 1893, were the holders of a conditional purchase within the meaning of section 42 of the Crown Lands Act of 1884, so as to be enabled by virtue thereof to make the additional conditional purchase applied for on the said date.

The Supreme Court, in delivering judgment, traversed all the sections of the various Crown Lands Acts which bore upon the point at issue, which might tend to elucidate the construction that it was intended by the Legislature the particular section under review should bear; and the Court finally held that the words “any holder of a conditional purchase” in section 42 of the Act of 1884 meant anyone still fulfilling the conditions attaching to a conditional purchase as such, and did not apply to a person who had obtained his grant on their fulfilment. The decision of the Land Appeal Court being therefore held to be correct the appeal was dismissed.

The above decision covered the case of *re T. H. Mate & Co. (Limited)* and the Crown Lands Acts, and also that of *William Kiddle and the Crown Lands Acts (Pierce Murphy, respondent)*.

This decision led to the introduction of section 31 into the Crown Lands Act of 1895, which has the effect of validating all confirmed conditional purchases and conditional leases made in virtue of freeholds, and also permits applications for additional conditional purchases to be made in virtue of conditional purchases which have been converted into holdings in fee-simple.

A person having no interest in the land has no right to lodge a complaint questioning validity of Conditional Purchase.

Re William Mitcham and the Crown Lands Acts (Ida Flora Flood, respondent)—One William Mitcham had lodged a complaint against an application for a conditional purchase by Ida Flora Flood, on the ground that at the date of the application the lands in question were not Crown lands available for conditional purchase. The complaint was duly investigated by the Local Land Board and dismissed, and the same result was arrived at on Mitcham's appeal to the Land Appeal Court. The matter was then brought before the Supreme Court, the question for determination being whether the Land Appeal Court was right in holding that William Mitcham could not raise the question as to whether the lands were available for conditional purchase by means of a complaint purporting to be made under the Crown Lands Act of 1884. The

The Court held that the Act never contemplated that a person—a mere stranger—having no interest in the matter of any sort or description could come in and put a person who had been holding a conditional purchase, presumably taken up on Crown lands, to the proof of his title, and that therefore the Local Land Board and the Land Appeal Court had come to a proper determination in the case.

The question submitted to the Court was therefore answered in the affirmative, and the appeal dismissed.

An Additional Conditional Purchase cannot be taken up in virtue of an Additional Conditional Purchase made in virtue of a freehold—and no accrued rights to make Additional Conditional Purchases are contained in section 2, Act of 1884.

In re W. E. Abbott.—This was an appeal to the Privy Council from a decision of the Supreme Court. The main facts were these: Abbott was the holder in fee-simple of 40 acres in the Eastern Division acquired under section 25 of the Crown Lands Alienation Act of 1861, after having been offered for sale by auction and not sold.

Prior to the commencement of the Act of 1884 he had also acquired, under the provisions of section 22 of the Crown Lands Alienation Act of 1861, by virtue of the freehold above mentioned, certain conditional purchases, the aggregate area of which, together with the freehold, amounted to 240 acres. In March, 1892, Abbott applied for an additional conditional purchase of 150 acres, and also for a conditional lease of 440 acres.

His applications were refused by the Land Board on the ground that he was not the holder of a conditional purchase within the meaning of the section 42 of the Act of 1884, and a subsequent appeal to the Land Court was dismissed.

The Supreme Court held that the question in the case was whether the right of selection which existed prior to the commencement of the Act of 1884, in the then holders of land in fee-simple, was preserved to them by any provision of the Act of 1884, and on a consideration of section 2 (sub-section *b*) of that Act the Court by majority held that such right of selection was not a "right accrued" within the meaning of that sub-section. Their Honors were further of opinion that whatever might be the true construction of the words "right accrued" section 3 of the Act of 1884 was a complete answer to the appellants' contention.

Upon the case coming before the Privy Council their Lordships concurred with the Supreme Court in thinking that the appellant was not the holder of a conditional purchase within the meaning of section 42 and could not claim the benefit of that section.

With regard to the alleged accrued right under section 2, Act of 1884, their Lordships thought it fallacious to say that the section in question conferred on the fee-simple holder the right to make conditional purchases, and were of opinion that even if the language of section 2 was sufficient to reserve to appellant the right for which he contended the express provision in section 3 of that Act would be fatal to his claim.

Their Lordships accordingly advised that the judgment of the Supreme Court should be affirmed.

Information Bureau.

In accordance with the Minister's directions as to the necessity of some systematic method being adopted for affording prompt and reliable information to intending settlers respecting the vacant Crown lands of the Colony, an Information Bureau was established during the year with the object of circulating as widely as possible full particulars respecting Crown lands about to be made available for settlement or occupation.

Owing to survey and classification preceding selection under the Crown Lands Act of 1895, plans and printed details respecting the areas about to be made available can now be provided some time before the land is actually open to application, thus avoiding the uncertainty which existed under the policy of selection before survey.

By the end of June, 1895, details had been collated and maps prepared indicating the character and position of the vacant Crown lands of the Colony; and the value of this information being considerable, separate pamphlets were published of each of the fourteen Land Board Districts into which the Colony is divided

divided for the purposes of land administration. In these pamphlets the Department is enabled to furnish full particulars respecting the character of the land, distance from railways, ports of shipment, &c., capital value, rentals, &c.

Pamphlets are also issued every month containing particulars of the areas to become available in the immediate future, and these are exhibited at eighty of the principal railway stations, at a large number of the Post Offices, at the District Survey Offices, and at the office of every Crown Land Agent in the Colony. The demand for pamphlets and lithographic plans is such as to show that they are much appreciated by those in search of land. It may be mentioned that the Railway Commissioners and the Post Office authorities have rendered material assistance to this Department by exhibiting in public places pamphlets, advertisement sheets, and maps relating to available land. To still further meet the demand for information respecting lands to be made available, a weekly issue of the *Government Gazette*, containing full particulars of the week's notifications relating to Crown land matters, is published under the designation of the Lands Department *Weekly Gazette*, and sold for a nominal price. To the same end preliminary notices of areas about to be set apart for settlement are published every week in two of the daily and one of the weekly newspapers.

All written communications meet with prompt attention, and all information possible is furnished to persons inquiring.

That the public have taken every advantage of the Information Bureau is evidenced by the fact that from 1st April to the end of the year, no less than 2,428 personal inquiries were made, and 1,388 letters despatched in reply to written communications. 16,500 pamphlets and lithographs were circulated in connection with the areas notified for settlement since the 13th July, 1895.

Rabbit Branch.

During the past year the spread of the rabbit pest was checked in various parts of the Colony by the extreme heat and the severity of the drought.

The area of infested country, however, continues to increase, and rabbits are known to exist in localities so far east as to render it easy of belief that the pest can exist, and indeed thrive, in any part of this Colony, irrespective of the climatic conditions or the character of the soil. However, there is the pleasing fact to note, that the owners or occupiers of infested lands, after continuous efforts, have at length been rewarded by the discovery of a cheap and efficacious remedy, which has been instrumental in the destruction of a countless number of rabbits.

Reference is of course made to the phosphorized pollard, which apparently can be used at all periods of the year, and is readily consumed by rabbits, irrespective of the condition of the country in which it is laid. This poison, used in conjunction with wire-netting fences, is now regarded as the best means of coping with the pest. Nevertheless, when everything is admitted, the fact remains that the presence of the rabbit is the cause of an annual recurring expenditure of a more or less serious character in the management of the pastoral and agricultural estates of which this Colony is so largely composed.

During the year the work of erecting additional rabbit-proof fencing by private owners has been proceeded with to a considerable extent, and the number of miles previously known to have been erected has been increased by 390 miles, making the total quantity erected about 16,300 miles.

The prevalence of the pest in Queensland is of course well known, and the fear of its spreading has led landowners in that Colony to erect numerous lines of barrier fences. It also led to negotiations being entered into, which are now practically completed, for the erection in this Colony of an additional barrier fence, extending from a point on the Namoi River, below Narrabri, to Mungindi, on the Queensland Border, a distance of over 100 miles, the cost of which will probably be in excess of £6,000.

The area of country "declared" rabbit-infested has been but little increased during this year, although applications for action of this kind have been numerous. Local objections, however, have invariably been found to exist, and following the policy of the past such objections have generally been respected.

Complaints

Complaints and agitations of various kinds, regarding the best means of keeping the rabbit within bounds, induced the Minister to summon a conference for the purpose of securing an expression of opinion as to the best methods by which the eradication of the rabbit pest might be brought about. Upwards of fifty delegates attended, and a series of resolutions was adopted, upon which a Bill to make better provisions for the checking and suppression of the rabbit pest has been drafted, which it is anticipated will receive Parliamentary sanction at an early date.

Further schemes having for their object the extermination of the rabbit pest have been received in the department, but after examination it was found that in no case were they of such a nature as to warrant expenditure, in submitting any of them to a practical test.

In this year, and for the first time, were the provisions relating to the compulsory destruction of rabbits brought into operation, a number of the owners of small holdings in the Land District of Urana being at their own request called upon to adopt this course.

Several persons applied for licenses to keep live rabbits in their possession, and particulars of those granted are given below.

LICENSES TO KEEP LIVE RABBITS.

Name.	Place.	Period.
Baker and Cobb	Agricultural Society's Grounds, Moore Park	6 weeks.
J. M'Garvie Smith	Denison-street, Woollahra	12 months.
Charles Martin	Sydney University	12 months.
Robert Hudson	Winchcombe, Carson, and Co's. Wool Store, Pyrmont	1 week.
J. L. Thompson	Agricultural College, Richmond	6 months.

Animals Infectious Diseases Act.

This Act (assented to on the 16th March, 1888) was designed to prevent the indiscriminate introduction of noxious and infectious microbes, wherewith to cause the spread of disease with the object of exterminating the rabbit pest, but has not been resorted to much of late.

Various applications under the 6th and 7th sections of the Act in question, were made, in order that certain persons might obtain permits to introduce and keep microbes, as also permits to inoculate animals therewith.

Seven such licenses were issued during the year, and it may be as well to state that in each case the advice of the Board of Health has been obtained as to the desirableness of issuing the licenses.

Labour Settlements.

The Labour Settlements referred to in my report for last year still continue to exist, but the results attending each of them have been of a somewhat varied character.

Pitt Town.—The settlement at Pitt Town, which at the start was regarded as the most important, has practically been in a state of collapse for some months past, and although at the present time about 120 men, women, and children are located upon the place, dependent for their existence entirely upon the sale of firewood, it is beyond question that the so-called settlement must be closed.

Area of settlement	2,140 acres.
Cost of settlement to the State	£7,705
Value of improvements at date of last appraisalment	5,254
Population at initiation	480
Present population	129

Wilberforce Settlement.—This settlement which originally consisted of 37 enrolled members, with an area of 1,630 acres, has recently been reduced to 20 members, with an area of 882 acres. Matters here have progressed more favorably than at Pitt Town, and the settlers resident are confident of their ability to make permanent homes upon the place. Fruit trees have been planted, and the place presents a favorable aspect.

The

The total sum advanced to the Board of Control amounts to £1,940, whilst the improvements, including live stock and plant, were recently valued at £2,532.

Bega Labour Settlement.—The area set apart for a settlement at this place is 1,360 acres, and as the rental has been appraised at 3s. per acre per annum, the land may be regarded as good, and it is thought that in this instance the experiment may develop into a permanent home for a limited number of settlers.

The settlement now consists of 20 enrolled members (103 souls), but arrangements are being made to subdivide a further portion of the area, when it is anticipated that the population will be increased by the addition of 7 families.

The Board of Control of the Settlement has been aided by the Government to the extent of £1,300, of which over £300 remains unexpended. Agistment fees have also been received for depasturing stock upon the unallotted portion of the settlement area. The improvements upon the place were at the last appraisal valued at £1,253, but the value has been considerably increased of late by the erection of post and wire fencing.

The settlers are well housed, and work under the individualistic system. A considerable area is under cultivation, and quite recently much attention has been devoted to the growth of fruit trees.

Expenditure, 1895.

The total expenditure for all Services, in 1895 amounts to £320,308 7s. 9d., being £16,527 11s. 5d. less than that for 1894. Comparing it with 1886 expenses—the year just prior to the reorganisation of the Head Office—which then amounted to £555,873 5s. 10d., a saving is shown to the extent of £235,564 18s. 1d.

The salaries paid in the year, exclusive of the Land Appeal Court (£5,058 3s. 4d.), amounted to £175,759 7s. 4d., being £196 11s. 8d. more than in 1894, but £85,441 12s. 8d. less than those paid in 1886, the decrease being mainly due to the Departmental inquiries in 1887 and 1889.

A comparison of the figures under each head of Service is shown on Schedule III, from which it will be observed that a reduction in expenditure has been general. Of the few items showing an increase the only one calling for explanation is that for survey fees, viz., £1,840 7s. 11d.; but this is owing to the surveys necessitated by the provisions of the Land Act of 1895 in anticipation of homestead selection, settlement lease, &c.

The expenditure in 1895, for the Services of the year only, and from all sources, was £305,529 5s. 6d. Included in these figures, however, are expenses amounting to £8,897 10s. 9d., which were not met from the appropriations of the Department, and being deducted shows that the 1895 expenditure above referred to from such appropriations to be £296,631 14s. 9d. It is estimated that the unpaid claims on the 31st December, 1895, for the Services of the year alone, amounted to £14,400, and therefore the estimated expenditure for the Services of 1895 from the Votes of the Department is, in round numbers, £311,000.

Referring to the salaries of Crown Lands Agents and assistants, 27 were paid wholly by this Department; 49 were paid jointly by this Department and the Departments of Justice and Mines and Agriculture; while 21 received no remuneration whatever from the Department.

The number of accounts registered during the year was 10,276; and the separate payments made on account of them by cheques drawn in the Account Branch numbered 18,333.

Schedules I to VII show respectively Revenue and Receipts for 1895; Expenditure for all Services during 1895; Comparative Statement of the Expenditure in 1894 and 1895 respectively; Salaries paid in the year 1895; Statement showing the strength of the Staff, and the annual rate of Salaries as on the 31st December, 1894 and 1895, respectively; Statement of Travelling Expenses and Fees paid

paid in connection with Local Land Board Meetings during the year 1895; Statement of Revenue and Expenditure for the years 1886 to 1895 inclusive, showing the percentage of the latter to Revenue.

The Land Appeal Court.

During the year 1895 the Court heard and disposed of 266 cases, comprising 179 appeals, 80 references, and 7 motions. Of these cases, 184 were heard and disposed of in Sydney, and 82 at the various sittings in the country. The Court held sittings in Sydney on 11 different occasions, and in the country as follows:— Bourke, 1; Dubbo, 2; Hay, 2; Tamworth, 2; Wagga Wagga, 1. In 7 instances the Court was asked to state a special case for the decision of the Supreme Court, and all were proceeded with. Of these, the Supreme Court confirmed the Land Appeal Court's ruling in 3 cases; the remaining 4 are still pending.

Auction Sales.

Town Lands.—During the year an area of 1,017 acres 21½ perches was offered for sale, comprised in 2,564 lots. The area sold amounted to 289 acres 36¼ perches, the number of lots represented in that area being 745, and the amount realised reached a total of £9,926 17s., or an average price per acre of £34 6s. 5d.

Suburban Lands.—The area offered during 1895 amounted to 5,114 acres 3 roods 26¾ perches, embraced in 1,149 lots. The area sold was 868 acres 2 roods 25¾ perches, comprising 261 lots, and the amount realised £4,863 9s. The average price per acre obtained was therefore £5 12s.

Country Lands.—The lots offered in the case of these lands amounted to 1,403, representing an area of 57,342 acres 2 roods 1 perch. The lots and area sold during the year were respectively 485 and 19,989 acres 3 roods 25¾ perches, while the amount realised therefrom was £42,217 9s. 4d., being an average price per acre of £2 2s. 3d.

It will thus be seen from the figures given above that the total area of all classes offered for sale during 1895 amounted to 63,474 acres 2 roods 9¼ perches, comprised in 5,116 lots, and that the total area sold was 21,147 acres 3 roods 7¾ perches, embracing 1,491 lots, the amount realised reaching a total of £57,007 15s. 4d.

The following Schedule admits of a ready comparison between the transactions under this class of sales for the years 1894 and 1895:—

	Year.	No. of lots offered.	Area offered.			No. of lots sold.	Area sold.			Amount realised.			Average price per acre.		
			a.	r.	p.		a.	r.	p.	£	s.	d.	£	s.	d.
Town ...	1894	2,805	1,192	2	25½	806	335	2	22½	10,599	17	9	31	11	7½
	1895	2,564	1,017	0	21½	745	289	0	36¼	9,926	17	0	34	6	5
Suburban ...	1894	1,209	5,659	2	11¾	404	1,485	0	30¾	8,519	16	2	5	14	8¾
	1895	1,149	5,114	3	26¾	261	868	2	25¾	4,863	9	0	5	12	0
Country ...	1894	1,885	102,563	3	4¾	699	42,973	1	5½	86,042	7	0	2	0	0½
	1895	1,403	57,342	2	1	485	19,989	3	25¾	42,217	9	4	2	2	3

It will be noticed from the particulars supplied above that both in the area offered and sold during 1895 there has been a decrease, but the average price per acre obtained from the lands sold has been well maintained when compared with the results of similar sales in the previous year. It will also be seen that about 28 per cent. of town lands, 17 per cent. of suburban lands, and 35 per cent. of country lands offered were sold, as compared with 28 per cent., 26 per cent., and 42 per cent. respectively in 1894. Further details will be found in Schedule XXX.

The provisions relating to the sale of land by auction have been extended during the year by the passing of the Land Act of 1895. Section 56 of that Act provides that any town or suburban Crown lands, or lands within population areas, which might have been offered and not sold, may be granted at the original upset price to any person applying for them.

Since the Act came into force, on 1st June, 1895, 399 applications have been received, 68 of which it was thought advisable to refuse, while 210 applications, comprising 251 lots, were granted. The

The area and the amount realised in connection with the lands thus sold were respectively 738 acres 1 rood $36\frac{1}{2}$ perches, and £4,170 2s. 6d., the average price per acre obtained being—for town land, £20 16s. 7d.; for suburban land, £7 0s. 11d.; and for country land within population areas £2 8s. Further details will be found in Schedule XXXI.

Consequent upon the non-payment of the balance of the purchase money within the required time, 492 lots were forfeited during the year, representing an area of 682 acres 2 roods $9\frac{1}{4}$ perches, and the sum of £5,009 13s. 10d., which had been paid as deposits in connection therewith, was accordingly forfeited to the Crown. Further particulars will be found in Schedule XXII.

The value of improvements (£553 14s. 3d.), which had been added to the upset price of certain portions, was refunded to persons whose claims to consideration had been admitted as justifiable; and certain other payments which had been made in excess, to the amount of £64 16s. 6d., were also authorised for refund during the year.

Homestead Selections.

This is a new class of holding brought into existence by the Land Act of 1895, and as the leading characteristics and conditions of the tenure under which Crown lands are made available for this particular form of selection have already been explained, it will only be necessary here to give in brief the results obtained during the latter part of 1895, when the alienation of lands under this system first became possible. Further details can be obtained from Schedule XXII.

The blocks made available for homestead selection were 964 in number, representing an area of 164,520 acres 1 rood 30 perches, and the annual rent, which the Act provides shall be for the first five years at the rate of $1\frac{1}{4}$ per cent. of the capital value of the land, amounted in the aggregate to £2,795 11s. 1d. Applications were received for 202 of these blocks, and the area and rental of the land thus selected were respectively 62,576 acres 1 rood 21 perches and £1,331 2s. 9d.

The Local Land Boards confirmed 63 of these applications, for an area of 24,624 acres 3 roods 5 perches, to which an annual rent of £572 8s. is attached. Thirteen applications were disallowed or withdrawn, thus leaving applications for 131 blocks which had not been finally dealt with prior to the close of the year.

Under section 20 of the Act of 1895 it was made possible for any holder of land under conditional purchase, with its attached conditional leases, who had obtained his certificate of conformity, to convert his holding into a homestead selection. In only three instances, however, up to the close of the year, was advantage taken of these provisions, the area held by the applicants being 1,327 acres. Schedule XXIII gives further details as to locality, &c.

From Schedule LXXV it will be seen that the blocks notified in the *Gazette* during 1895 as being set apart for homestead selection were 1,357 in number, and comprised an area of 267,159 acres 12 perches. Many of these blocks, however, did not become available for selection during 1895, as it is the practice of the Department to allow sufficient time to elapse between the date of notification and the date of the land becoming available, to enable intending settlers to satisfy themselves as to the blocks being suited to their requirements.

Conditional Purchases.

There were 1,751 applications lodged during 1895, covering an area of 253,431 acres 12 perches, and these results, when compared with those of the preceding year, will show a decrease both in the number received and in the area selected, the applications lodged in 1894 being 2,617, and the area embraced therein, 414,355 acres $10\frac{3}{4}$ perches. Now that new legislation has increased the term of residence from five to ten years, and has also opened up other channels by means of which people can obtain the land they require, it cannot be expected that this particular form of purchase will be as largely availed of as in the past. It will be seen, from Schedules VIII and IX and from the summary appended below, that 959 of the applications received during 1895 were for original conditional purchases—773 for additional and 19 for non-residential conditional purchases—or taking these applications according to the Division of the Colony in which they are situated, the results will be as follows:—Eastern Division, 1,165 applications for 109,976 acres

1 rood 20 perches; Central Division, 585 applications for 143,414 acres 2 roods 32 perches; and Western Division, 1 application for 40 acres. In Schedule XI will be found particulars as to the number of applications received during the year for land within special areas and for ordinary lands, and also as to the number and area of conditional purchases applied for from 1862 up to the present time.

Year.	Section 26. (O.C.P.)						Section 42. (A.C.P.)						Section 47. (N.R.C.P.)						Special Areas.			Total.													
	No.	Area.			Deposit.			No.	Area.			Deposit.			No.	Area.			Deposit.			No.	Area.			Deposit.									
		a.	r.	p.	£	s.	d.		a.	r.	p.	£	s.	d.		a.	r.	p.	£	s.	d.		a.	r.	p.	£	s.	d.		a.	r.	p.	£	s.	d.
1865	2430	772,718	3	0	77,272	17	0	2039	344,052	3	20	24,406	10	4	302,47,806	3	0	0	2,251	1	0	0	742	0	0	140	8	0	6377	1,165,851	1	20	121,069	16	4
1866	2030	579,530	2	28	57,054	0	1	2087	330,279	3	2	33,023	0	4	365,43,086	2	27	8,850	5	0	78	9,000	2	0	2,121	17	0	6080	963,100	2	27	101,794	2	11	
1867	2300	529,623	2	14	52,962	17	5	2185	231,912	2	5	24,191	5	3	186,20,073	3	12	4,014	16	0	98	11,359	1	0	2,501	12	0	3470	793,004	0	31	82,670	10	11	
1868	2474	560,109	3	23	56,010	10	11	2334	247,689	0	16	24,763	18	4	283,20,139	0	22	5,227	17	0	273	31,311	0	17	7,155	9	0	5804	865,109	0	38	93,158	4	3	
1869	2722	533,218	0	0	53,321	3	0	2684	283,215	0	20	28,320	15	3	271,20,600	3	0	5,532	3	0	525	00,070	2	20	12,680	5	0	6205	903,159	2	9	90,854	6	3	
1870	3252	879,019	3	3	87,907	18	5	4064	600,839	2	16	60,119	3	2	230,28,103	1	33	5,635	10	6	930	205,515	1	28	40,316	1	4	8520	1,713,577	1	0	193,973	12	8	
1871	2243	588,570	1	30	58,558	19	5	2541	430,069	3	38	43,007	11	5	127,12,887	0	13	2,871	9	11	1243	27,3,886	3	15	54,948	17	0	6154	1,303,414	1	2	150,184	18	6	
1872	1535	314,920	1	24	31,492	2	9	1828	323,557	0	26	32,356	10	1	105	0,234	1	3	1,922	5	8	928	168,837	2	6	32,087	15	3	4396	816,390	1	19	97,857	11	9
1873	1156	197,092	2	15	19,709	7	2	1101	174,103	1	32	17,416	11	7	57	4,536	2	0	912	2	0	1079	158,012	3	37	31,320	2	10	3393	533,805	2	4	69,368	3	7
1874	830	132,233	8	80	13,223	18	4	358	170,302	0	24	17,080	4	4	49	3,424	0	0	634	16	0	850	107,889	3	30	21,450	3	44	2617	414,355	0	10	62,489	2	04
1875	631	102,305	0	0	10,236	10	0	643	94,218	3	0	9,421	13	0	19	1,253	2	0	250	14	0	455	55,593	3	12	10,322	19	9	1761	253,431	0	12	80,231	19	6

From Schedule XI it will be seen that, of the applications made during the year under review, 819 were confirmed for 107,290 acres 1 rood 24 perches, and 295 were disallowed, but taking into account those applications outstanding from previous years the total number confirmed during 1895 was 1,627, representing an area of 268,761 acres 3 roods 17 perches, and 446 were disallowed.

At the close of the year there were 147,883 incomplete conditional purchases current, embracing an area of 20,266,046 acres 3 roods 13 perches, and the number of conditional purchases, for which deeds of grant had been issued, was 22,610, the area thereby alienated being 2,648,329 acres 2 roods 23 perches. Further details will be found in Schedule XXI.

The forfeitures of conditional purchases during the year were 513, as compared with 659 during the preceding year. The following details are taken from Schedules XVII and XVIII:—

No.	Area.	Reasons of Forfeiture.
181	a. r. p. 16,665 2 19	Non-payment of balance, interest, or instalment of purchase money. Non-fulfilment of conditions.
332	46,867 1 16	
513	63,532 3 35	

It may here be mentioned in connection with the forfeitures of conditional purchases that in accordance with the provisions of the Crown Lands Act Amendment Act of 1891, forfeiture, incurred principally for technical *laches*, was conditionally waived in 479 instances, and in 647 was absolutely waived. In addition to the foregoing the holders of 5,338 conditional purchases, representing an area of 770,632 acres, were granted extensions of time for the payment of their instalments.

Under the provisions of the 28th section of the Land Act of 1895, applications affecting 1,250 conditional purchases, which contained 282,863 acres, were granted, and 462 were refused. By virtue of that section resident selectors, who may be unable to pay their instalments, are enabled to obtain a suspension of payment for twelve months, and it therefore follows that applications, such as are mentioned in the latter part of the preceding paragraph, can now be made and dealt with on fixed lines, thus avoiding the informality that was previously attached to the granting of such requests, owing to the absence of any special provision in the Land laws.

From Schedule XIV it will be seen that 952 certificates of conformity were issued in connection with conditional purchases under the repealed Acts.

8,591 transfers were received and 8,243 dealt with during 1895. The conditional purchases transferred were 16,099 in number, but, deducting those transferred more than once during the year, the actual number of conditional purchases affected by these transfers was 11,517. Stamp duty to the amount of £4,473 12s. was paid in connection with 3,292 transfers, the inference to be drawn from these figures is that only about 40 per cent. of the transfers represent actual sales. Further details will be found in Schedules XV and XVI.

During

During the year 2 conditional purchases and 8 conditional leases, containing an aggregate area of 4,469 acres 2 roods, were validated under the provisions of section 138 of the Act of 1884, and 23 conditional purchases, containing an area of 3,870 acres 3 roods 2 perches, which came within the provisions of section 44 of the Act of 1895, were also validated in accordance with that section. *Vide* Schedule XIX.

Particulars of the work carried out by Conditional Purchase Inspectors will be found in Schedule LXXIX. The total number of instructions issued during the year amounted to 15,704, and the reports received were 15,694 in number.

No resumptions from either conditional purchases and conditional leases on account of the land being auriferous were found to be necessary during 1895.

Special Areas.

The number of special areas proclaimed during the year was 212, representing an area of 62,294 acres, as compared with 332 proclaimed in 1894, and covering an area of 151,537 acres. 156 of these special areas included 54,951 acres of country lands, and the remainder, 56, embracing an area of 7,343 acres, represented lands within population or suburban areas. Further details will be found in Schedule LXXIV.

Full particulars with respect to special areas proclaimed from 1885 to the end of 1895 will be found in Schedule XII. From the details there given it will be seen that 91,151 acres 3 roods 33 perches of suburban or population area lands have been selected out of a total available area of 140,284 acres 2 roods 27½ perches, and that of country lands the selected area amounts to 762,076 acres 20 perches, the area available for selection being 1,010,780 acres 1 rood 17 perches. In connection with these alienations the amount of deposit money received has reached a total of £165,871 3s. 7½d., the price placed upon the land selected being £1,637,696 5s. 10d. The area still remaining available for selection on the 31st December, 1895, was 297,836 acres 3 roods 31½ perches.

The following figures, which have been taken from Schedule XII, previously mentioned, will serve to show the transactions in each of the several Land Board Districts:—

Land Board District.	Class of Land.	Quantity of Land Available.		Area selected.		Area unselected.	
		a.	r. p.	a.	r. p.	a.	r. p.
Armidale	Country	35,977	2 0	22,680	3 0	13,296	3 0
	Suburban or Population...	6,089	0 28	1,845	2 18	4,243	2 10
Bourke	Country	14,040	2 0	2,309	3 0	11,730	3 0
	Suburban or Population...	120	0 0	80	0 0	40	0 0
Cooma	Country	29,099	3 20	22,997	1 0	6,102	2 20
	Suburban or Population...	11,711	0 33	6,406	3 15	5,304	1 18
Dubbo	Country	20,976	2 0	16,302	2 0	4,674	0 0
	Suburban or Population...	5,981	2 29	4,705	0 39	1,276	1 30
Forbes	Country	133,686	3 23	117,668	3 28	16,017	3 35
	Suburban or Population...	18,043	3 5	16,145	0 35	1,898	2 10
Goulburn	Country	47,148	0 28	35,128	3 18	12,019	1 10
	Suburban or Population...	39,813	2 30½	28,888	0 20	10,925	2 10
Grafton	Country	49,653	1 20	34,893	1 20	14,760	0 0
	Suburban or Population...	1,777	3 30	556	0 2	1,221	3 28
Hay	Country	161,272	1 0	121,386	1 0	39,886	0 0
	Suburban or Population...	10,193	3 0	8,139	1 0	2,054	2 0
Maitland	Country	17,643	2 18	10,885	1 18	6,758	1 0
	Suburban or Population...	9,823	3 37	6,259	2 14	3,564	1 23
Moree	Country	45,996	3 13	5,178	1 20	40,818	1 33
	Suburban or Population...	55,373	2 30	47,518	1 30	7,855	1 0
Orange	Country	13,530	1 12	8,329	0 27	5,201	0 25
	Suburban or Population...	11,307	2 0	5,242	1 0	6,065	1 0
Sydney	Country	5,316	1 22	1,804	0 30	3,512	0 32
	Suburban or Population...	98,941	0 34	71,203	1 15	27,737	3 19
Tamworth	Country	15,351	3 10	6,769	3 16	8,581	3 34
	Suburban or Population...	289,662	1 31	248,680	2 31	40,981	3 0
Wagga Wagga	Country	2,530	3 31	1,222	3 17	1,308	0 14
	Suburban or Population...						
Total	Country	1,010,780	1 17	762,076	0 20	248,704	0 37
	Suburban or Population...	140,284	2 27½	91,151	3 33	49,132	2 34½
Grand Total ... ..	.....	1,151,065	0 4½	853,228	0 13	297,836	3 31½

With reference, however, to the value of the land selected, which has been previously stated to be £1,637,696 5s. 10d., it should be mentioned that, in accordance with the provisions of section 36 of the Act of 1895, an opportunity of obtaining a re-appraisal of the value was afforded the holders of these lands by lodging an application within three months after the commencement of that Act on (June 1st, 1895). These selectors have availed themselves of this privilege to a large extent, but the appraisements by the Local Land Boards have not yet been carried out in the majority of cases owing to the limited time available between the date of receipt of the applications and the close of the year. Schedule XIII shows that 2,716 applications were lodged, and that 517 have been dealt with. In 358 cases reductions have been recommended to the amount of £25,637 11s. 4d.; in 8 instances the original values were increased to the extent of £261 8s. 6d.; and in 130 cases the Boards did not feel justified in recommending any alteration. It appears probable, therefore, that the total value originally placed upon these conditional purchases within special areas, viz., £1,637,696 5s. 10d., will be reduced to some considerable extent as the result of the re-appraisements.

Improvement Purchases.

The demand for the purchase of lands on gold-fields, under section 46 of the Act of 1884, by virtue of improvements, is still small, and has varied but little for the last three years. The applications received during 1895 amounted to 125; and those approved to 96; those refused were 66 in number; and in addition 15 were allowed to lapse. The land alienated during the year included 79 lots, and covered an area of 27 acres 2 roods 29 $\frac{3}{4}$ perches, the amount realised being £1,263 6s. 6d. Further details will be found in Schedule XXXIII.

There was also one application approved under section 2 of the Lands Act Amendment Act of 1875, for a country lot of 120 acres, the price paid for which was £240.

Special Purchases.

The transactions in connection with this class of alienation embrace applications for rescission of water frontage reservations (section 63, Act of 1884), for permission to reclaim and purchase land (section 4, Act of 1884), for the purchase of small, isolated areas, &c. (section 66, Act of 1884), and for permission to close and purchase unnecessary roads (section 67, Act of 1884).

The applications received during the year were 85, of which 4 were under section 63, 17 under section 64, 20 under section 66, and 44 under section 67.

The land alienated during 1895 amounted to 538 acres 28 $\frac{1}{4}$ perches, and the purchase money received was £4,720 12s. 7d.

In addition to the foregoing, 26 cases under section 42 of the Act of 1889 were completed during the year, and the area granted in connection therewith reached a total of 84 acres. This section, it may be mentioned, provides that where it is found necessary to resume land for the opening of a new road, or for the diversion of an existing one, any unnecessary existing road passing through the land from which the resumption is made may be granted in lieu of the land so taken.

Schedule XXXIV gives further details in connection with the above, and, in addition, the figures quoted below present the transactions of the year in a convenient form for reference:—

	Area sold.			Purchase money.		
	a.	r.	p.	£	s.	d.
Section 63, Act 1884...	0	2	14 $\frac{1}{2}$	567	10	8
" 64 " " ...	4	0	13 $\frac{1}{2}$	2,401	13	3
" 66 " " ...	142	1	12 $\frac{1}{4}$	700	18	4
" 67 " " ...	391	0	28	1,050	10	4
" 42 " 1889...	84	0	30	.....	.....	.....
	622	1	18 $\frac{1}{4}$	4,720	12	7

Surrenders and Exchanges.

It will be seen, on reference to Schedule XXXV, that 131 fresh applications were received during the year, and that in 55 cases the final stage of acceptance by the Governor-in-Council was reached. The area comprised in these latter amounted to 139,797 acres 2 roods 14 perches, as compared with 87,038 acres 22 perches included in the 27 applications completed during 1894. The applications refused or withdrawn during 1895 amounted to 40, and the number of cases outstanding at the close of the year reached a total of 239; the necessary action, however, in many instances was well advanced.

The increase in the number of exchanges completed during the year was in a large measure attributable to the desire of holders of expiring leaseholds in the Central Division to consolidate their estates while the opportunity remained. Under the provisions of the Act of 1895 exchanges may embrace land held under conditional purchase and may extend beyond the limits of a particular pastoral holding. The advantageous disposal to surrounding selectors of surrendered areas too small in extent for new settlement is also now possible. Provision has in addition been made to enable the completion of certain Eastern Division exchange proposals which lapsed in consequence of the expiry of the pastoral leases in virtue of which they were originally made.

Deeds of Grant.

The number of deeds of grant prepared during the year show a decrease when compared with those issued in 1894, but the area granted was greater in 1895. In the latter year the number of deeds prepared reached a total of 2,634, representing an area of 299,788 acres 1 rood 8 $\frac{3}{4}$ perches, whilst in 1894 3,302 deeds were issued, which included an area of 273,651 acres 23 perches. Schedule XXXVI gives further details as to the nature of the grants, and also as to the area comprised under the different classes of alienation.

Volunteer Land Order Applications.

These applications have not altogether ceased, three having been received during the year for land in the Tamworth district, and one in the Wagga Wagga district. One application for land in the former district was granted.

Settlement Leases.

These leases owe their origin to the Land Act of 1895, and the creation of this form of tenure, together with that of homestead selection, may legitimately be considered to be the leading feature of that Act, but as a general outline of the objects of leases of this description, and of the conditions upon which they are granted has already been given in a previous part of this Report, it will not be necessary to enter into similar details here.

The time that elapsed between the commencement of the Act on June 1st, 1895, and the close of the year, was not sufficient to admit of much being done, but the results which have so far been obtained cannot be considered otherwise than satisfactory.

From Schedule LXXVI it will be seen that settlement lease areas, containing 172 farms, of which the aggregate area was 526,621 acres 3 roods, were notified during 1895. In several instances, however, these farms did not become available for leasing until 1896, and the actual number that were therefore open for application prior to the close of 1895 was 103, comprising an area of 293,986 acres 1 rood. The annual rent at which these farms were offered amounted in the aggregate to £3,400 13s.

Applications were received for 75 farms, the total area and rental of which were respectively 206,913 acres and £2,712 1s. 6d.

The applications confirmed were 19 in number, the area being 46,512 acres 3 roods and the rental £632 3s. 7d. The next step that will require to be taken in connection with these applications is the formal execution of the lease by the Governor, but no applications were advanced to this stage during the year.

In seven instances the applications were disallowed or withdrawn, but in two cases fresh applications were lodged forthwith, and the number of farms comprised in the applications remaining undealt with at the close of the year was 51. Further details will be found in Schedule LIII.

Annual Leases.

The leases in existence at the end of 1895 were 8,924 in number, and included an area of 5,564,303 acres 1 rood 27 perches, the annual revenue derived therefrom being £39,510 14s. 6d.

1,214 leases lapsed during the year, the area and rental being respectively 759,752 acres and £5,583 2s. 1d. The cancellations numbered 34, and the area covered by these was 28,951 acres 3 roods, to which a rental of £255 5s. 1d. was attached. Further details will be found in Schedules LXIV and LXV.

The following table shows the number, area, and rental of the leases in existence in each division of the Colony at the close of 1895:—

Division.	Number.	Area.		Rent.		
		a.	r. p.	£	s.	d.
Eastern	7,818	4,676,669	2 31	31,112	15	9
Central	1,037	806,786	2 36	7,898	16	7
Western	69	80,847	0 0	499	2	2
	8,924	5,564,303	1 27	39,510	14	6

These figures show an increase when compared with those for 1894, the leases current at the end of that year being 8,343, covering an area of 5,423,383 acres 3 roods 26½ perches, and producing an annual revenue of £38,359 3s. 11d.

The applications received during the year have been more numerous than in either of the two preceding years, as will be seen from the following figures. The area offered at auction during 1895 as annual leases was 13,184¼ acres, of which 6,929¾ acres were sold at an annual rental of £95 18s. 10d.:—

Year.	Applications made.	Area applied for.		Area leased by auction.		
		a.	r. p.	a.	r. p.	
1892	2,578	1,768,807	0 0	3,357	2	0
1893	2,130	1,390,212	1 13	10,709	0	0
1894	1,779	1,018,615	0 0	11,042	0	0
1895	2,444	1,458,627	2 0	6,929	3	0

The number of applications disposed of during the year amounted to 2,071; of these, 1,725 were granted and 346 were disallowed or withdrawn. Some of these applications were lodged prior to 1895. The area leased in satisfaction of the applications granted was 1,030,941 acres 38 perches, and the rental attached to that area reached a total of £6,459 14s. 5d. Further details will be found in Schedules LXII and LXIII.

Conditional Leases.

Although the decrease in the number of applications received during 1895, when compared with the number received during 1894, is not so marked as in similar comparisons between previous years, it may fairly be assumed that the prospects of any increase in applications for leases of land under this particular class of tenure are somewhat remote, the principal causes of this, no doubt, being the steadily decreasing quantity of land capable of profitable occupation, and the opening up by recent legislation of other more popular systems of tenure. Schedule XXIV gives full details with reference to the applications received during 1895, and a summary of similar transactions for the last eleven years is appended below:—

Year.	Number.	Area.		Deposits.		
		a.	r. p.	£	s.	d.
1885	3,816*	2,547,045	0 15*	21,225	7	6
1886	2,500	1,207,953	0 8	10,066	5	6
1887	2,228	1,242,380	0 0	10,353	3	4
1888	2,623	1,424,753	1 25	11,872	18	11
1889	3,470	1,569,949	3 30	13,082	18	4
1890	5,466	3,056,774	2 26	25,439	7	2
1891	3,952	2,177,810	0 15	18,140	17	10
1892	2,692	1,171,971	1 18	9,769	5	1
1893	1,800	715,611	0 34	5,943	8	4
1894	1,338	528,612	2 30	4,409	9	10
1895	1,120	478,301	3 20	3,985	1	8

*This includes 1,094 applications, made under 54th section of the Act of 1884, representing an area of 1,198,617 acres 30 perches.

1,265 applications were dealt with during the year, 924 being confirmed for an area of 363,880 acres 10 perches, and 341 disallowed. Of the applications confirmed, 362 were made during 1895, and embraced an area of 138,213 acres 3 roods 20 perches, and of the applications disallowed 239 were lodged during the year under review. Schedule XXV gives further details.

2,865 transfers were passed during 1895, the actual number of leases included therein being 2,134, representing an aggregate area of 1,486,564 acres 33 perches. (Schedule XXVI.)

366 leases were gazetted as forfeited during the year. These embraced an area of 140,072 acres 3 roods, and the rental attached thereto was £1,547 15s. 9d. (Schedule XXVII.)

The conversions of conditional leases into additional conditional purchases under the provisions of section 25 of the Crown Lands Act of 1889 were 286 in number. In 159 instances the conversion covered the whole of the lease, and in 127 cases there was only partial conversion. The total area converted amounted to 98,657 acres 2 roods, and the rental that had been attached to that area was £1,518 16s. 7d.

The rents fixed by the local Land Boards were in 1,027 instances submitted for the Minister's approval, and no references to the Land Appeal Court in connection with any such rents were found to be necessary during the year.

In 470 instances extension of time for the payment of rent was granted, the amount thus deferred being £3,699 0s. 6d. In 348 cases forfeiture was provisionally, and in 422 cases absolutely, waived during the year.

The number of leases gazetted as approved during the year was 968, comprising an area of 377,823 acres 1 rood 6 perches, the rental attached thereto being £4,109 15s. 11d. The total number of gazetted leases in existence at the close of the year was 21,551, covering an area of 12,338,191 acres 3 roods 27 perches, and producing a rental of £149,079 17s. 4d. If, however, there are added to these the applications which have so far not been dealt with, the number in existence on the 31st December, 1895, becomes 22,483, with an area of 12,953,202 acres 2 roods 20 perches, and representing a rental of £154,204 19s. 2d. Further details will be found in Schedule XXIX.

Pastoral Leases.

The pastoral leases in existence on the 31st December, 1895, were 798, in number being 227 less than in the previous year, but this was due to the fact that a considerable number of leases in the Central Division expired during the year by effluxion of time, these being, however, in most instances subsequently converted into occupation licenses. The area of the leases current on the date above mentioned was 53,426,693 acres, and the annual revenue derived therefrom was £341,178 15s. 11d. Of these leases, 491 were in the Central and 307 in the Western Division. Further details are supplied in the subjoined Schedule, and also in Schedule XXXVII.

No. of Leases.	Division of Colony.	Area.	Rent.
		Acres.	£ s. d.
491	Central	14,814,475	161,910 3 10
307	Western	38,612,218	179,268 12 1
798	.....	53,426,693	341,178 15 11

Two leases in the Western Division were forfeited during the year. (Schedule XLIV.)

The area withdrawn from pastoral lease during the year amounted to 97,858 acres; the number of leaseholds affected was 107, and £3,610 1s. 7d. was refunded to the lessees on account of rent paid in advance upon the area so withdrawn. (Schedule XXXVIII.)

The number of pastoral leases transferred during the year amounted to 115; of these, 80 were in the Central and 35 in the Western Division. (Schedule XXXIX.)

Several

Several changes in the laws relating to pastoral leases have been brought about by the Land Act of 1895; but as these have already formed the subject of comment in the introductory paragraphs of this Report, it will only be necessary here to make some direct reference to the results of those changes.

In Schedule XLII will be found particulars of the applications lodged, in accordance with the provisions of section 9 of the Act of 1895, for the reappraisal of the rents of pastoral leases in the Western Division. It will be seen that in 263 instances the applications have been accepted, while 6 had to be declined on account of certain informalities.

Nineteen applications were lodged for the attachment of resumed areas to their respective leasehold areas under the provisions of section 8 of the Act of 1895. One of these applications has been refused, and in the others action is proceeding. Schedule XL gives further details as to the names, numbers, &c., of the resumed areas comprised in the above applications.

In Schedule XLV will be found full information as to the name and number of every pastoral lease still in existence in the Central Division, and also as to the date when each lease will expire.

In Schedule XLVI will be found details as to the pastoral leases which expired during the year, and also as to whether the lessces have availed themselves of their right to take a preferential occupation license over the land formerly held by them under pastoral lease.

Occupation Licenses.

The licenses held during 1895 were 1,626 in number, as compared with 1,454 during the previous year. The increase is, however, mainly due to the expiration of pastoral leases in the Central Division, and the consequent change of tenure into that of occupation license. The licenses in force covered an area of 40,817,284 acres, and the annual rental derived therefrom was £123,728 8s. 8d. (Schedule XXXVII.)

The figures appended below afford the means of comparison between the years 1894 and 1895:—

Current on 31st December, 1894.				Current on 31st December, 1895			
Division.	No.	Area.	Rent.	Division.	No.	Area.	Rent.
		Acres.	£ s. d.			Acres.	£ s. d.
Eastern (preferential)...	339	4,042,616	21,722 17 0	Eastern (preferential)...	313	3,580,773	18,673 11 8
"	316	3,626,788	11,636 15 1	"	315	3,671,019	10,567 2 1
Central	580	6,978,339	36,232 11 11	Central (preferential) ..	218	3,738,899	18,850 15 6
Western	219	24,256,773	48,601 11 6	"	568	6,399,972	33,539 6 8
				Western	212	23,426,621	42,097 12 9
Total	1,454	38,904,516	118,193 16 4	Total	1,626	40,817,284	123,728 8 8

The sales of occupation licenses over vacant Crown lands show somewhat better results than in the previous year, when the area offered is compared with that sold. The total number offered was 100, and these included an area of 1,226,905 acres; 26 were sold, containing an area of 361,773 acres. The area offered in 1894 was 3,036,765 acres, of which 486,504 acres were sold. Further details will be found in Schedule XLI.

Twenty-seven preferential occupation licenses in the Eastern Division were not renewed for 1895, in addition to 45 ordinary occupation licenses; 25 of the latter being in the Eastern, 12 in the Central, and 8 in the Western Division. (Schedule XLIV.)

Nineteen preferential occupation licenses and 95 occupation licenses were transferred during the year. Further details are given in Schedule XXXIX.

The sum of £5,890 18s. 8d. was refunded to licensees on account of rent paid in advance on 1,085,652 acres withdrawn from 387 occupation licenses by various processes of alienation or by reservation. (Schedule XXXVIII.)

From

From Schedule XLIII it will be seen that in 32 instances reappraisements of license fees were made and gazetted during 1895. The names of the resumed areas are given in the Schedules mentioned, and also other details.

The applications received during 1895 for the attachment of resumed areas to leasehold areas under section 8 of the Act of 1895 have been already referred to when dealing with the subject of Pastoral Leases. All details will be found in Schedule XL.

Homestead Leases.

At the close of 1895 the Homestead Leases in existence numbered 1,227, embracing an area of 10,250,437 acres, and producing a rental of £68,974 18s. These leases are confined to the Western Division of the Colony, and lie within the Land Board Districts of Bourke, Hay, and Moree. The numbers within each of those Districts are respectively 808, 298, and 121. Further details will be found in Schedule LII. 106 applications were lodged during 1895, being a slight decrease when compared with the number received during 1894. The following figures will probably be of some interest for purposes of comparison:—

Year.	No. of Applications.	Area applied for.	Deposits lodged.		
			Acres.	£	s. d.
1885	391	3,323,235	15,880	2	11
1886	121	1,141,963	4,758	3	7
1887	128	1,198,286	4,992	17	2
1888	141	1,332,691	5,511	15	7
1889	238	2,187,837	9,113	19	9
1890	310	2,620,959	10,920	13	3
1891	191	1,515,629	6,278	2	1
1892	176	1,214,447	5,648	16	6
1893	135	870,044	3,582	10	4
1894	110	692,515	2,885	9	7
1895	106	613,723	2,557	3	7

The Homestead Leases granted during the year numbered 76, representing an area of 515,821 acres, and a rental of £2,340 15s. 3d. The applications refused or permitted to be withdrawn were 45 in number, leaving 93, in respect of which the necessary action had not been finally completed when the year closed. Schedules XLVII and XLVIII give further details.

Twenty-three leases were forfeited during the year, the area embraced therein being 158,034 acres, and the annual rental £766 15s. 1d. Particulars as to the localities in which these leases were situated will be found in Schedule L.

With reference to the rental obtained from the leases in existence, which has been previously stated to be £68,974 18s., it may here be mentioned that under the provisions of section 9 of the Act of 1895 the lessees were offered a new appraisalment of the rents of their holdings, where devastation by rabbits, deterioration of values, &c., had rendered the original rental excessive. The section further provided that the applications for new appraisalments must be lodged within three months from the commencement of the Act, on 1st June, 1895, and from Schedule LI it will be seen that a great majority of the lessees have applied accordingly. 740 applications were lodged, but of these 11 had to be refused on account of various informalities, leaving 729 cases in which it will be necessary to proceed with the appraisalment of a new rental; and it is not, therefore, anticipated that the revenue obtained in 1896 will equal the amount received in 1895.

Special

Special Leases.

The applications received during 1895 for this particular form of lease were more numerous than in 1894, being 269 as compared with 175. The number requiring action, including those outstanding at the close of 1894, was 478, and in 214 instances the applications were duly disposed of, 74 being declined, withdrawn, &c., and 140 granted, representing an area of 3,680 acres 1 rood 11½ perches, and an annual rental of £2,807 17s. 8d. Further details will be found in Schedule LIV.

The leases forfeited during the year were 33 in number, embracing an area of 872 acres 1 rood 31 perches, with an annual rental of £489 12s. 8d. (Schedule LV.)

The leases current on the 31st of December, 1895, were 575 in number, representing an area of 14,344 acres and 38¾ perches, and producing an annual rental of £14,628 6s. 8d. Fifty-three leases, covering an area of 311 acres 3 roods 11¾ perches, with a rental of £1,225, which terminated by effluxion of time on 31st December, 1895, are, however, included amongst the leases current at the close of the year. Schedules LVI and LVII supply further details.

These leases are granted under the provisions of sections 89, 90, and 92 of the Crown Lands Act of 1884 for the various purposes specified hereunder.

Under section 89—

Floating docks, jetties, piers, and wharfs below high-water mark.

Under section 90—

Accommodation house.	Guano (to obtain).	Skin-drying and packing.
Accommodation paddock.	Inn.	Slaughter-houses.
Bakery.	Irrigation.	Smelting works.
Ballast (to obtain).	Landing-places.	Smithy.
Bathing places.	Lime-kilns.	Stables and accommodation
Boats (building and repairing).	Limestone (to obtain).	paddocks.
Boiling-down works.	Loam (to obtain).	Store.
Brick earth (to obtain).	Machinery (erection of).	Sugar-cane growing.
Brick-kiln.	Mail stations in sparsely-populated	Storage purposes.
Bridges.	districts.	Tanks.
Dams.	Pipe-line.	Tanneries.
Drainage.	Punt-houses.	Tobacco growing.
Eucalyptus (cultivation of).	Quarries.	Vegetable garden.
Explosives (Sites for storage of).	Railway station and depôt.	Village settlement.
Factory.	Recreation.	Wattle growing.
Ferries.	Saw-mills.	Well.
Fisheries.	Sericulture.	Wharfs (above high-water mark).
Freezing works.	Shells (to obtain).	Wool-washing establishments.
Gravel (to obtain).	Ships (building or repairing).	Working mineral springs.
Grazing.		

Under section 92—

Irrigation works and tramway purposes.

Artesian Well Leases.

No transactions in connection with this particular form of lease took place during 1895.

Scrub Leases.

The applications for scrub leases received during the year were 12 in number, and covered an area of 54,702 acres, and, in addition to these, there were 7 applications, embracing 59,120 acres, outstanding at the close of 1894, making a total of 19 that required consideration during 1895. Of these 5 were disallowed or withdrawn, and 4 were granted, the area and rental of the latter being, respectively, 19,210 acres 2 roods and £18 0s. 8d. One

One lease was forfeited during the year, representing an area of 10,240 acres and a rental of £8 10s. 8d.

Ten leases expired during 1895, the area and rental being, respectively, 74,957 acres and £16 7s. 6d. In nine instances, however, the lessees have applied, under the provisions of section 26 of the Act of 1895, for extensions of their leases.

The number of leases current at the close of the year was 21, the area under lease being 121,357 acres 2 roods, and the annual rental derived therefrom £272 19s. 10d. Further details will be found in Schedule LVIII.

Leases of Inferior Lands.

The leases granted during 1895 were 8 in number, representing an area of 19,900 acres and a rental of £14 12s. 6d. Two leases were declared forfeited, the area and rental being respectively 68,000 acres and £42 13s. 4d.

The number of leases current at the close of the year was 41, covering an area of 488,475 acres 3 roods, and producing an annual revenue of £421 16s. 10d. (Schedule LIX.)

Residential Leases.

The maximum area which may be granted in connection with leases of this character has been extended by the provisions of section 50 of the Act of 1895 from 10 acres to 20 acres, and that section also secures to lessees tenant-right in improvements; in other respects the law remains unaltered. The applications received during the year were 68 in number, and these, added to 44 outstanding at the close of 1894, gave a total of 112 requiring action in 1895. Of these, 37 were disallowed or withdrawn, and 33 were granted for an area of 273 acres and $\frac{1}{2}$ perch, the rental attached thereto being £42 8s. 5d.

Eight leases were forfeited during the year, representing an area of 58 acres 10 perches and a rental of £13 10s.

There were 169 leases current at the close of the year covering an area of 1,583 acres 1 rood $10\frac{1}{2}$ perches, and producing an annual revenue of £256 0s. 5d. (Further particulars are given in Schedule LX.)

Snow Leases.

These leases, which are practically confined to the Land Board Districts of Cooma and Wagga Wagga, are granted over Crown lands which are usually covered with snow for a part of each year, and are therefore unfit for continuous use and occupation.

Four of these leases containing 17,210 acres were granted during 1895 at a rental of £144 16s. 10d., and 11 were forfeited or cancelled. These latter included an area of 42,120 acres, to which a rental of £617 0s. 8d. was attached.

Eighteen leases were current on 31st December, 1895; these contained an area of 82,980 acres, and the rental derived therefrom was £618 1s. 5d. (Schedule LXI.)

Dedications—Reserves—Resumptions.

Reserves from sale to the number of 1,011, and representing an area of 1,978,326 acres, were notified during the year, while 2,332 reserves from sale, comprising 2,243,430 acres, were revoked during the year. (Schedules LXIX and LXX.)

The reserves from lease and license, annual lease, &c., notified during 1895 were 222 in number, and contained an area of 554,355 acres. The revocations of similar reserves during the year reached a total of 765, the area comprised therein being 556,010 acres. (Schedules LXXI and LXXII.)

The

The dedications for public purposes during the year were 136 in number, and the area thus dedicated amounted to 7,590 acres 1 rood 30 $\frac{1}{4}$ perches. Further details as to the respective purposes for which these lands were dedicated will be found in Schedule LXXIII.

The area resumed during 1895 under the provisions of the 105th section of the Act of 1884, and of the 41st section of the Act of 1889, reached a total of 1,961 acres 11 perches. Further particulars as to the locality, and ultimate disposal of the land so resumed, will be found in Schedule LXVIII.

Newcastle Pasturage Reserve.

Full details with respect to applications to purchase under the Newcastle Pasturage Reserve Act will be found in Schedule LXVII. There are 660 cases in which the payment of the purchase money is still proceeding, and the total amount paid prior to the close of 1895 was £18,655, leaving a balance of £22,726 still due on account of these sales.

Cases of Trespass on Crown Lands.

The number of trespassers on Crown lands, and particulars relating thereto, are set out in Schedule LXXVII, and these, inclusive of 375 which had not been dealt with prior to the close of 1894, numbered 1,112. During the year 671 cases were dealt with in various ways detailed in the Schedule previously mentioned, thus leaving 441 which had not been disposed of when the year closed.

Applications for permission to Ringbark.

One hundred and twenty-five applications were received during the year, comprising an area of 780,248 acres 3 roods, and the fees lodged in connection therewith amounted to £371. Fifty-four applications received prior to 1895 were allowed, and also fifty-eight of those received during the year, the total number allowed being therefore 112, covering an area of 677,453 acres. Eight applications were disallowed during 1895, and at the close of the year sixty-four were outstanding. Schedule LXXX gives further details in reference to these transactions.

Cases dealt with by Land Boards.

The cases that came under the consideration of the Land Boards during 1895 were 21,436 in number, of which 1,970 were adjourned. A comparison is instituted in the following figures between similar transactions for the past four years, and further details as to the places at which meetings are held, and the respective number of cases dealt with by each Land Board, will be found in Schedule LXXVIII:—

1892.	35,316	cases considered;	2,567	cases adjourned;	1,731	days occupied.
1893.	30,910	„ „	2,830	„ „	1,449 $\frac{1}{2}$	„ „
1894.	25,988	„ „	2,055	„ „	1,438	„ „
1895.	21,436	„ „	1,970	„ „	1,236 $\frac{1}{2}$	„ „

Correspondence.

During the year 118,226 documents were received and registered in the Head Office, representing an increase of 7,149 as compared with 1894.

The

The number of printed and manuscript letters, schedules, parcels, &c., despatched during 1895 amounted to 147,817, and in addition to these 2,006 telegrams were sent and 145 circulars were issued. (Schedules LXXXI and LXXXII.)

The letters received at the various Local Land Board Offices during the year were 120,362 in number, as compared with 124,797 received in 1894. The manuscript and printed letters, parcels, &c., despatched amounted to 114,483. Further details will be found in Schedule LXXXIII.

Cost of Survey.

Particulars as to the cost of the various classes of measurements carried out during 1895 by licensed surveyors paid by fees will be found in Schedule LXXXV.

Chief Surveyor.

The report of the Chief Surveyor and Director of Trigonometrical Survey is appended hereto.

H. CURRY,

Acting Under Secretary.

SCHEDULE I.
REVENUE and Receipts for 1895

	£	s.	d.	£	s.	d.
Sales—						
Auction Sales (including payments on account of sales in previous years)	70,279	0	0			
Newcastle Pasturage Reserve, Sales	1,954	0	0			
Improvement Purchases, &c.	1,797	0	0			
Deposits, &c., on Conditional Purchases	36,276	0	0			
Instalments (including interest) on Conditional Purchases	855,447	0	0			
Balances on Conditional Purchases	90,225	0	0			
Homestead Selections (Improvements)	20	0	0			
Do (Rents)	715	0	0			
Miscellaneous Purchases	4,736	0	0			
Total, Land Sales				1,061,458	0	0
Interest on Land Conditionally Purchased... ..				80,867	0	0
Pastoral Occupation—						
Pastoral Leases (Runs)	345,932	0	0			
Conditional Leases	152,538	0	0			
Annual Leases	41,694	0	0			
Occupation Licenses	130,094	0	0			
Homestead Leases	74,829	0	0			
Snow Leases	334	0	0			
Inferior Leases	321	0	0			
Scrub Leases	478	0	0			
Improvement Leases (Rents)	3	0	0			
Settlement Leases	2,119	0	0			
Quit Rents	767	0	0			
Total, Pastoral Occupation				749,169	0	0
Miscellaneous—						
Fees on Transfer of Runs, &c.	1,038	0	0			
Fees on Preparation and Enrolment of Title Deeds	2,269	0	0			
Survey Fees under Land Act of 1889	19,878	0	0			
Special Leases	18,410	0	0			
All other Receipts	27,516	0	0			
Total, Miscellaneous				69,111	0	0
Total				£1,960,605	0	0

SCHEDULE II.
EXPENDITURE for all Services during 1895.

Heads of Service, &c.	1888 Service.		1889 Service.		1890 Service.		1891 Service.		1892 Service.		1893 Service.		1894 Service.		1895 Service.		Total.											
	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.										
Salaries—Permanent Staff									12	10	0	13	2	6	152	18	7	152,642	8	8*								
Do Emergency Staff, from 1st May, 1895															8,796	18	1	8,796	18	1								
Do Temporary Staff, to 30th April, 1895															13	18	7	14,306	2	0								
Travelling Expenses (including Equipment and Forage Allowance)									2	3	4	2	14	6	2,774	14	3	27,337	8	4								
General Expenses											88	18	9	919	15	3	4,796	9	10	5,503	3	10						
Appraisal and Inspection Fees			0	10	6	0	10	6	1	1	0	1	1	0	179	0	10	547	7	8	729	11	1					
Fees for attendance at Local Land Boards															343	4	6	3,453	4	0	3,801	8	6					
Rent															625	9	3	1,185	11	10	1,811	1	1					
Legal Expenses															479	15	9	243	0	1	723	15	10					
Public Cemeteries—Fencing, clearing, and acquisition of sites for							Cr. 3	0	0	Cr. 9	3	4						960	18	6	948	10	2					
Public Parks and Recreation Reserves—For acquisition of sites for, and improvements, &c.	Cr. 30	0	0						Cr. 16	13	4	Cr. 0	0	11				13,797	9	3	13,750	15	0					
Rabbit-proof Fencing															7	3	7	269	4	8	276	8	3					
Compensation Claims (excluding payments for Parks, Recreation Reserves, Cemeteries, and Minor Roads)																		1,365	3	1	1,365	3	1					
Minor Roads—Compensation for Land taken, and cost of fencing												Cr. 67	4	10				3,054	14	4	2,907	9	6					
Gratuities for loss of office																		766	10	0	766	10	0					
Preparation of Deeds															82	12	6	791	7	7	854	0	1					
Postages and Stamp Duties															763	18	0	3,201	13	6	3,905	11	6					
Advertising									0	13	6	8	5	6	946	16	3	362	19	9	1,018	17	0					
Wages and Provisions for Surveyors' Labourers															1,143	19	0	13,547	5	6	14,696	4	6					
Plans and Tracings															218	5	1	3,100	15	3	3,319	0	9					
Lithography															Cr. 165	9	6	518	0	0	362	10	6					
Instruments, Materials, and Books															39	3	6	583	16	1	627	19	7					
Survey Fees									186	17	1	89	2	8	6,160	11	3	30,427	1	1	42,863	12	1					
Photo-zincography															7	15	0	564	0	5	571	15	5					
Land Appeal Court—Salaries and Contingencies															79	11	9	6,495	18	4	6,575	20	1					
Photo-lithography (performed at Government Printing Office)																		479	15	0	479	15	0					
Fees to Commissioners of Courts of Claims																												
Labour Settlements															15	13	3	4,679	8	5	4,696	1	8					
Dubbo Land Board Office building—Erection of																		350	0	0	350	0	0					
Cooma do do Repairs to																		200	0	0	200	0	0					
Information Bureau—Expenses of, not including Salaries																		873	10	4	873	10	4					
Fees for Reports on improvements—Leasehold areas															15	0	0				15	0	0					
Totals	£	Cr. 30	0	0	0	10	6	0	10	6	Cr. 1	10	0	177	3	3	143	1	2	14,489	15	10	305,529	5	6	320,308	7	9

* Includes salaries of a number of officers transferred from Temporary to Permanent Staff.
† Includes £3,897 10s. 9d. net from other sources than the appropriations for the Department.

SCHEDULE III.

COMPARATIVE Statement of the Expenditure in 1894 and 1895 respectively.

Heads of Service.	1894.	1895.	Increase.	Decrease.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Salaries (less charges to other Departments for work done)	175,021 8 5*	175,759 7 4	737 18 11	.....
Travelling Expenses, Equipment and Forage Allowances	33,250 15 0	30,116 15 7	.....	3,133 19 5
General Expenses	6,527 0 2	5,803 3 10	.....	733 16 4
Appraisalment and Inspection Fees	1,308 0 0	729 11 1	.....	578 8 11
Fees for Attendance at Local Land Boards	5,314 8 0	3,301 8 6	.....	1,512 19 6
Rent	2,198 15 11	1,811 1 1	.....	387 14 10
Legal Expenses	2,081 1 3	722 15 10	.....	1,358 6 5
Public Cemeteries—Acquisition of sites for, fencing, clearing, &c.	2,296 17 5	948 10 2	.....	1,348 7 3
Public Parks and Recreation Reserves—Acquisition of sites for, improving, maintaining, &c.	14,759 2 2	13,750 15 0	.....	1,008 7 2
Rabbit-proof Fencing	493 13 7	276 8 3	.....	217 5 4
Compensation Claims (excluding payments for Public Parks, Recreation Reserves, Cemeteries, and Minor Roads)	1,813 15 7	1,365 3 1	.....	448 12 6
Minor Roads—Compensation for land and for fencing, &c.	2,552 0 11	2,997 9 6	445 8 7	.....
Gratuities under the Civil Service Act, Bonuses, &c.	183 15 0	766 10 0	582 15 0	.....
Abatement on Pensions .....	.....	.....	.....	.....
Preparation of Deeds	1,069 16 8	854 0 1	.....	215 16 7
Postage, Stamp Duties, &c.	8,574 19 0	3,965 11 6	.....	4,609 7 6
Advertising	2,254 14 6	1,018 17 0	.....	1,235 17 6
Wages and Provisions for Surveyors' Labourers	14,406 5 4	14,696 4 6	289 19 2	.....
Plans and Tracings by Contract	3,090 14 9	3,319 0 9	228 6 0	.....
Lithography	203 3 11	352 10 6	149 6 7	.....
Instruments, Materials, and Books	249 18 7	627 19 7	378 1 0	.....
Survey Fees	41,023 4 2	42,863 12 1	1,840 7 11	.....
Photo-zincography	433 10 7	571 15 5	138 4 10	.....
Photo-lithography by the Government Printer	1,494 16 0	479 15 0	.....	1,015 1 0
Land Appeal Court (including Salaries, Travelling Expenses, &c.)	7,084 12 9	6,575 10 1	.....	509 2 8
Fees to Commissioners of Courts of Claims	16 12 0	.....	.....	16 12 0
Labour Settlements	4,880 4 3	4,696 1 8	.....	184 2 7
Moree Land Board Office—Erection of	1,868 2 5	.....	.....	1,868 2 5
Dubbo do do .....	.....	350 0 0	350 0 0	.....
Cooma do Repairs to .....	.....	200 0 0	200 0 0	.....
Fees for Reports on Improvements, Leasehold Areas	2,384 10 10	15 0 0	.....	2,369 10 10
Information Bureau—Expenses of (not including salaries) .....	.....	873 10 4	873 10 4	.....
	336,835 19 2	320,308 7 9	6,213 18 4	22,741 9 9
		Deduct Increase		6,213 18 4
		Net Decrease	£	16,527 11 5

* Charges to other Departments, 1894, £511 7s. 3d.

SCHEDULE IV.

SALARIES paid in the year 1895.

	Permanent.	Temporary, to 30th April, 1895.	Emergency, from 1st May, 1895.	Totals.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
ADMINISTRATIVE BRANCH.				
Head Office Staff*	31,457 13 3	2,174 16 2	476 7 9	34,108 17 2
Local Land Boards	20,967 0 10	1,550 19 6	1,096 8 5	23,614 8 9
Land Agents and Assistants	12,335 1 5	.....	66 13 4	12,401 14 9
Inspectors of Conditional Purchases	5,619 19 2	1,265 8 0	2,727 2 2	9,612 9 4
Messengers and others	3,053 3 8	202 1 9	110 11 10	3,365 17 3
	73,432 18 4	5,193 5 5	4,477 3 6	83,103 7 3
SURVEY BRANCH.				
Head Office Staff	27,523 10 3	3,670 11 11	1,336 10 4	32,530 12 6
District Survey Offices	33,307 11 2	3,184 6 11	881 11 9	37,373 9 10
Salaried Surveyors	10,933 8 0	258 0 3	416 7 8	11,607 15 11
Assistant Surveyors	837 12 11	720 0 0	569 0 0	2,126 12 11
Field Assistants .....	.....	288 0 0	551 8 0	839 8 0
Messengers and others	601 11 4	73 1 4	99 10 2	774 2 10
	73,203 13 8	8,194 0 5	3,854 7 11	85,252 2 0
TRIGONOMETRICAL SURVEY BRANCH.				
Field Staff	753 6 8	133 6 8	133 6 8	1,020 0 0
Office Staff	910 0 0	.....	.....	910 0 0
	1,663 6 8	133 6 8	133 6 8	1,930 0 0
DETAIL SURVEY BRANCH.				
Field Staff	2,340 0 0	290 0 0	.....	2,630 0 0
Office Staff	2,002 10 0	509 8 1	332 0 0	2,843 18 1
	4,342 10 0	799 8 1	332 0 0	5,473 18 1
LAND APPEAL COURT.				
The Commissioners	4,000 0 0	.....	.....	*4,000 0 0
Registrar, Clerks, and Messenger	1,058 3 4	.....	.....	1,058 3 4
	5,058 3 4	.....	.....	5,058 3 4
Grand Totals	£ 157,700 12 0	14,320 0 7	8,796 18 1	180,817 10 8

* Includes Clerks Rabbit Branch.

† Paid under Special Appropriation, 53 Vic. No. 26.

SCHEDULE V.

STATEMENT showing the Strength of the Staff and the Annual Rate of Salaries as on the 31st December, 1894 and 1895 respectively.

Branches, &c.	Numbers.		Salaries.	
	31st Dec., 1894.	31st Dec., 1895.	31st Dec., 1894.	31st Dec., 1895.
Administrative Branch (Head Office)	160	168	£ 34,024	£ 35,172
Survey Branch (Head Office)	159	153	34,133	32,654
Trigonometrical Branch	7	7	1,880	1,880
Detail Survey Branch	22	22	5,567	5,744
Local Land Boards	124	135	34,054	34,053
* Land Agents and Assistants	74	71	12,356	12,280
District Survey Offices	194	192	51,506	51,189
Rabbit Branch	3	||	662	.....
† Land Appeal Court	7	7	5,019	5,019
Information Bureau .....	.....	3	.....	770
Totals.....	750	758	179,201	178,711

* Excluding five paid as clerks in Local Land Boards. † Excluding the salary of counsel for the Crown, £533. ‡ Includes clerks Rabbit Branch. § Including messengers and office cleaners, who rendered vouchers for wages in 1894 (12), who were not included in that year. ¶ Entered under Administrative Branch.

SCHEDULE VI.

STATEMENT of Travelling Expenses and Fees paid in connection with Local Land Board Meetings during 1895.

Board District.	Particulars.	Amount.			Total.		
		£	s.	d.	£	s.	d.
Armidale	Chairman's and clerk's travelling expenses	493	0	7	1,358	6	1
	Members' travelling expenses	220	2	9			
	Members' fees	490	7	0			
	Fees and travelling expenses of surveyors, inspectors, witnesses, and others..	154	15	9			
Bourke	Chairman's and clerk's travelling expenses	424	17	11	863	16	10
	Members' travelling expenses	72	5	6			
	Members' fees	300	6	0			
	Fees and travelling expenses of surveyors, inspectors, witnesses, and others..	66	7	5			
Cooma.....	Chairman's and clerk's travelling expenses	449	18	5	998	6	11
	Members' travelling expenses	118	2	0			
	Members' fees	328	2	6			
	Fees and travelling expenses of surveyors, inspectors, witnesses, and others..	102	4	0			
Dubbo.....	Chairman's and clerk's travelling expenses	301	6	9	524	1	3
	Members' travelling expenses	40	17	9			
	Members' fees	158	11	0			
	Fees and travelling expenses of surveyors, inspectors, witnesses, and others..	23	5	9			
Forbes.....	Chairman's and clerk's travelling expenses	289	0	3	516	1	0
	Members' travelling expenses	18	15	9			
	Members' fees	186	18	0			
	Fees and travelling expenses of surveyors, inspectors, witnesses, and others..	21	7	6			
Goulburn	Chairman's and clerk's travelling expenses	403	16	3	1,010	11	4
	Members' travelling expenses	146	9	10			
	Members' fees	306	1	6			
	Fees and travelling expenses of surveyors, inspectors, witnesses, and others..	154	3	9			
Grafton	Chairman's and clerk's travelling expenses	363	3	9	667	12	0
	Members' travelling expenses	56	15	6			
	Members' fees	192	13	6			
	Fees and travelling expenses of surveyors, inspectors, witnesses, and others..	54	19	3			
Hay	Chairman's and clerk's travelling expenses	332	0	6	656	10	6
	Members' travelling expenses	34	19	0			
	Members' fees	211	1	0			
	Fees and travelling expenses of surveyors, inspectors, witnesses, and others..	78	10	0			
Maitland.....	Chairman's and clerk's travelling expenses	307	3	5	801	0	7
	Members' travelling expenses	152	1	0			
	Members' fees	180	10	6			
	Fees and travelling expenses of surveyors, inspectors, witnesses, and others..	152	5	8			
Moree.....	Chairman's and clerk's travelling expenses	271	18	4	543	1	6
	Members' travelling expenses	65	16	6			
	Members' fees	177	9	0			
	Fees and travelling expenses of surveyors, inspectors, witnesses, and others..	27	17	8			
Orange	Chairman's and clerk's travelling expenses	355	19	9	892	15	9
	Members' travelling expenses	130	16	8			
	Members' fees	340	14	6			
	Fees and travelling expenses of surveyors, inspectors, witnesses, and others..	65	4	10			
Sydney	Chairman's and clerk's travelling expenses	97	0	9	373	1	11
	Members' travelling expenses	49	18	7			
	Members' fees	165	18	0			
	Fees and travelling expenses of surveyors, inspectors, witnesses, and others..	60	4	7			
Tamworth	Chairman's and clerk's travelling expenses	350	0	10	977	6	4
	Members' travelling expenses	181	16	9			
	Members' fees	365	18	6			
	Fees and travelling expenses of surveyors, inspectors, witnesses, and others..	79	10	3			
Wagga Wagga	Chairman's and clerk's travelling expenses	453	10	0	1,166	19	1
	Members' travelling expenses	184	19	2			
	Members' fees	366	19	6			
	Fees and travelling expenses of surveyors, inspectors, witnesses, and others..	161	10	5			
Total					1,166	19	1
					£11,349	11	7

SUMMARY.

Chairmen's and clerks' travelling expenses	£ 4,892	s. 17	d. 6
Members' travelling expenses	1,473	16	9
Members' fees	3,780	10	6
Fees and travelling expenses of surveyors, inspectors, witnesses, and others	1,202	6	10
	£11,349	11	7

SCHEDULE VII.

STATEMENT of Revenue and Expenditure for the years 1886 to 1895 inclusive, showing the percentage of the latter to Revenue.

Year.	Total Expenditure.	*Extraordinary Expenses deducted.	Net Expenditure.	Decrease as compared with 1886.	Revenue.	Percentage of Net Expenditure to Revenue.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£	per cent.
1886	555,873 5 10		555,873 5 10		1,599,714	34
1887	684,312 1 7	175,269 13 8	509,042 7 11	46,830 17 11	2,323,681	21
1888	472,336 8 2	96,355 14 4	375,980 13 10	179,892 12 0	2,154,409	17
1889	399,754 10 4	41,407 19 1	358,346 11 3	197,526 14 7	2,067,385	17
1890	421,242 14 9	33,719 17 5	387,522 17 4	168,350 8 6	2,165,528	17
1891	435,156 2 9	26,778 1 6	408,378 1 3	147,495 4 7	2,197,090	18
1892	410,842 0 8	43,023 17 5	367,818 3 3	188,055 2 7	2,154,717	17
1893	379,531 10 11	57,346 2 0	322,185 8 11	233,687 16 11	2,147,144	14
1894	336,835 19 2	34,866 19 11	301,968 19 3	253,904 6 7	2,075,885	14
1895	320,308 7 9	30,397 8 4	289,910 19 5	265,962 6 8	1,960,605	14
	£ 4,416,193 1 11	539,165 13 8	3,877,027 8 3		20,846,158	

* Includes expenditure mainly in connection with the administration of the Forest Branch since 1886 (now under the Department of Mines and Agriculture), the Rabbit Branch, Minor Roads, Public Parks and Recreation Reserves, Labour Settlements, and Land Appeal Court, &c., not incurred in 1886.

SCHEDULE VIII.

RETURN showing the Number and Area of Conditional Purchases applied for during 1895, with the amount of Deposits and Survey Fees received.

Local Land Board District and Land District.	Class of Land.	Section 20.				Section 42.				Section 47.			
		No.	Area.	Deposit.	Survey Fee.	No.	Area.	Deposit.	Survey Fee.	No.	Area.	Deposit.	Survey Fee.
Armidale—	Ordinary lands	17	2,390 0 0	239 0 0	85 0 0	26	2,764 1 0	276 8 6	97 18 6				
Armidale	Special areas	6	259 3 0	67 18 6	23 7 0	1	52 0 0	7 16 0	3 5 8				
Glen Innes	Ordinary lands	7	433 0 0	43 6 0	31 7 6	8	1,485 0 0	148 10 0	26 4 4				
Glen Innes	Special areas	4	230 3 0	51 13 0	17 17 6	2	362 0 0	66 2 0	9 7 6				
Inverell	Ordinary lands	24	3,233 1 0	323 19 6	131 17 6	39	3,113 0 0	311 16 0	133 0 10				
Inverell	Special areas	8	731 3 0	155 18 5	41 2 6	8	958 3 0	200 16 5	82 9 0				
Tenterfield	Ordinary lands	23	2,105 6 0	210 12 0	118 15 0	20	1,753 2 0	175 7 0	73 10 1				
Tenterfield	Special areas					1	19 0 23	2 10 11	1 11 6				
Walcha	Ordinary lands	7	553 1 0	55 6 6	34 2 6	9	1,478 3 0	147 17 6	15 10 1				
	Total	96	10,012 3 0	1,349 10 11	488 9 6	114	12,972 1 23	1,327 4 4	397 17 6				
Bourke—	Ordinary lands	8	4,600 0 0	460 0 0	80 15 0								
Bourke	Special areas	1	40 0 0	4 0 0	4 0 0								
	Total	9	4,640 0 0	464 0 0	84 0 0								
Cooma—	Ordinary lands	4	401 1 0	40 2 6	20 15 0	4	231 2 0	23 3 0	9 5 8	4	220 0 0	44 0 0	16 6 0
Cooma	Special areas	1	52 0 0	20 16 0	4 7 6								
Bombala	Ordinary lands	12	1,581 0 0	158 2 0	66 12 0	7	437 1 0	43 14 6	24 5 8				
Bombala	Special areas	6	411 0 0	72 13 0	20 5 0	3	655 1 0	98 5 9	15 0 0				
Braidwood	Ordinary lands	10	665 0 0	66 10 0	45 7 4	5	343 0 0	34 6 0	17 6 11				
Braidwood	Special areas	2	200 0 0	30 0 0	10 10 0								
Cooma	Ordinary lands	15	1,370 0 0	137 0 0	74 7 4	30	2,292 0 0	229 4 0	86 16 0				
Cooma	Special areas	13	1,673 0 0	322 9 0	72 0 0	4	331 6 31	60 19 6	18 4 5				
Eilen	Ordinary lands	1	160 0 0	15 0 0	5 17 6	4	200 0 0	20 0 0	12 16 0	1	40 0 0	8 0 0	4 0 0
Eilen	Special areas	1	63 1 0	10 7 9	4 15 0								
Milton	Ordinary lands	4	196 0 0	19 12 0	17 2 6	1	61 0 0	6 2 0	3 9 5				
Milton	Special areas												
Moruya	Ordinary lands	29	1,557 0 0	155 14 0	125 17 6	14	646 0 0	64 12 0	41 10 0				
Moruya	Special areas	4	186 1 0	25 16 3	16 17 6	3	149 0 0	22 7 0	9 11 3				
Queanbeyan	Ordinary lands	13	925 0 0	92 10 0	58 17 6	17	1,168 0 0	116 16 0	44 13 3	1	180 0 0	32 0 0	6 0 0
Queanbeyan	Special areas	1	21 0 0	6 4 0	3 1 0								
	Total	116	9,492 3 0	1,135 18 6	552 13 6	62	6,094 0 31	723 9 9	277 18 1	6	420 0 0	81 0 0	20 5 0
Dubbo—	Ordinary lands	22	5,441 0 0	544 2 0	152 12 6	38	7,095 0 0	709 10 0	175 2 8				
Dubbo	Special areas	21	6,832 0 0	683 4 0	169 7 6	12	2,784 0 0	278 8 0	47 0 8				
Dubbo	Special areas	7	337 0 0	71 0 0	25 10 0	1	40 0 0	12 0 0	2 0 0				
Nyngan	Ordinary lands	6	2,739 0 0	273 18 0	54 7 6	4	1,150 0 0	115 0 0	12 16 9				
Nyngan	Special areas	18	4,175 0 0	417 10 0	117 10 0	16	6,333 3 0	633 17 6	101 5 0				
Warren	Ordinary lands	1	47 0 0	11 15 0	4 5 0	4	211 1 0	69 16 6	12 19 2				
	Total	75	19,564 0 0	2,001 9 0	514 12 6	75	18,219 0 0	1,878 12 0	352 6 10				
Forbes—	Ordinary lands	2	670 0 0	60 0 0	19 10 0	3	395 0 0	39 10 0	12 7 7				
Forbes	Special areas	8	2,263 3 0	342 11 3	58 12 6	13	2,351 3 0	352 15 3	69 5 9				
Barmedman East	Ordinary lands	8	1,094 3 0	109 9 6	45 0 0	3	760 0 0	76 0 0	14 16 3				
Barmedman East	Special areas	1	320 0 0	48 0 0	8 0 0								
Condobolin	Ordinary lands	5	640 0 0	64 0 0	20 0 0	2	461 0 0	46 2 0	10 4 5				
Condobolin	Special areas	1	82 0 0	16 8 0	5 2 6								
Forbes	Ordinary lands	3	501 1 0	50 2 6	18 7 6	9	2,208 0 0	220 16 0	47 5 2				
Forbes	Special areas	11	173 0 19	58 1 9	21 2 6	6	1,544 2 0	250 14 9	30 3 10				
Gronffell	Ordinary lands	3	260 0 0	26 0 0	14 15 0	4	1,120 0 0	112 0 0	19 6 3				
Gronffell	Special areas	4	339 2 0	33 13 3	22 7 6	2	150 0 0	27 0 8	7 6 8				
Parkes	Ordinary lands	8	1,763 2 0	176 17 0	53 2 6	6	970 0 0	97 0 0	25 4 5				
Parkes	Special areas	15	2,263 3 0	363 5 3	73 8 2	3	391 2 0	62 7 3	10 18 2				
	Total	63	10,826 2 19	1,449 8 6	359 8 2	51	10,272 0 0	1,273 5 3	237 13 1				
Grafton—	Ordinary lands	12	692 0 0	69 4 0	52 17 6	2	350 0 0	35 0 0	9 5 8				
Grafton	Special areas	2	195 0 0	29 5 0	10 0 0								
Casino	Ordinary lands	2	90 0 0	9 0 0	8 5 0	1	93 2 0	6 19 0	3 11 3				
Casino	Special areas	5	82 2 19	62 11 10	13 0 0								
Grafton	Ordinary lands	7	370 0 0	37 0 0	30 0 0	5	231 0 0	23 2 0	12 7 6				
Grafton	Special areas	3	216 0 0	21 12 0	14 5 0	3	133 0 0	13 18 0	9 7 6				
Kempsey	Ordinary lands	2	90 0 0	8 0 0	8 0 0	4	491 2 0	49 3 0	16 10 0				
Kempsey	Special areas	4	62 2 28	35 11 0	10 6 4	2	173 2 11	29 13 4	5 19 5				
Lismore	Ordinary lands	2	250 0 0	25 0 0	13 15 0	4	250 0 0	25 0 0	13 10 0				
Lismore	Special areas	1	82 0 0	16 8 0	5 2 6								
Murwillumbah	Ordinary lands	8	527 0 0	52 14 0	28 12 6	2	80 0 0	8 0 0	6 0 0	2	100 0 0	20 0 0	7 10 0
Port Macquarie	Special areas												
	Total	48	2,647 1 8	366 5 10	199 9 10	23	1,634 2 11	195 15 4	76 11 4	2	100 0 0	20 0 0	7 10 0

SCHEDULE VIII—continued.

Local Land Board District and Land District.	Class of Land.	Section 26.				Section 42.				Section 47.											
		No.	Area.		Deposit.	Survey Fee	No.	Area.		Deposit.	Survey Fee.	No.	Area.		Deposit.	Survey Fee.					
			a.	r.	p.	£		s.	d.	£	s.		d.	£	s.	d.	£	s.	d.		
Goulburn—	Ordinary lands	4	170	0	0	17	0	0	16	5	0	8	505	0	0	50	10	0	26	0	1
Boorowa	Special areas	0	459	1	0	103	4	11	29	2	6	10	926	1	0	102	11	3	35	10	11
Goulburn	Ordinary lands	8	520	0	0	52	0	0	35	17	6	0	524	2	0	52	9	0	23	10	8
	Special areas	1	48	1	0	8	8	11	4	5	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gunning	Ordinary lands	4	160	0	0	16	0	0	16	0	0	4	288	0	0	28	16	0	14	5	0
	Special areas	2	154	1	0	29	10	6	9	12	6	1	53	3	0	9	8	2	3	5	8
Moss Vale	Ordinary lands	8	820	0	0	82	12	0	40	12	6	2	131	3	0	13	4	0	2	0	0
Yass	Ordinary lands	0	983	0	0	98	0	0	35	7	0	2	80	0	0	8	0	0	0	0	0
	Special areas	2	360	0	0	70	0	0	12	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Young	Ordinary lands	1	60	0	0	6	0	0	4	5	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Special areas	23	971	3	8	260	0	11	77	18	8	7	140	0	16	37	0	3	12	9	0
	Total	65	4,702	2	8	742	3	8	281	6	2	43	2,649	1	16	201	18	8	126	1	4
Hay—	Ordinary lands	2	800	0	0	80	0	0	16	15	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Barranald South	Special areas	1	634	0	0	95	2	0	10	12	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Deniliquin	Ordinary lands	8	2,020	3	0	262	1	0	10	7	6	5	897	0	0	89	14	0	23	8	10
	Special areas	11	5,343	1	0	359	13	0	101	12	6	4	564	2	0	100	5	9	17	5	1
Hay	Ordinary lands	5	2,070	0	0	207	0	0	48	0	0	5	1,199	0	0	119	18	0	20	3	8
Hilston	Ordinary lands	2	160	0	0	16	0	0	10	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Special areas	1	314	0	0	47	2	0	8	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Total	20	11,032	0	0	1,565	18	6	249	17	6	14	2,669	2	0	309	17	9	60	17	2
Maitland—	Ordinary lands	12	1,466	0	0	146	12	0	65	0	0	16	1,230	3	0	123	2	0	47	16	5
Casalis	Ordinary lands	1	40	0	0	4	0	0	4	0	0	2	160	0	0	16	0	0	7	6	3
Dungog	Ordinary lands	3	143	0	0	14	6	0	11	12	6	1	40	0	0	4	0	0	3	0	0
Gosford	Special areas	2	21	0	8	4	4	3	3	18	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Maitland	Ordinary lands	1	50	0	0	5	0	0	4	5	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Special areas	5	102	3	20	33	13	10	16	15	6	2	51	3	0	12	18	10	4	19	0
Muswellbrook	Ordinary lands	8	450	0	0	45	0	0	35	2	6	18	363	2	0	36	7	0	52	19	5
Newcastle	Ordinary lands	3	152	3	0	15	5	6	12	17	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Special areas	2	103	1	0	20	13	0	8	12	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Paterson	Special areas	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Raymond Terrace	Ordinary lands	1	100	0	0	10	0	0	5	5	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Scone	Ordinary lands	8	1,168	0	0	116	16	0	45	5	0	14	1,175	1	0	117	10	6	51	2	11
Singleton	Ordinary lands	1	78	2	0	7	7	0	4	17	6	1	40	0	0	4	0	0	3	0	0
Stroud	Ordinary lands	1	291	0	0	29	2	0	7	15	0	1	70	0	0	7	0	0	8	11	3
	Special areas	1	320	0	0	48	0	0	8	0	0	2	149	0	0	21	0	0	6	18	9
Taree	Ordinary lands	8	670	1	0	67	0	6	33	0	0	4	170	3	0	17	1	6	12	5	8
	Special areas	2	97	2	0	14	12	6	8	10	0	1	45	1	0	9	1	6	3	3	9
Wollombi	Ordinary lands	3	120	0	0	12	0	0	12	0	0	1	50	0	0	5	0	0	.....	.....	.....
	Total	62	5,429	0	28	593	12	7	292	16	0	65	4,157	0	0	441	0	1	203	0	4
Morree—	Ordinary lands	7	2,131	0	0	213	2	0	51	12	6	5	915	0	0	91	10	0	20	7	7
Bingara	Ordinary lands	13	6,165	0	0	610	10	0	141	5	0	13	6,033	2	0	609	7	0	93	16	0
Morree	Special areas	5	2,142	1	0	321	6	9	43	0	0	3	420	0	0	73	10	0	13	10	1
Warialda	Ordinary lands	8	1,260	0	0	126	0	0	47	7	0	25	5,258	0	0	525	16	0	98	11	2
	Special areas	7	461	0	0	128	1	6	31	7	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Walgett	Ordinary lands	8	3,480	0	0	348	0	0	70	10	0	4	1,747	2	0	174	15	0	22	0	4
	Total	53	13,689	1	0	1,766	0	3	835	2	6	55	13,904	0	0	1,414	18	0	248	11	8
Orange—	Ordinary lands	3	470	0	0	47	0	0	17	10	0	2	480	0	0	43	0	0	9	16	11
Bathurst	Ordinary lands	17	8,078	0	0	807	16	0	105	6	0	8	1,047	0	0	104	14	0	38	0	5
Carcoar	Special areas	15	704	0	0	202	0	0	60	9	6	2	30	1	27	9	2	0	3	15	9
Cowra	Ordinary lands	3	260	0	0	26	0	0	14	15	0	3	190	0	0	19	0	0	10	2	6
Lithgow	Special areas	2	86	2	0	14	2	9	8	5	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Molong	Ordinary lands	8	1,295	0	0	129	16	0	45	10	0	20	3,668	1	0	366	16	6	61	8	3
	Special areas	8	734	3	30	132	7	8	39	3	6	2	168	3	10	30	13	11	7	3	3
Mudgee	Ordinary lands	17	1,996	3	0	199	13	6	85	15	0	18	2,001	0	0	200	8	0	65	6	11
	Special areas	5	536	2	0	80	9	6	25	5	0	3	147	0	0	25	16	0	9	13	2
Orange	Ordinary lands	1	30	0	0	3	0	0	5	0	0	1	300	0	0	30	0	0	5	16	3
Rylstone	Ordinary lands	13	879	2	0	87	19	0	59	7	6	8	470	0	0	47	0	0	26	3	2
	Special areas	2	320	0	0	64	0	0	12	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wellington	Ordinary lands	7	1,630	0	0	163	0	0	48	0	0	6	887	0	0	88	14	0	25	8	2
	Special areas	1	320	0	0	48	0	0	8	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Total	102	12,154	0	30	1,477	10	5	534	5	6	73	9,342	1	37	965	4	11	258	3	9
Sydney—	Special areas	2	360	0	0	28	0	0	9	15	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Campbelltown	Ordinary lands	4	298	3	0	20	17	6	17	2	6	1	40	0	0	4	0	0	3	0	0
Klans	Special areas	3	210	1	0	34	23	0	13	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nowra	Ordinary lands	1	40	0	0	4	0	0	4	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Parramatta	Special areas	3	118	3	0	29	9	0	11	16	6	1	33	2	0	6	14	0	2	15	6
Pennith	Ordinary lands	11	1,140	0	0	114	0	0	50	15</											

SCHEDULE IX.

CONDITIONAL PURCHASES (Ordinary and within Special Areas) applied for in each Division, Land Board, and Land District, during the year 1895.

Local Land Board District.	Land District.	Section 25. (O.C.P.)			Section 42. (A.C.P.)			Section 47. (N.R.C.P.)			Total No. of Appli- cations.	Total Area applied for					
		No.	Aren.		No.	Area.		No.	Area.			a.	r.	p.			
EASTERN DIVISION.																	
			a.	r.	p.	a.	r.	p.	a.	r.	p.	a.	r.	p.			
Armidale	Armidale	23	2,649	3	0	27	2,816	1	0	...	...	50	5,466	0	0
	Glen Innes	11	683	3	0	10	1,837	0	0	...	...	21	2,520	3	0
	Inverell	32	4,020	0	0	47	4,076	3	0	...	...	79	8,096	3	0
	Tenterfield	23	2,106	0	0	21	1,763	2	28	...	...	44	3,869	2	28
	Wnicha	7	553	1	0	9	1,478	3	0	...	...	16	2,032	0	0
Cooma	Bega	5	453	1	0	4	231	2	0	4	220	0	0	13	904	3	0
	Bombala	18	1,992	0	0	10	1,142	2	0	...	...	28	3,134	2	0
	Braidwood	12	865	0	0	5	343	0	0	...	...	17	1,208	0	0
	Cooma	28	3,048	0	0	34	2,673	0	31	...	...	62	5,721	0	31
	Eden	2	219	1	0	4	200	0	0	1	40	0	0	7	459	1	0
	Milton	4	196	0	0	1	61	0	0	...	...	5	257	0	0
	Moruya	33	1,773	1	0	17	793	0	0	...	...	50	2,568	1	0
	Queanbeyan	14	945	0	0	17	1,153	0	0	1	160	0	0	32	2,264	0	0
Goulburn	Burrowa	10	629	1	0	18	1,431	1	0	...	...	23	2,060	2	0
	Goulburn	9	563	1	0	9	524	2	0	...	...	18	1,092	3	0
	Gunning	6	314	1	0	5	311	3	0	...	...	11	656	0	0
	Mossvale	8	825	0	0	2	131	3	0	...	...	10	957	3	0
	Yass	8	1,343	0	0	2	30	0	0	...	...	10	1,423	0	0
	Young	24	1,021	3	8	7	140	0	16	...	...	31	1,161	3	24
Grafton	Bellingen	14	887	0	0	2	350	0	0	...	...	16	1,237	0	0
	Casino	7	172	2	19	1	69	2	0	...	...	8	242	0	19
	Grafton	7	370	0	0	5	281	0	0	...	...	12	651	0	0
	Kempsey	3	216	0	0	3	139	0	0	...	...	6	355	0	0
	Lismore	6	142	2	29	6	663	0	11	...	...	12	807	3	0
	Murwillumbah	3	332	0	0	4	250	0	0	...	...	7	582	0	0
	Port Macquarie	8	527	0	0	2	30	0	0	2	100	0	0	12	707	0	0
Maitland	Cassilis	12	1,466	0	0	16	1,230	3	0	...	...	23	2,696	3	0
	Dungog	1	40	0	0	2	160	0	0	...	...	3	200	0	0
	Gosford	5	164	0	8	1	40	0	0	...	...	6	204	0	8
	Maitland	6	212	3	20	2	51	3	0	...	...	8	264	2	20
	Muswellbrook	8	450	0	0	18	863	2	0	...	...	26	1,313	2	0
	Newcastle	5	256	0	0	...	...	...	...	...	...	5	255	0	0
	Paterson .....	...	...	...	...	2	119	3	0	...	...	2	119	3	0
	Raymond Terrace	1	100	0	0	...	...	...	...	...	...	1	100	0	0
	Seone	8	1,168	0	0	14	1,175	1	0	2	153	2	0	24	2,496	3	0
	Singleton	1	73	2	0	1	40	0	0	...	...	2	113	2	0
	Stroud	2	411	0	0	3	210	0	0	...	...	5	821	0	0
	Taree	10	767	3	0	5	216	0	0	...	...	15	983	3	0
	Wollombi	3	120	0	0	1	50	0	0	1	40	0	0	5	210	0	0
Orange	Bathurst	3	470	0	0	2	430	0	0	...	...	5	900	0	0
	Carcoar	17	3,078	0	0	8	1,047	0	0	...	...	25	4,125	0	0
	Cowra	15	794	0	0	2	30	1	27	...	...	17	824	1	27
	Lithgow	5	346	2	0	3	190	0	0	...	...	8	536	2	0
	Molong	16	2,032	3	30	22	3,837	0	10	...	...	38	5,870	0	0
	Mudgee	22	2,203	1	0	21	2,151	0	0	...	...	43	4,354	1	0
	Orange	1	80	0	0	1	300	0	0	...	...	2	380	0	0
	Rylstone	15	1,199	2	0	8	470	0	0	...	...	23	1,669	2	0
	Wellington	8	1,950	0	0	6	837	0	0	...	...	14	2,837	0	0
Sydney	Campbelltown	2	160	0	0	...	...	...	...	...	...	2	160	0	0
	Kiama .....	...	...	...	...	1	40	0	0	...	...	1	40	0	0
	Nowra	7	419	0	0	1	40	0	0	...	...	8	459	0	0
	Parramatta	1	40	0	0	2	90	0	0	3	180	0	0
	Penrith	3	113	3	0	1	33	2	0	...	...	4	152	1	0
	Pictou	11	1,140	0	0	8	470	0	0	...	...	19	1,610	0	0
	Windsor	28	2,434	1	20	5	200	0	0	33	2,634	1	20
Tamworth	Murrurundi	7	2,011	0	0	16	2,608	1	0	...	...	23	4,619	1	0
	Tamworth	48	4,732	1	5	43	4,538	3	10	1	250	0	0	92	9,581	0	15
Wagga Wagga	Albury	3	118	1	10	2	280	0	0	...	...	5	398	1	10
	Cootamundra	20	1,293	2	18	4	714	0	0	...	...	24	2,007	2	18
	Gundagai	4	825	0	0	13	2,290	0	0	...	...	17	3,115	0	0
	Tumbarumba	1	180	0	0	2	450	0	0	...	...	3	630	0	0
	Tumut	4	280	0	0	5	272	2	0	...	...	9	552	2	0
Forbes... ..	Barmedman East	9	1,414	3	0	3	750	0	0	...	...	12	2,174	3	0
TOTAL EASTERN.....		637	59,665	3	7	509	49,057	0	13	19	1,253	2	0	1,165	109,976	1	20
CENTRAL DIVISION.																	
Bourke.....	Brewarrina East	8	4,600	0	0	...	...	...	...	...	...	8	4,600	0	0
Dubbo.....	Dubbo	28	7,162	0	0	13	2,824	0	0	...	...	41	9,986	0	0
	Coonamble	22	5,441	0	0	38	7,095	0	0	...	...	69	12,536	0	0
	Nyngan	6	2,739	0	0	4	1,150	0	0	...	...	10	3,889	0	0
	Warren	19	4,222	0	0	20	7,150	0	0	...	...	39	11,372	0	0
Forbes	Barmedman	11	2,883	3	0	16	2,746	3	0	...	...	27	5,630	2	0
	Condobolin	4	722	0	0	2	451	0	0	...	...	6	1,173	0	0
	Forbes	14	674	1	19	15	3,752	2	0	...	...	29	4,426	3	19
	Grenfell	7	1,099	2	0	6	1,300	0	0	...	...	13	2,399	2	0
	Parkes	23	4,032	1	0	9	1,261	3	0	...	...	32	5,294	0	0

SCHEDULE IX—continued.

Local Land Board District.	Land District.	Section 26. (O.C.P.)		Section 42. (A.C.P.)		Section 47. (N.R.C.P.)		Total No. of Applications.	Total Area applied for.
		No.	Area.	No.	Area.	No.	Area.		
CENTRAL DIVISION—continued.									
			a. r. p.		a. r. p.		a. r. p.		a. r. p.
Hay.....	Deniliquin	19	7,964 0 0	9	1,461 2 0	...	.....	25	9,425 2 0
	Balranald South	3	1,434 0 0	...	.....	...	.....	3	1,434 0 0
	Hay	5	2,070 0 0	5	1,199 0 0	...	.....	10	3,269 0 0
	Hillston	3	464 0 0	...	.....	...	.....	3	464 0 0
Moree	Bingara	7	2,131 0 0	5	915 0 0	...	.....	12	3,046 0 0
	Moree	23	8,337 1 0	21	6,583 2 0	...	.....	44	14,920 3 0
	Walgett.....	8	3,480 0 0	4	1,147 2 0	...	.....	12	4,627 2 0
	Warialda.....	15	1,741 0 0	25	5,258 0 0	...	.....	40	6,999 0 0
Tamworth	Coonabarabran	9	1,560 0 0	15	3,387 2 0	...	.....	24	4,947 2 0
	Gunnedah	23	3,123 3 13	16	4,753 2 0	...	.....	39	7,877 1 13
	Narrabri.....	27	7,060 1 0	16	4,315 3 0	...	.....	43	11,376 0 0
Wagga Wagga ...	Cootamundry Central.....		.....		.....		.....		.....
	Corowa	11	3,285 1 0	7	1,272 0 0	...	.....	18	4,557 1 0
	Narrandera	3	389 0 0	3	1,010 3 0	...	.....	6	1,399 3 0
	Tumbarumba North	1	50 0 0	...	.....	...	.....	1	50 0 0
	Urana	9	2,378 3 0	5	901 3 0	...	.....	14	3,280 2 0
	Wagga Wagga	13	3,108 0 0	10	1,325 3 0	...	.....	23	4,433 3 0
TOTAL CENTRAL		321	82,152 0 32	264	61,262 2 0	...	.....	585	143,414 2 32
WESTERN DIVISION.									
Bourke	Cobar	1	40 0 0	...	.....	...	.....	1	40 0 0
TOTAL WESTERN.....		1	40 0 0	..	.....	...	.....	1	40 0 0
SUMMARY.									
Eastern Division		637	59,665 3 7	509	49,057 0 13	19	1,253 2 0	1,165	109,976 1 20
Central Division		321	82,152 0 32	264	61,262 2 0	...	.....	585	143,414 2 32
Western Division		1	40 0 0	..	.....	...	.....	1	40 0 0
TOTAL.....		959	141,857 3 39	773	110,319 2 13	19	1,253 2 0	1,751	253,431 0 12

SCHEDULE X.

RETURN showing the Number and Area of Conditional Purchases applied for during 1895, and the amount of Deposits received.

Ordinary Conditional Purchases.				Special Area Conditional Purchases.			
No.	Area.	Deposit.	Section.	No.	Area.	Deposit.	Section.
	a. r. p.	£ s. d.			a. r. p.	£ s. d.	
631	102,365 0 0	10,236 10 0	26	328	39,492 3 39	7,460 17 9	26
643	94,218 3 0	9,421 13 0	42	130	16,100 3 13	2,862 2 0	42
19	1,253 2 0	250 14 0	47	...	.....	.....	47
1,293	197,837 1 0	19,908 17 0		458	55,593 3 12	10,322 19 9	

SUMMARY of Number and Area of Conditional Purchases applied for from the year 1862 to 1895 inclusive.

Years.	Applied for.		Years.	Applied for.	
	No.	Area.		No.	Area.
1862 to 1869	27,994	a. r. p. 2,161,390 2 2	1884	10,657	a. r. p. 1,453,937 0 33
1870	4,471	329,318 1 2	1885	5,377	1,165,351 1 20
1871	4,751	358,682 2 8	1886	6,080	963,196 2 27
1872	3,281	749,586 3 0	1887	4,769	793,004 0 31
1873	13,417	1,391,719 0 0	1888	5,364	865,199 0 38
1874	14,510	1,586,282 0 0	1889	6,205	903,159 2 9
1875	14,517	1,756,678 0 0	1890	3,526	1,713,577 1 0
1876	12,654	1,984,212 0 0	1891	6,153	1,303,094 0 12
1877	12,009	1,699,816 0 0	1892	4,396	816,399 1 19
1878	12,602	1,588,247 3 18	1893	3,393	533,805 2 4
1879	7,540	924,136 1 0	1894	2,617	414,355 0 10½
1880	3,583	1,147,001 2 39	1895	1,751	253,431 0 12
1881	14,220	2,329,202 0 15			
1882	14,606	2,392,217 2 35			
1883	10,674	1,617,712 0 7			
			Total.....	246,117	33,194,713 1 21½

SCHEDULE XI.

RETURN showing the Number and Area of Conditional Purchase Applications Confirmed or Disallowed during 1895.

Local Land Board and Land District.	Class of Application.	Applications made during 1895.				Applications made prior to 1st January, 1895.				Total.			
		Confirmed.		Disallowed.		Confirmed.		Disallowed.		Confirmed.		Disallowed.	
		No.	a. r. p.	No.	a. r. p.	No.	a. r. p.	No.	a. r. p.	No.	a. r. p.	No.	a. r. p.
ARMIDALE.													
Armidale	Ordinary land	Original	6 062 0 0	3 720 0 0	8 540 0 0	2 240 0 0	14 1,502 0 0	5 960 0 0					
		Additional	9 088 1 0	1 221 2 0	7 748 2 0	1 40 0 0	10 1,734 3 0	2 261 2 0					
Do	Special area	Original	4 179 3 0	.. .. .	5 519 3 0	1 20 0 0	6 600 2 0	1 20 0 0					
		Additional	1 52 0 0	.. .. .	2 206 1 0	.. .. .	3 258 1 0	.. .. .				
Glen Innes	Ordinary land	Original	5 378 0 0	.. .. .	1 320 0 0	1 40 0 0	6 633 0 0	1 40 0 0					
Do	Special area	Original	4 560 1 0	2 210 0 0	2 142 1 0	2 230 0 0	6 702 2 0	4 440 0 0					
		Additional	3 208 1 0	.. .. .	1 40 0 0	.. .. .	4 248 1 0	.. .. .				
Inverell	Ordinary land	Original	3 132 0 0	6 1,250 0 0	11 1,023 2 0	8 1,140 0 0	14 1,765 2 0	12 2,300 0 0					
		Additional	12 746 2 0	6 651 0 0	18 1,816 2 0	1 40 0 0	30 2,563 0 0	7 691 0 0					
Do	Special area	Original	2 212 3 0	4 453 1 0	2 222 2 0	.. .. .	4 435 1 0	4 453 1 0					
		Additional	3 448 0 0	5 420 3 0	3 610 0 0	.. .. .	6 1,058 0 0	5 420 3 0					
Tenterfield	Ordinary land	Original	5 342 0 0	5 700 0 0	17 2,573 0 0	2 90 0 0	22 2,916 0 0	7 850 0 0					
Do	Special area	Original	3 218 0 0	3 328 0 0	12 979 1 0	1 40 0 0	15 1,107 1 0	4 308 0 0					
		Additional	.. .. .	1 10 0 28	1 100 0 0	.. .. .	1 160 0 0	1 10 0 28					
Walcha	Ordinary land	Original	2 166 2 0	.. .. .	1 100 0 0	.. .. .	3 266 2 0	.. .. .				
Do	Special area	Additional	6 1,008 2 0	1 112 1 0	2 103 2 0	1 45 0 0	9 1,200 0 0	2 167 1 0					
		Additional	.. .. .	.. .. .	1 187 1 0	.. .. .	1 137 1 0	.. .. .				
SUMMARY.													
	Ordinary land	Original	21 1,976 2 0	14 2,730 0 0	38 5,168 2 0	11 1,510 0 0	59 7,132 0 0	25 4,240 0 0					
		Additional	34 3,609 2 0	13 1,522 3 0	41 3,788 0 0	6 395 0 0	75 7,897 2 0	19 1,917 3 0					
	Total		55 5,585 0 0	27 4,252 3 0	79 8,944 2 0	17 1,905 0 0	134 14,529 2 0	44 6,157 3 0					
	Special area	Original	9 600 3 0	4 453 1 0	9 882 1 0	1 20 0 0	18 1,483 0 0	5 473 1 0					
		Additional	4 500 0 0	6 430 3 28	6 939 2 0	.. .. .	10 1,453 2 0	6 430 3 28					
	Total		13 1,100 3 0	10 884 0 28	15 1,825 3 0	1 20 0 0	28 2,936 2 0	11 904 0 28					
	Grand Total—Ordinary land and Special area		68 6,685 3 0	37 5,136 3 28	94 10,780 1 0	18 1,925 0 0	162 17,466 0 0	55 7,061 3 28					
DOURKE.													
Brewarrina East	Ordinary land	Original	6 3,897 0 0	1 640 0 0	2 1,280 0 0	.. .. .	8 5,177 0 0	1 640 0 0					
	Total		6 3,897 0 0	1 640 0 0	2 1,280 0 0	.. .. .	8 5,177 0 0	1 640 0 0					
Cobar	Special area	Original	1 40 0 0	.. .. .	.. .. .	.. .. .	1 40 0 0	.. .. .				
	Total		1 40 0 0	.. .. .	.. .. .	.. .. .	1 40 0 0	.. .. .				
	Grand Total—Ordinary land and Special area		7 3,937 0 0	1 640 0 0	2 1,280 0 0	.. .. .	9 5,217 0 0	1 640 0 0					
COOMA.													
Bega	Ordinary land	Original	3 311 1 0	.. .. .	1 60 0 0	.. .. .	4 371 1 0	.. .. .				
		Additional	1 40 0 0	1 50 0 0	.. .. .	.. .. .	1 40 0 0	1 50 0 0					
Do	Special area	Non-residential	.. .. .	.. .. .	1 70 0 0	1 50 0 0	1 70 0 0	1 50 0 0					
		Additional	.. .. .	.. .. .	1 40 2 0	.. .. .	1 40 2 0	.. .. .				
Bombala	Ordinary land	Original	1 66 0 0	4 600 0 0	4 340 0 0	.. .. .	5 395 0 0	4 660 0 0					
		Additional	3 259 1 0	1 60 0 0	6 993 2 0	2 180 0 0	9 1,252 3 0	3 240 0 0					
Do	Special area	Original	2 60 0 0	.. .. .	3 134 0 0	.. .. .	5 194 0 0	.. .. .				
		Additional	1 312 1 0	.. .. .	5 495 3 0	.. .. .	6 808 0 0	.. .. .				
Braidwood	Ordinary land	Original	2 80 0 0	1 50 0 0	8 980 0 0	.. .. .	10 1,069 0 0	1 50 0 0					
		Additional	3 250 0 0	.. .. .	4 160 0 0	.. .. .	7 410 0 0	.. .. .				
Do	Special area	Original	1 100 0 0	1 100 0 0	.. .. .	.. .. .	1 100 0 0	1 100 0 0					
		Additional	8 467 0 0	1 100 0 0	4 211 2 0	1 100 1 0	12 808 2 0	2 200 1 0					
Cooma	Ordinary land	Original	13 904 2 0	5 215 0 0	24 2,035 3 0	2 225 0 0	37 3,030 1 0	7 450 0 0					
		Additional	11 1,213 3 0	2 464 0 0	7 931 2 0	1 160 0 0	13 2,195 1 0	3 824 0 0					
Do	Special area	Original	2 61 0 31	.. .. .	1 40 0 0	1 134 2 0	3 101 0 31	1 134 2 0					
		Additional	.. .. .	1 150 0 0	1 40 0 0	1 40 0 0	.. .. .	2 190 0 0					
Elden	Ordinary land	Original	1 60 0 0	2 100 0 0	1 40 0 0	1 180 0 0	2 100 0 0	3 280 0 0					
		Additional	.. .. .	1 40 0 0	1 120 0 0	.. .. .	1 120 0 0	1 40 0 0					
Milton	Ordinary land	Original	3 165 2 0	.. .. .	.. .. .	.. .. .	3 165 2 0	.. .. .				
		Additional	1 61 0 0	.. .. .	.. .. .	.. .. .	1 61 0 0	.. .. .				
Moruya	Ordinary land	Original	9 581 0 0	8 440 0 0	5 315 0 0	.. .. .	14 876 0 0	8 440 0 0					
		Additional	6 322 2 0	3 130 0 0	3 182 1 0	.. .. .	9 464 3 0	3 130 0 0					
Do	Special area	Original	2 95 0 0	.. .. .	.. .. .	.. .. .	2 95 0 0	.. .. .				
		Additional	1 59 0 0	1 40 0 0	2 30 1 0	.. .. .	3 139 1 0	1 40 0 0					
Queanbeyan	Ordinary land	Original	9 656 0 0	2 200 0 0	1 40 0 0	1 40 0 0	10 696 0 0	3 240 0 0					
		Additional	7 523 2 0	5 250 0 0	5 390 0 0	.. .. .	12 353 2 0	5 250 0 0					
Do	Special area	Original	1 21 0 0	.. .. .	2 167 3 10	.. .. .	3 188 3 10	.. .. .				
		Additional	.. .. .	.. .. .	2 181 2 10	1 13 2 10	2 181 2 10	1 13 2 10					
SUMMARY													
	Ordinary land	Original	35 2,475 3 0	17 1,600 0 0	23 1,955 2 0	3 180 1 0	58 4,431 1 0	20 1,780 1 0					
		Additional	35 2,510 3 0	17 805 0 0	43 3,691 2 0	5 595 0 0	78 6,202 1 0	22 1,400 0 0					
		Non-residential	.. .. .	1 40 0 0	2 190 0 0	1 50 0 0	2 190 0 0	2 90 0 0					
	Total		70 4,986 2 0	35 2,445 0 0	68 5,837 0 0	9 825 1 0	138 10,823 2 0	44 3,270 1 0					
	Special area	Original	17 1,489 3 0	3 504 0 0	12 1,283 1 10	1 100 0 0	20 2,773 0 10	4 724 0 0					
		Additional	4 432 1 31	1 40 0 0	11 838 0 10	2 148 0 10	15 1,270 2 1	3 188 0 10					
	Total		21 1,922 0 31	4 604 0 0	23 2,121 1 20	3 208 0 10	44 4,043 2 11	7 912 0 10					
	Grand Total		91 6,908 2 31	39 3,049 0 0	91 7,958 1 20	12 1,133 1 10	182 14,867 0 11	61 4,182 1 10					

SCHEDULE XI—continued.

Local Land Board and Land District.	Class of Application.	Applications made during 1885.				Applications made prior to 1st January, 1885.				Total.			
		Confirmed.		Disallowed.		Confirmed.		Disallowed.		Confirmed.		Disallowed.	
		No.	a. r. p.	No.	a. r. p.	No.	a. r. p.	No.	a. r. p.	No.	a. r. p.	No.	a. r. p.
DUBBO.													
Coonamble	Ordinary land	Original	200 3 0	14	3,501 0 0	11	2,089 2 0	4	1,800 0 0	13	2,300 1 0	18	5,301 0 0
		Additional	611 2 0	11	1,324 0 0	19	5,364 1 0	5	610 0 0	24	5,975 3 0	16	2,484 0 0
Do	Special area	Original	360 0 0	6	1,551 0 0	1	406 0 0	2	320 0 0	10	1,565 0 0	7	1,871 0 0
Dubbo	Ordinary land	Original	955 0 0	2	560 0 0	2	380 0 0	..	..	6	1,335 0 0	2	660 0 0
		Additional	270 0 0	..	..	1	50 0 0	..	..	7	320 0 0	..	..
Do	Special area	Original	40 0 0	1	538 0 0	1	100 0 0	..	..	2	140 0 0	..	..
		Additional	..	1	640 0 0	4	632 0 0	1	40 0 0	4	632 0 0	2	578 0 0
Nyngan	Ordinary land	Original	..	2	640 0 0	..	..	..	..	1	40 0 0	2	640 0 0
		Additional	..	..	..	1	40 0 0	..	..	..	..	..	..
Warren	Ordinary land	Original	2,593 0 0	7	1,468 0 0	..	..	1	60 0 0	12	3,507 0 0	2	1,628 0 0
		Additional	131 0 0	2	560 0 0	3	974 0 0	..	..	5	291 1 0	..	..
Do	Special area	Original	122 1 0	1	49 0 0	1	631 0 0	..	..	3	753 1 0	1	49 0 0
		Additional	..	..	..	..	..	..	..	..	..	..	..
SUMMARY.													
	Ordinary land	Original	5 020 3 0	27	7,053 0 0	22	3,376 2 0	8	2,220 0 0	27	4,497 1 0	35	9,278 0 0
		Additional	13 4,169 2 0	17	3,584 0 0	20	6,718 1 0	6	610 0 0	42	10,877 3 0	22	4,194 0 0
		Non-residential	..	..	..	1	40 0 0	..	..	1	40 0 0	..	..
	Total		18 4,780 1 0	44	10,642 0 0	52	10,634 3 0	13	2,830 0 0	70	15,416 0 0	57	13,472 0 0
	Special area	Original	8 401 1 0	..	..	5	616 0 0	..	..	13	1,017 1 0	..	..
		Additional	3 162 1 0	1	49 0 0	2	781 0 0	..	..	5	893 1 0	1	49 0 0
	Total		11 563 2 0	1	49 0 0	7	1,347 0 0	..	..	18	1,910 2 0	1	49 0 0
	Grand Total		29 5,343 3 0	45	10,691 0 0	59	11,981 3 0	13	2,830 0 0	88	17,325 2 0	58	13,521 0 0
FORBES.													
Barnedman	Ordinary land	Additional	1 40 0 0	2	355 0 0	..	..	..	..	1	40 0 0	2	355 0 0
Do	Special area	Original	4 1,323 3 0	..	..	1	80 0 0	..	..	5	1,403 3 0	..	..
		Additional	6 1,223 1 0	2	400 0 0	..	..	..	..	6	1,223 1 0	2	400 0 0
Barnedman East.	Ordinary land	Original	4 675 3 0	..	..	1	240 0 0	..	..	5	915 3 0	..	..
		Additional	2 720 0 0	..	..	..	..	..	..	2	720 0 0	..	..
Do	Special area	Original	1 320 0 0	..	..	..	..	..	..	1	320 0 0	..	..
		Additional	..	..	..	1	240 0 0	..	..	1	240 0 0	..	..
Condobolin	Ordinary land	Original	2 480 0 0	1	160 0 0	..	..	..	..	2	480 0 0	1	160 0 0
		Additional	2 451 0 0	..	..	1	200 0 0	1	200 0 0	3	651 0 0	1	200 0 0
Do	Special area	Original	1 82 0 0	..	..	..	..	..	..	1	82 0 0	..	..
		Additional	..	3	501 2 0	1	400 0 0	..	..	1	407 0 0	3	501 2 0
Forbes	Ordinary land	Original	1 55 0 0	4	2,580 0 0	..	..	..	..	4	2,580 0 0	1	55 0 0
		Additional	..	1	5 1 0	..	..	..	..	..	..	..	..
Do	Special area	Original	8 42 2 19	1	578 3 0	7	2,770 2 0	..	..	8	42 2 19	1	5 1 0
		Additional	1 63 1 0	3	200 0 0	1	200 0 0	..	..	3	2,831 3 0	1	578 3 0
Greenfell	Ordinary land	Original	3 1,065 2 0	..	..	..	..	..	..	1	200 0 0	3	200 0 0
		Additional	2 60 0 0	1	40 0 0	..	..	..	..	3	1,065 2 0	..	..
Do	Special area	Original	2 180 0 0	..	..	..	..	..	..	2	60 0 0	1	40 0 0
		Additional	8 1,004 0 0	1	160 0 0	1	200 0 0	..	..	2	180 0 0	..	..
Parkes	Ordinary land	Original	1 160 0 0	4	510 0 0	7	1,110 1 0	1	320 0 0	19	2,644 2 0	1	3 0 0
		Additional	12 1,534 1 0	..	..	1	150 0 0	3	16 0 0	4	541 3 0	3	16 0 0
Do	Special area	Original	3 391 3 0	..	..	..	..	..	..	..	..	..	..
		Additional	..	..	..	..	..	..	..	..	..	..	..
SUMMARY.													
	Ordinary land	Original	0 2,150 3 0	8	1,081 2 0	4	1,040 0 0	..	..	13	3,199 3 0	8	1,081 2 0
		Additional	8 2,276 2 0	7	920 0 0	5	2,780 0 0	2	620 0 0	18	5,056 2 0	9	1,440 0 0
	Total		17 4,426 1 0	15	2,001 2 0	9	3,820 0 0	2	620 0 0	26	8,255 1 0	17	2,521 2 0
	Special area	Original	23 3,362 2 19	2	45 1 0	8	1,100 1 0	1	3 0 0	36	4,262 3 19	3	43 1 0
		Additional	12 1,858 1 0	3	978 3 0	9	3,160 2 0	3	16 0 0	21	5,018 3 0	6	204 3 0
	Total		40 5,220 3 19	5	1,024 0 0	17	4,260 3 0	4	19 0 0	57	9,280 2 19	9	1,043 0 0
	Grand Total		57 9,646 0 19	20	3,025 2 0	26	8,170 3 0	6	639 0 0	83	17,827 3 19	26	3,564 2 0
GOULBURN.													
Boorowa	Ordinary land	Original	..	1	40 0 0	1	70 0 0	..	..	1	70 0 0	1	40 0 0
		Additional	6 425 0 0	..	..	1	68 0 0	..	..	7	493 0 0	..	..
Do	Special area	Original	3 268 2 0	..	..	1	111 0 0	..	..	4	377 2 0	..	..
		Additional	8 810 3 0	2	115 2 0	3	410 0 0	3	410 0 0	8	810 3 0	5	525 2 0
Goulburn	Ordinary land	Original	4 370 0 0	1	100 0 0	10	838 0 0	..	..	16	1,208 0 0	1	100 0 0
		Additional	8 474 2 0	1	50 0 0	4	205 0 0	1	40 0 0	12	679 2 0	2	00 0 0
Do	Special area	Original	1 48 1 0	..	..	..	..	..	..	1	48 1 0	..	..
		Additional	2 80 0 0	..	..	2	274 0 0	1	40 0 0	4	354 0 0	1	40 0 0
Gunning	Ordinary land	Original	2 123 1 0	1	60 0 0	1	40 0 0	..	..	3	163 1 0	1	60 0 0
		Additional	1 50 0 0	1	104 1 0	..	..	..	..	1	50 0 0	1	104 1 0
Do	Special area	Original	1 58 3 0	..	..	..	..	..	..	1	58 3 0	..	..
		Additional	6 301 0 0	1	30 0 0	2	290 0 0	..	..	7	671 0 0	1	30 0 0
Moss Vale	Ordinary land	Original	1 81 3 0	..	..	1	245 0 0	..	..	4	326 3 0	..	..
		Additional	1 40 0 0	1	203 0 0	1	40 0 0	1	40 0 0	1	40 0 0	1	40 0 0
Yass	Ordinary land	Original	1 40 0 0	..	..	4	250 0 0	..	..	5	290 0 0	..	..
		Additional	1 40 0 0	..	..	1	320 0 0	..	..	2	360 0 0	..	..
Do	Special area	Original	1 50 0 0	..	..	1	40 0 0	..	..	2	90 0 0	..	..
Young	Ordinary land	Original	20 995 1 18	13	751 2 5	1	16 3 10	33	1,669 3 23	1	16 3 10	1	16 3 10
		Additional	6 127 1 5	1	5 1 38	9	806 0 38	..	..	14	933 2 3	1	5 1 38
SUMMARY.													
	Ordinary land	Original	15 931 0 0	4	382 0 0	17	1,592 0 0	2	80 0 0	32	2,523 0 0	6	482 0 0
		Additional	18 1,144 2 0	2	110 0 0	13	803 0 0	1	40 0 0	31	1,952 2 0	3	150 0 0
		Non-residential	..	..	..	1	40 0 0	1	80 0 0	1	40 0 0	1	80 0 0
	Total		33 2,075 2 0	6	492 0 0	31	2,440 0 0	4	200 0 0	64	4,515 2 0	10	692 0 0
	Special area	Original	25 1,270 0 18	1	104 1 0	14	875 2 5	1	16 3 10	36	2,145 2 23	2	121 0 10
		Additional	15 1,031 3 6	3	120 3 38	10	1,126 0 38	3	410 0 0	25	2,158 0 3	6	530 3 33
	Total		40 2,301 3 23	4	225 0 33	24	2,001 3 3	4	426 3 10	61	4,303 2 26	8	652 0 3
	Grand Total		73 4,377 1 23	10	717 0 33	55	4,441 3 3	8	626 3 10	125	8,819 0 26	18	1,344 0 3

SCHEDULE XI—continued.

Local Land Board and Land District.	Class of Application.	Applications made during 1895.				Applications made prior to 1st January, 1895.				Total.			
		Confirmed.		Disallowed.		Confirmed.		Disallowed.		Confirmed.		Disallowed.	
		No.	a. r. p.	No.	a. r. p.	No.	a. r. p.	No.	a. r. p.	No.	a. r. p.	No.	a. r. p.
GRAFTON.													
Bellingen	Ordinary land	Original	7 390 0 0	1 50 0 0	6 483 0 0	4 340 0 0	13 873 0 0	5 390 0 0					
Do	Special area	Original	2 350 0 0	..	1 87 0 0	1 102 0 0	2 250 0 0	1 102 0 0					
Casino	Ordinary land	Original	1 40 0 0	..	1 68 0 0	..	2 108 0 0	..					
Grafton	Ordinary land	Original	1 69 2 0	..	..	1 80 0 0	1 69 2 0	..					
Kempsey	Ordinary land	Original	3 230 0 0	..	..	1 80 0 0	3 130 0 0	1 80 0 0					
Lismore	Ordinary land	Original	3 140 0 0	1 101 0 0	1 60 0 0	..	3 140 0 0	1 101 0 0					
Do	Special area	Original	3 216 0 0	..	..	..	4 276 0 0	..					
Murwillumbah	Ordinary land	Original	1 57 0 0	2 99 0 0	1 230 2 0	..	1 287 2 0	2 90 0 0					
Do	Special area	Original	2 89 0 0	..	..	..	2 80 0 0	..					
Port Macquarie	Ordinary land	Original	4 491 2 0	..	..	..	4 491 2 0	..					
		Additional	3 47 1 3	..	..	..	3 47 1 3	..					
		Non-residential	2 172 3 11	..	..	..	2 172 3 11	..					
		Original	1 200 0 0	1 50 0 0	..	..	1 200 0 0	1 50 0 0					
		Additional	4 265 2 0	1 100 0 0	..	..	4 265 2 0	1 100 0 0					
		Original	1 82 0 0	..	2 184 3 0	..	3 216 3 0	..					
		Additional	7 466 0 0	..	2 172 0 0	..	9 638 0 0	..					
		Non-residential	1 60 0 0	..	1 200 0 0	..	1 200 0 0	..					
		Original	24 1,522 0 0	2 100 0 0	10 783 0 0	5 420 0 0	34 2,305 0 0	7 520 0 0					
		Additional	15 1,373 2 0	4 300 0 0	2 430 2 0	1 102 0 0	17 1,804 0 0	5 402 0 0					
		Non-residential	1 60 0 0	..	..	..	1 60 0 0	..					
		Total	40 2,955 2 0	6 400 0 0	12 1,213 2 0	6 522 0 0	52 4,169 0 0	12 922 0 0					
		Original	6 824 1 3	..	3 221 3 0	..	9 546 0 3	..					
		Additional	2 172 3 11	..	..	..	2 172 3 11	..					
		Total	8 497 0 14	..	3 221 3 0	..	11 718 3 14	..					
		Grand Total	48 3,452 2 14	6 400 0 0	15 1,435 1 0	6 522 0 0	63 4,887 3 14	12 922 0 0					
HAY.													
Denillquin	Ordinary land	Original	7 2,460 3 0	1 160 0 0	..	..	7 2,460 3 0	1 160 0 0					
Do	Special area	Original	3 477 0 0	1 100 0 0	1 358 8 0	..	4 835 8 0	1 100 0 0					
		Additional	5 2,213 0 0	1 40 0 0	5 1,786 0 0	..	10 3,999 0 0	1 40 0 0					
		Non-residential	2 497 3 0	1 67 0 0	4 504 2 0	4 1,197 2 0	6 912 1 0	5 1,264 2 0					
		Original	4 1,856 2 0	1 200 0 0	2 310 0 0	..	6 2,166 2 0	1 200 0 0					
		Additional	2 367 0 0	1 357 0 0	4 2,220 1 0	2 280 0 0	6 2,590 1 0	3 637 0 0					
		Non-residential	2 150 0 0	..	..	..	2 150 0 0	..					
		Original	1 329 3 0	..	..	..	1 329 3 0	..					
		Additional	..	..	..	..	..	..
		Total	13 4,467 1 0	2 360 0 0	2 310 0 0	..	15 4,777 1 0	2 360 0 0					
		Original	5 844 0 0	2 437 0 0	5 2,638 0 0	2 280 0 0	10 3,432 0 0	4 737 0 0					
		Additional	..	..	..	..	..	..
		Non-residential	..	..	..	..	..	..
		Total	18 5,311 1 0	4 817 0 0	7 2,898 0 0	2 280 0 0	23 8,209 1 0	6 1,097 0 0					
		Original	5 2,213 0 0	1 40 0 0	5 1,786 0 0	..	10 3,999 0 0	1 40 0 0					
		Additional	3 787 2 0	1 67 0 0	4 504 2 0	4 1,197 2 0	7 1,242 0 0	5 1,264 2 0					
		Non-residential	..	..	..	1 320 0 0	..	1 320 0 0					
		Total	8 2,950 2 0	2 107 0 0	9 2,290 2 0	5 1,517 2 0	17 5,241 0 0	7 1,624 2 0					
		Grand Total	26 8,261 3 0	6 924 0 0	16 5,133 2 0	7 1,797 2 0	42 13,450 1 0	13 2,721 2 0					
MATTLAND.													
Casillis	Ordinary land	Original	10 1,346 0 0	1 100 0 0	3 240 3 18	1 100 0 0	13 1,686 3 18	2 200 0 0					
Do	Special area	Original	11 986 0 0	3 190 0 0	8 1,485 2 0	3 200 0 0	19 2,421 2 0	6 380 0 0					
Dungog	Ordinary land	Original	1 40 0 0	..	..	..	1 40 0 0	..					
Do	Special area	Original	1 40 0 0	1 60 0 0	..	..	1 40 0 0	1 60 0 0					
Gosford	Ordinary land	Original	2 108 0 0	..	1 68 3 0	1 160 0 0	3 176 3 0	1 160 0 0					
Do	Special area	Original	..	..	2 80 0 0	..	2 80 0 0	..					
Maitland	Ordinary land	Original	2 21 0 8	..	3 40 0 0	..	1 40 0 0	..					
Do	Special area	Original	1 50 0 0	..	2 17 0 37	..	4 38 1 5	..					
		Additional	4 92 2 10	1 70 1 10	..	..	4 92 2 10	1 70 1 10					
		Non-residential	2 51 3 0	..	..	..	2 51 3 0	..					
Muswellbrook	Ordinary land	Original	6 380 0 0	1 40 0 0	1 40 0 0	..	7 420 0 0	1 40 0 0					
Newcastle	Ordinary land	Original	9 451 3 0	6 245 0 0	2 143 2 0	..	11 565 1 0	6 346 0 0					
Do	Special area	Original	2 103 1 0	..	2 102 3 0	..	2 103 1 0	..					
Do	Special area	Original	..	..	1 40 0 0	..	1 40 0 0	..					
Do	Special area	Additional	..	..	2 119 3 0	..	2 119 3 0	..					
Do	Special area	Original	1 160 0 0	..	1 75 2 0	..	2 175 2 0	..					
Do	Special area	Additional	3 180 2 0	2 380 0 0	11 2,227 0 0	1 53 2 0	14 2,407 2 0	3 413 2 0					
Do	Special area	Original	9 545 0 0	2 160 0 0	7 655 0 0	..	16 1,200 0 0	2 160 0 0					
Do	Special area	Additional	1 73 2 0	..	..	..	1 73 2 0	..					
Do	Special area	Non-residential	..	..	1 100 3 0	..	1 100 3 0	..					
Do	Special area	Original	1 291 0 0	..	1 40 0 0	..	2 331 0 0	..					
Do	Special area	Additional	1 70 0 0	..	1 226 0 0	..	2 296 0 0	..					
Do	Special area	Original	1 329 0 0	..	..	..	1 329 0 0	..					
Do	Special area	Additional	2 166 3 0	..	..	..	2 166 3 0	..					
Do	Special area	Non-residential	3 200 0 0	3 330 1 0	4 222 0 0	..	7 422 0 0	3 330 1 0					
Do	Special area	Original	3 120 3 0	1 50 0 0	..	..	3 120 3 0	1 50 0 0					
Do	Special area	Additional	1 40 0 0	..	..	..	1 40 0 0	..					
Do	Special area	Non-residential	3 120 0 0	1 45 1 0	1 40 0 0	..	4 160 0 0	1 45 1 0					
Do	Special area	Original	1 40 0 0	..	..	..	1 40 0 0	..					
		Additional	..	..	..	..	..	..
		Non-residential	..	..	..	..	..	..
		Total	82 2,889 0 0	9 983 0 0	24 2,994 0 18	3 313 2 0	56 5,883 0 18	12 1,206 2 0					
		Original	34 2,168 2 0	13 705 0 0	21 2,690 3 0	3 200 0 0	55 4,354 1 0	16 905 0 0					
		Additional	1 40 0 0	..	1 40 0 0	..	2 80 0 0	..					
		Non-residential	..	..	..	..	..	..
		Total	67 5,092 2 0	22 1,688 0 0	46 5,724 3 18	6 613 2 0	113 10,617 1 18	28 2,201 2 0					
		Original	10 576 3 18	1 70 1 10	2 17 0 37	..	12 591 0 15	1 70 1 10					
		Additional	4 218 2 0	1 45 1 0	2 119 3 0	..	6 338 1 0	1 45 1 0					
		Total	14 795 1 18	2 115 2 10	4 136 3 37	..	18 929 1 15	2 115 2 10					
		Grand Total	81 5,887 3 18	24 1,803 2 10	50 6,801 3 16	6 613 2 0	131 11,749 2 33	30 2,317 0 16					

SCHEDULE XI—continued.

Local Land Board and Land District.	Class of Application.	Applications made during 1895.				Applications made prior to 1st January, 1895.				Total.			
		Confirmed.		Disallowed.		Confirmed.		Disallowed.		Confirmed.		Disallowed.	
		No.	a. r. p.	No.	a. r. p.	No.	a. r. p.	No.	a. r. p.	No.	a. r. p.	No.	a. r. p.
MOREE.													
Bingara	Ordinary land	Original	1 400 0 0	3 1,180 0 0	2 488 0 0	4 475 0 0	3 888 0 0	7 1,655 0 0	2 605 0 0	7 1,484 2 0	2 605 0 0	1 320 0 0	
Do	Special area	Additional	1 400 0 0	1 400 0 0	1 320 0 0	1 171 0 0	1 171 0 0	1 171 0 0	1 320 0 0	1 320 0 0	1 320 0 0	1 171 0 0	
Moree	Ordinary land	Original	12 4,810 0 0	2 320 0 0	18 7,742 0 0	2 840 0 0	29 12,505 0 0	4 1,160 0 0	19 10,387 3 0	3 743 0 0	2 1,280 0 0	1 320 0 0	
Do	Special area	Additional	1 640 0 0	1 640 0 0	1 640 0 0	2 1,280 0 0	4 1,526 0 0	2 1,280 0 0	1 640 0 0	2 1,280 0 0	2 1,280 0 0	1 640 0 0	
Warialda	Ordinary land	Original	3 440 0 0	1 150 0 0	9 1,294 0 0	2 165 0 0	12 1,734 0 0	3 315 0 0	7 757 0 0	14 2,712 0 0	3 315 0 0	1 150 0 0	
Do	Special area	Additional	1 13 2 0	1 13 2 0	1 13 2 0	1 13 2 0	1 13 2 0	1 13 2 0	1 13 2 0	1 13 2 0	1 13 2 0	1 13 2 0	
Walgett	Ordinary land	Original	6 3,003 1 0	5 1,401 3 0	5 1,401 3 0	3 840 0 0	11 4,405 0 0	3 840 0 0	6 3,003 1 0	11 4,405 0 0	3 840 0 0	5 1,401 3 0	
Do	Special area	Additional	3 734 0 0	1 310 2 0	5 1,561 3 0	1 310 2 0	8 2,205 3 0	1 310 2 0	3 734 0 0	8 2,205 3 0	1 310 2 0	1 310 2 0	
SUMMARY.													
Ordinary land	Original	22 8,662 1 0	6 1,650 0 0	31 10,925 3 0	11 2,320 0 0	56 19,588 0 0	17 3,070 0 0	23 12,558 0 0	28 6,020 0 0	51 18,578 0 0	9 1,972 2 0	1 320 0 0	
Do	Additional	23 7,423 1 0	6 1,307 2 0	27 8,830 2 0	3 665 0 0	50 17,313 3 0	9 1,972 2 0	59 19,285 5 0	3 665 0 0	62 17,948 3 0	12 2,637 2 0	1 320 0 0	
Total	Original	45 16,085 2 0	12 2,957 2 0	62 21,184 1 0	14 2,985 0 0	107 37,221 3 0	26 5,042 2 0	115 38,813 5 0	31 6,685 2 0	113 35,169 5 0	21 5,609 2 0	2 640 0 0	
Special area	Original	2 733 2 0	1 16 0 0	3 749 2 0	2 1,280 0 0	5 1,999 2 20	2 1,280 0 0	7 3,279 2 20	3 566 3 0	8 3,845 5 20	4 1,846 3 0	1 63 0 0	
Do	Additional	2 733 2 0	1 16 0 0	3 749 2 0	1 63 0 0	4 1,362 2 20	2 1,280 0 0	6 2,644 2 20	4 1,229 3 0	6 3,874 2 20	6 1,909 3 0	1 63 0 0	
Total	Original	4 1,466 4 0	2 32 0 0	6 1,498 4 0	3 1,343 0 0	9 3,361 4 40	4 2,560 0 0	13 6,233 4 40	7 1,795 3 0	14 7,219 4 40	10 3,758 3 0	2 126 0 0	
Grand Total	Original	49 17,551 6 0	14 3,011 2 0	68 24,565 3 0	17 4,328 0 0	121 43,760 7 40	30 7,812 6 0	128 45,576 1 40	38 8,480 5 0	127 42,403 9 40	31 7,567 2 0	4 766 0 0	
Do	Additional	49 17,551 6 0	14 3,011 2 0	68 24,565 3 0	17 4,328 0 0	121 43,760 7 40	30 7,812 6 0	128 45,576 1 40	38 8,480 5 0	127 42,403 9 40	31 7,567 2 0	4 766 0 0	
ORANGE.													
Bathurst	Ordinary land	Original	3 470 0 0	3 132 3 0	6 602 3 0	0 652 3 0	6 602 3 0	6 602 3 0	3 470 0 0	9 1,074 3 0	3 470 0 0	3 470 0 0	
Do	Special area	Additional	1 300 0 0	1 300 0 0	2 143 0 0	3 503 0 0	3 503 0 0	3 503 0 0	1 300 0 0	4 803 0 0	3 503 0 0	1 300 0 0	
Carecar	Ordinary land	Original	2 203 0 0	5 1,020 0 0	2 200 0 0	2 150 0 0	4 350 0 0	7 1,240 0 0	2 203 0 0	4 403 0 0	7 1,240 0 0	2 203 0 0	
Do	Special area	Additional	2 240 0 0	2 236 0 0	6 335 0 0	8 575 0 0	2 236 0 0	8 575 0 0	2 240 0 0	10 815 0 0	2 236 0 0	2 240 0 0	
Cowra	Ordinary land	Original	9 400 2 0	1 10 0 0	1 120 0 0	1 120 0 0	10 498 3 0	2 20 0 0	9 400 2 0	11 518 3 0	2 20 0 0	1 10 0 0	
Do	Special area	Additional	1 16 0 0	1 16 0 0	1 16 0 0	1 16 0 0	1 16 0 0	1 16 0 0	1 16 0 0	2 32 0 0	1 16 0 0	1 16 0 0	
Lithgow	Ordinary land	Original	1 50 0 0	1 40 0 0	1 128 0 0	2 178 0 0	3 228 0 0	4 278 0 0	1 50 0 0	4 228 0 0	3 228 0 0	2 178 0 0	
Do	Special area	Additional	1 46 2 0	1 40 0 0	1 69 0 0	1 69 0 0	1 46 2 0	1 40 0 0	1 46 2 0	2 92 2 0	1 40 0 0	1 46 2 0	
Molong	Ordinary land	Original	2 80 0 0	3 880 0 0	11 1,450 0 0	4 400 0 0	18 1,500 0 0	7 1,280 0 0	2 80 0 0	15 1,680 0 0	7 1,280 0 0	3 880 0 0	
Do	Special area	Additional	13 2,571 3 0	1 177 0 0	9 1,209 3 0	22 3,781 2 0	1 177 0 0	22 3,781 2 0	13 2,571 3 0	25 4,358 2 0	1 177 0 0	1 177 0 0	
Mudgee	Ordinary land	Original	4 523 3 30	2 168 3 10	2 168 3 10	2 168 3 10	6 667 3 30	2 168 3 10	4 523 3 30	8 695 6 30	2 168 3 10	2 168 3 10	
Do	Special area	Additional	2 148 3 10	1 275 0 0	2 148 3 10	2 148 3 10	4 296 6 20	1 275 0 0	2 148 3 10	6 444 6 20	1 275 0 0	1 275 0 0	
Mulgoe	Ordinary land	Original	6 411 3 0	1 275 0 0	12 1,871 2 0	1 120 0 0	17 2,233 1 0	2 305 0 0	7 626 3 0	24 2,859 1 0	2 305 0 0	1 275 0 0	
Do	Special area	Additional	5 626 3 0	2 650 0 0	11 1,404 3 0	18 1,404 3 0	17 1,404 3 0	2 650 0 0	5 626 3 0	23 2,434 3 0	2 650 0 0	2 650 0 0	
Orange	Ordinary land	Original	1 390 0 0	2 176 0 0	3 566 0 0	2 185 0 0	5 751 0 0	5 751 0 0	1 390 0 0	7 1,141 0 0	2 176 0 0	2 176 0 0	
Do	Special area	Additional	1 390 0 0	2 176 0 0	2 185 0 0	2 185 0 0	4 770 0 0	2 176 0 0	1 390 0 0	6 1,155 0 0	2 176 0 0	2 176 0 0	
Rylstone	Ordinary land	Original	8 544 2 0	2 176 0 0	9 720 0 0	2 190 0 0	17 1,462 0 0	4 366 0 0	8 544 2 0	21 1,806 0 0	4 366 0 0	2 176 0 0	
Do	Special area	Additional	7 456 0 0	1 40 0 0	4 357 1 0	1 56 0 0	11 813 1 0	2 96 0 0	7 456 0 0	15 1,269 1 0	2 96 0 0	1 40 0 0	
Wellington	Ordinary land	Original	2 520 0 0	3 960 0 0	3 537 0 0	5 1,057 0 0	2 320 0 0	3 960 0 0	2 520 0 0	8 1,577 0 0	3 960 0 0	3 960 0 0	
Do	Special area	Additional	4 787 0 0	6 1,092 1 0	6 1,092 1 0	7 1,789 1 0	10 1,789 1 0	6 1,092 1 0	4 787 0 0	14 2,576 1 0	6 1,092 1 0	6 1,092 1 0	
SUMMARY.													
Ordinary land	Original	22 2,369 1 0	14 3,381 0 0	43 5,353 3 0	9 860 0 0	65 7,043 0 0	23 4,241 0 0	38 11,604 3 0	36 5,300 2 0	76 10,403 3 0	6 932 0 0	2 246 1 0	
Do	Additional	38 5,300 2 0	5 926 0 0	40 4,072 1 0	1 66 0 0	76 9,462 3 0	6 932 0 0	82 10,394 3 0	43 5,353 3 0	122 14,865 6 0	12 2,168 1 0	2 246 1 0	
Total	Original	58 7,670 3 0	19 4,307 0 0	83 9,425 4 0	10 916 0 0	143 17,351 3 0	29 5,223 0 0	148 26,847 6 0	79 10,655 3 0	198 25,268 9 0	18 6,173 0 0	4 492 1 0	
Special area	Original	16 1,351 3 30	2 50 0 0	4 451 1 0	1 30 0 0	20 1,863 0 30	3 60 0 0	23 1,923 3 30	3 218 3 10	27 2,081 6 40	5 116 0 0	1 63 0 0	
Do	Additional	3 218 3 10	2 56 0 0	5 267 1 0	1 63 0 0	3 281 3 10	2 56 0 0	6 544 4 10	5 267 1 0	11 811 4 10	7 116 0 0	1 63 0 0	
Total	Original	19 1,600 3 0	4 106 0 0	9 718 1 0	2 93 0 0	23 2,144 6 40	5 116 0 0	29 2,468 4 40	8 485 4 10	38 2,892 8 50	12 772 0 0	2 126 0 0	
Grand Total	Original	77 9,270 6 0	23 4,413 0 0	92 10,143 4 0	11 1,009 0 0	166 19,495 7 40	34 5,339 0 0	177 29,315 1 40	87 11,148 3 0	226 31,760 10 0	30 6,389 0 0	6 618 1 0	
Do	Additional	77 9,270 6 0	23 4,413 0 0	92 10,143 4 0	11 1,009 0 0	166 19,495 7 40	34 5,339 0 0	177 29,315 1 40	87 11,148 3 0	226 31,760 10 0	30 6,389 0 0	6 618 1 0	
SYDNEY.													
Campbelltown	Ordinary land	Original	2 1,600 0 0	2 1,600 0 0	2 1,600 0 0	2 1,600 0 0	2 1,600 0 0	2 1,600 0 0	2 1,600 0 0	4 3,200 0 0	2 1,600 0 0	2 1,600 0 0	
Do	Special area	Additional	1 40 0 0	1 40 0 0	1 40 0 0	1 40 0 0	1 40 0 0	1 40 0 0	1 40 0 0	2 80 0 0	1 40 0 0	1 40 0 0	
Kiama	Ordinary land	Original	2 228 3 0	1 40 0 0	2 50 0 0	1 40 0 0	4 208 3 0	1 40 0 0	2 228 3 0	3 248 3 0	1 40 0 0	1 40 0 0	
Do	Special area	Additional	1 40 0 0	1 40 0 0	1 40 0 0	1 40 0 0	1 40 0 0	1 40 0 0	1 40 0 0	2 80 0 0	1 40 0 0	1 40 0 0	
Parramatta	Ordinary land	Original	1 40 0 0	1 40 0 0	1 40 0 0	2 150 0 0	1 40 0 0	3 190 0 0	1 40 0 0	3 190 0 0	2 150 0 0	2 150 0 0	
Do	Special area	Additional	3 118 3 0	1 33 3 0	4 151 6 0	3 118 3 0	7 269 6 0	1 33 3 0	4 151 6 0	11 320 9 0	1 33 3 0	1 33 3 0	
Penrith	Ordinary land	Original	7 417 0 0	1 150 0 0	5 570 0 0	12 987 0 0	1 150 0 0	16 727 0 0	4 350 0 0	20 1,077 0 0	1 150 0 0	1 150 0 0	
Do	Special area	Additional	4 350 0 0	3 120 0 0	2 210 0 0	1 40 0 0	6 490 0 0	4 160 0 0	4 350 0 0	10 840 0 0	4 160 0 0	4 160 0 0	
Picton	Ordinary land	Original	7 342 1 13	3 1,320 0 0	1 40 0 0	8 352 1 13	3 1,320 0 0	11 1,712 1 13	4 160 0 0	15 1,872 1 13	3 1,320 0 0	1 40 0 0	
Do	Special area	Additional	4 160 0 0	1 40 0 0	3 120 0 0	1 50 0 0	7 280 0 0	2 90 0 0	4 160 0 0	11 700 0 0	2 90 0 0	1 40 0 0	
Windsor	Ordinary land	Original	16 647 3 10	1 50 2 10	2 68 1 0	1 32 0 0	18 716 0 10	2 82 2 10	16 647 3 10	20 838 0 10	2 82 2 10	1 50 2 10	
Do	Special area	Additional	16 647 3 10	1 50 2 10	2 68 1 0	1 32 0 0	18 716 0 10	2 82 2 10	16 647 3 10	20 838 0 10	2 82 2 10	1 50 2 10	
SUMMARY.													
Ordinary land	Original	17 628 0 18	5 1,510 0 0	8 600 0 0	2 80 0 0	25 1,618 0 18	5 1,510 0 0	30 3,128 0 18	6 330 0 0	36 3,458 0 18	5 1,510 0 0	1 40 0 0	
Do	Additional	4 160 0 0	1 40 0 0	4 1,840 0 0	1 240 0 0	10 2,170 0 0	5 280 0 0	15 2,450 0 0	4 160 0 0	14 2,610 0 0	5 280 0 0	1 40 0 0	
Total	Original	21 1,413 0 18	6 1,650 0 0	12 2,440 0 0	3 320 0 0	35 3,788 0 18	10 1,790 0 0	45 6,038 0 18	10 1,490 0 0	50 6,068 0 18	10 1,790 0 0	2 40 0 0	
Special area	Original	22 1,047 2 10	2 116 2 10	2 68 1 0	1 32 0 0	24 1,115 3 10	3 142 2 10	27 1,257 5 10	1 33 2 0	28 1,148 7 10	4 175 0 10	1 33 2 0	
Do	Additional	1 29 1 0	1 33 2 0	1 33 2 0	1 32 0 0	1 29 1 0	1 33 2 0	4 175 0 10	1 29 1 0	5 414 2 10	1 33 2 0	1 33 2 0	
Total	Original	23 1,076 3 10	3 149 4 10	3 101 3 0	2 64 0 0								

SCHEDULE XI—continued.

Local Land Board and Land District.	Class of Application.	Applications made during 1895.				Applications made prior to 1st January, 1895.				Total.				
		Confirmed.		Disallowed.		Confirmed.		Disallowed.		Confirmed.		Disallowed.		
		No.	a. r. p.	No.	a. r. p.	No.	a. r. p.	No.	a. r. p.	No.	a. r. p.	No.	a. r. p.	
TAMWORTH.														
Coonabarrabran	Ordinary land	Original	3	290 0 0	3	540 0 0	4	1,075 0 0	7	1,365 0 0	3	540 0 0	3	540 0 0
		Additional	4	633 0 0	2	757 2 0	5	333 0 0	3	940 0 0	9	965 0 0	5	1,697 2 0
Gunnedah	Ordinary land	Original	8	3,058 2 0	2	2,270 1 0	5	1,173 3 0	1	50 0 0	5	1,173 3 0	7	2,329 1 0
		Additional	9	257 1 7	1	3 1 0	2	696 1 0	1	80 0 0	13	3,754 3 0	3	550 0 0
Do	Special area	Original	2	590 0 0	1	40 0 0	2	250 1 0	1	67 3 0	4	790 1 0	2	107 3 0
Murrurundi	Ordinary land	Original	4	85 0 0	6	693 3 0	6	618 0 0	10	1,503 0 0	6	693 3 0	6	693 3 0
		Additional	2	295 3 0	2	240 0 0	2	240 0 0	4	535 3 0	4	535 3 0	4	535 3 0
Do	Special area	Original	2	264 0 0	2	360 0 0	4	360 0 0	4	624 0 0	4	624 0 0	4	624 0 0
Narrabri	Ordinary land	Original	6	2,034 1 0	5	1,030 2 0	17	5,441 2 0	4	393 0 0	23	7,524 3 0	9	1,479 2 0
		Additional	7	2,122 2 0	5	1,203 0 0	29	30,754 1 0	2	697 1 0	36	32,876 3 0	7	1,819 1 0
Do	Special area	Original	5	708 3 0	2	446 0 0	1	490 0 0	6	1,168 3 0	2	446 0 0	2	446 0 0
Tamworth	Ordinary land	Original	11	1,410 0 0	1	45 0 0	25	6,242 2 0	6	665 0 0	46	7,682 2 0	7	710 0 0
		Additional	18	2,091 0 0	2	699 0 0	23	4,383 1 0	2	150 0 0	46	6,984 1 0	4	810 0 0
Do	Special area	Original	17	761 3 5	10	1,006 0 5	10	1,006 0 5	27	1,767 3 10	1	250 0 0	28	1,767 3 10
	Additional	6	315 0 0	4	277 3 10	12	2,733 3 0	1	49 0 0	18	3,018 3 0	5	326 3 10	
SUMMARY.														
Ordinary land	Original	22	4,353 1 0	16	3,975 3 0	63	14,133 0 0	12	1,172 3 0	85	13,536 1 0	28	6,148 2 0	
	Additional	41	8,709 0 0	17	3,744 1 0	73	36,734 3 0	8	1,757 1 0	114	45,484 3 0	25	5,501 2 0	
	Non-residential	1	250 0 0	1	250 0 0	1	250 0 0	1	250 0 0	1	250 0 0	1	250 0 0	
Total		64	13,304 1 0	33	7,720 0 0	136	50,967 3 0	20	2,930 0 0	200	64,271 0 0	53	10,650 0 0	
Special area	Original	33	1,991 3 12	3	449 1 6	15	1,838 2 5	2	149 0 0	48	3,830 1 17	3	449 1 6	
	Additional	10	1,321 1 0	4	277 3 10	17	3,655 2 0	2	149 0 0	27	4,916 3 0	6	426 3 10	
Total		43	3,313 0 12	7	727 0 16	32	5,493 0 5	2	149 0 0	75	8,747 0 17	9	876 0 16	
Grand Total		107	16,616 1 12	40	8,447 0 16	168	56,461 3 5	22	3,079 0 0	275	73,018 0 17	62	11,520 0 16	
WAGGA WAGGA.														
Albury	Ordinary land	Original	2	280 0 0	4	1,715 0 0	1	40 0 0	6	1,995 0 0	1	40 0 0	1	40 0 0
		Additional	3	118 1 10	2	609 3 20	1	206 0 0	7	719 0 39	1	206 0 0	1	206 0 0
Do	Special area	Original	2	136 1 10	1	320 0 0	2	196 1 10	2	320 0 0	1	320 0 0	1	320 0 0
Coonambundra	Ordinary land	Original	3	561 3 0	1	60 0 0	2	87 0 0	5	648 3 0	1	60 0 0	1	60 0 0
		Additional	13	586 3 20	2	50 2 20	2	39 3 20	15	617 3 9	2	50 2 20	3	614 0 0
Do	Special area	Original	1	40 0 0	1	71 2 0	3	357 2 0	4	427 2 0	1	71 2 0	1	71 2 0
Corowa	Ordinary land	Original	2	640 0 0	1	100 0 0	1	300 0 0	2	640 0 0	1	100 0 0	1	100 0 0
		Additional	1	50 1 0	1	100 0 0	1	300 0 0	1	69 1 0	1	100 0 0	1	100 0 0
Do	Special area	Original	3	326 3 0	3	947 0 0	5	387 2 0	3	281 0 0	8	724 1 0	6	1,228 0 0
Gundagai	Ordinary land	Original	2	398 1 0	1	78 1 0	1	67 1 0	2	308 1 0	1	78 1 0	1	78 1 0
		Additional	4	752 2 0	1	302 0 0	1	67 1 0	4	772 2 0	1	302 0 0	1	302 0 0
Do	Special area	Original	1	245 0 0	2	400 2 0	1	189 0 0	2	400 2 0	1	189 0 0	1	189 0 0
Narrandera	Ordinary land	Original	2	295 0 0	2	400 2 0	1	189 0 0	2	400 2 0	1	189 0 0	1	189 0 0
		Additional	2	400 2 0	2	400 2 0	1	189 0 0	2	400 2 0	1	189 0 0	1	189 0 0
Do	Special area	Original	1	130 0 0	4	1,009 0 0	1	180 0 0	5	1,139 0 0	1	130 0 0	1	130 0 0
Tumbarumba	Ordinary land	Original	5	1,569 2 0	5	1,569 2 0	5	1,569 2 0	5	1,569 2 0	5	1,569 2 0	5	1,569 2 0
		Additional	1	50 0 0	1	50 0 0	1	50 0 0	1	50 0 0	1	50 0 0	1	50 0 0
Do	Special area	Original	3	162 2 0	1	50 0 0	2	230 0 0	1	80 0 0	6	402 2 0	2	130 0 0
Urana	Ordinary land	Original	1	20 0 0	2	277 3 0	1	1,534 3 0	2	147 2 0	3	2,620 1 0	4	425 1 0
		Additional	2	495 2 0	2	277 3 0	1	1,534 3 0	2	147 2 0	7	2,620 1 0	4	425 1 0
Do	Special area	Original	6	940 3 0	1	50 0 0	4	1,219 0 0	10	2,150 3 0	2	254 0 0	2	254 0 0
Wagga Wagga	Ordinary land	Original	1	48 1 0	2	160 0 0	2	160 0 0	4	143 1 0	3	325 3 0	3	638 0 0
		Additional	1	175 3 0	3	638 0 0	2	160 0 0	4	325 3 0	3	638 0 0	3	638 0 0
Do	Special area	Original	3	837 1 0	3	1,424 3 0	1	640 0 0	8	2,312 0 0	1	640 0 0	1	640 0 0
	Additional	1	60 2 0	1	640 0 0	1	640 0 0	2	799 2 0	2	799 2 0	2	799 2 0	
SUMMARY.														
Ordinary land	Original	4	605 0 0	2	190 0 0	8	975 1 0	2	80 0 0	12	1,580 1 0	4	270 0 0	
	Additional	14	1,640 2 0	14	2,950 1 0	21	5,944 3 0	7	683 2 0	35	7,135 1 0	21	3,633 3 0	
	Non-residential	1	250 0 0	1	250 0 0	1	250 0 0	1	250 0 0	1	250 0 0	1	250 0 0	
Total		18	2,495 2 0	16	3,140 1 0	30	6,469 1 0	9	763 2 0	48	8,766 1 0	25	3,903 3 0	
Special area	Original	31	3,830 1 39	2	50 2 29	18	4,836 0 0	2	546 0 0	19	3,672 1 39	4	596 2 19	
	Additional	9	1,485 3 0	2	178 1 0	4	826 1 10	7	2,069 2 0	13	2,312 0 10	9	2,247 3 0	
Total		40	5,322 0 39	4	228 3 29	22	5,662 1 10	9	2,015 2 0	62	10,984 2 0	13	3,144 1 29	
Grand Total		58	7,567 2 39	20	3,368 0 29	52	12,131 2 10	18	3,924 0 30	110	19,750 1 0	38	7,053 1 19	
SUMMARY.														
Ordinary land	Original	247	37,775 3 18	127	25,641 1 0	298	51,115 1 18	66	9,156 2 30	515	55,891 0 36	193	34,797 3 30	
	Additional	232	41,566 0 0	130	17,151 3 0	324	81,527 1 0	46	5,933 3 0	606	123,093 1 0	169	23,440 2 0	
	Non-residential	7	510 0 0	2	80 0 0	12	1,063 1 0	6	370 0 0	19	1,773 1 0	8	450 0 0	
Total for the whole Colony		536	79,851 3 18	249	42,872 0 0	634	133,705 3 18	118	15,515 1 30	1,170	210,757 2 36	367	58,688 1 30	
Special area	Original	213	19,209 3 20	21	1,337 2 15	106	15,953 1 37	10	2,367 3 10	319	34,623 1 26	31	4,205 1 25	
	Additional	69	8,130 1 17	25	2,277 1 51	68	12,412 0 18	22	4,038 0 10	137	20,551 1 35	47	6,330 2 1	
	Non-residential	1	29 1 0	1	29 1 0	1	29 1 0	1	29 1 0	1	29 1 0	1	29 1 0	
Total for the whole Colony		283	27,438 2 6	46	4,215 0 6	174	27,765 2 15	33	6,740 3 20	457	55,204 0 21	79	10,555 3 26	
Grand Total for the whole Colony		819	107,290 1 24	295	47,088 0 6	808	161,471 1 33	151	22,256 1 10	1,627	265,961 3 17	446	69,243 1 10	

SCHEDULE XII.
SPECIAL AREAS.

RETURN giving particulars as to proclamation and disposal of Special Areas from 1st January, 1885, to 31st December, 1895.

Land Board District.	Land District.	Class of Land.	Total Acreage in Special Areas when proclaimed.			Area thereof since included in Reserves or otherwise rendered unavailable for Conditional Purchase.			Area available for Selection.			Area Selected.			Area Unselected on 31 December, 1895.			Price represented by Land Selected.			Amount received for Deposit Money.			Percentage of Area Selected to Area available for Selection.	
			a.	r.	p.	a.	r.	p.	a.	r.	p.	a.	r.	p.	a.	r.	p.	£	s.	d.	£	s.	d.	Per cent.	
Armidale	Armidale	Suburban and Population Area	1,349	0	0	95	0	0	1,254	0	0	490	2	20	773	1	20	2,017	18	9	201	15	11	38	
		Country	18,166	0	10	6,294	0	10	11,872	0	0	7,432	2	0	4,439	2	0	13,271	5	0	1,332	10	6	63	
	Glen Innes	Population Area	150	0	0	150	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Country	13,343	0	0	2,980	0	0	10,363	0	0	5,298	2	0	5,064	2	0	9,954	16	3	972	1	2	51	
	Inverell	Population Area	659	1	39	411	3	0	247	2	30	247	2	30	.....	.....	.....	572	4	4	57	4	6	100
		Country	8,939	1	0	1,369	2	0	7,569	3	0	5,060	1	0	2,509	2	0	11,606	2	3	1,206	14	2	67	
	Tenterfield	Population Area	1,448	3	8	53	0	10	1,395	2	38	671	1	8	724	1	30	1,716	11	3	169	9	10	48	
		Country	2,447	1	0	1,516	1	0	931	0	0	505	0	0	426	0	0	771	0	0	111	11	0	54	
	Walcha	Population Area	3,799	3	0	603	0	0	3,191	3	0	446	0	0	2,745	3	0	1,338	0	0	123	16	0	14	
		Country	6,953	2	0	1,711	3	0	5,241	3	0	4,334	2	0	857	1	0	8,403	5	0	936	18	6	83	
Totals	Suburban and Population	Country	7,406	3	38	1,317	3	10	6,089	0	28	1,845	2	18	4,243	2	10	5,614	14	4	561	6	3	30	
		Country	49,849	0	10	13,871	2	10	35,977	2	0	22,680	3	0	13,296	3	0	41,006	8	6	4,559	15	4	63	
Grand Totals		.....	57,256	0	8	15,189	1	20	42,066	2	28	24,526	1	18	17,540	1	10	42,651	2	10	5,121	1	7	58
Bourke	Bourke	Suburban	40	0	0	.....	.....	.....	40	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Country	10,767	1	0	1,573	3	0	9,193	2	0	1,609	3	0	7,683	3	0	3,110	13	6*	425	2	0†	16	
	Cobar	Population Area	2,060	2	0	1,980	2	0	80	0	0	80	0	0	.....	.....	.....	100	0	0	10	0	0	100
		Country	5,188	1	0	2,308	1	0	2,880	0	0	.....	.....	.....	2,880	0	0	.....	.....	.....	.....	.....	.....	.....
	Brewarrina	Country	1,967	0	0	.....	.....	.....	1,967	0	0	500	0	0	1,167	0	0	1,200	0	0	120	0	0	40
		Country	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals	Suburban or Population	Country	2,100	2	0	1,980	2	0	120	0	0	80	0	0	40	0	0	100	0	0	10	0	0	67	
		Country	17,922	2	0	3,882	0	0	14,040	2	0	2,300	3	0	11,730	3	0	4,810	13	6	545	2	0	16	
Grand Totals		.....	20,023	0	0	5,862	2	0	14,160	2	0	2,399	3	0	11,770	3	0	4,410	13	6	555	2	0	17
Cooma	Bega	Suburban or Population Area	1,809	2	17	.....	.....	.....	1,809	2	17	1,809	2	17	.....	.....	.....	8,993	5	8	890	6	7	100
		Country	1,025	3	0	.....	.....	.....	1,025	3	0	880	0	0	145	3	0	1,967	15	0	196	15	6	86
	Bombala	Suburban or Population Area	2,844	3	0	625	0	0	2,219	3	0	1,440	0	0	779	3	0	3,259	2	6	325	18	3	65	
		Country	6,786	1	0	747	3	0	6,038	2	0	5,277	3	0	760	3	0	1,550	5	0	155	0	6	87	
	Braidwood	Country	713	3	0	331	1	0	412	2	0	205	0	0	207	2	0	333	15	0	33	7	6	49	
		Country	5,542	1	10	1,698	1	0	3,844	0	10	1,409	1	0	2,434	3	10	3,172	3	11	317	4	8	37	
	Cooma	Suburban or Population Area	17,661	1	20	1,925	3	30	15,735	1	30	12,171	1	0	3,564	0	30	20,449	17	6	2,046	19	10	77	
		Country	1,012	2	30	479	2	10	533	0	20	443	2	30	89	1	30	1,196	12	1	119	13	5	83	
	Eden	Suburban or Population Area	1,342	1	0	979	0	0	363	1	0	363	1	0	.....	.....	.....	908	2	6	90	16	3	100
		Country	1,178	2	21	.....	.....	.....	1,178	2	21	.....	.....	.....	1,178	2	21	.....	.....	.....	.....	.....	.....	.....
	Milton	Suburban or Population Area	2,695	0	0	1,730	0	0	965	0	0	890	0	0	75	0	0	1,510	5	0	154	0	6	92	
		Country	756	2	25	.....	.....	.....	756	2	25	123	3	0	632	3	25	199	10	0	19	19	0	16
	Moruya	Suburban or Population Area	2,455	3	30	99	3	0	2,356	0	30	1,695	3	0	660	1	30	2,411	9	2	281	2	11	72	
		Country	2,903	0	10	1,533	2	30	1,369	1	20	1,180	2	8	189	3	12	4,123	16	9	412	7	9	86	
	Queanbeyan	Suburban or Population Area	2,291	2	0	58	1	0	2,203	1	0	1,514	1	0	689	0	0	2,486	12	6	248	13	3	68	
		Country	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Totals	Suburban or Population Area	Country	16,047	2	33	4,336	2	0	11,711	0	33	6,406	3	15	5,304	1	18	20,854	10	11	2,095	9	8	54
			Country	35,001	3	10	6,901	3	30	29,099	3	20	22,997	1	0	6,102	2	20	32,069	1	8	3,206	16	3	79
Grand Totals		.....	51,049	2	3	10,238	1	30	40,811	0	13	29,404	0	15	11,406	3	38	52,922	12	7	5,292	5	11	72

* Does not include two Conditional Purchases forfeited.

† Includes deposit on two Conditional Purchases forfeited.

SCHEDULE XII—continued.

Land Board District.	Land District.	Class of Land.	Total Acreage in Special Areas when proclaimed.			Area thereof since included in Reserves or otherwise rendered unavailable for Conditional Purchase.			Area available for Selection.			Area Selected.			Area Unselected on 31 December, 1895.			Price represented by Land Selected.			Amount received for Deposit Money.			Percentage of Area Selected to Area available for Selection
			a.	r.	p.	a.	r.	p.	a.	r.	p.	a.	r.	p.	a.	r.	p.	£	s.	d.	£	s.	d.		Per cent.
Dubbo	Coonamble	Suburban or Population Area	170	2	19	.....	.....	170	2	19	170	2	19	.....	.....	.....	542	15	11	54	5	9	100	
		Country	4,283	3	0	3,252	3	0	1,036	0	0	742	0	0	294	0	0	2,601	0	0	266	2	0*	72
	Dubbo	Suburban or Population Area	1,534	3	0	444	3	0	1,090	0	0	585	1	10	604	2	30	1,705	18	9	170	12	0	54
		Country	6,606	1	0	1,746	0	0	4,860	1	0	3,728	1	0	1,132	0	0	5,110	17	6	511	1	9	77
	Nyngan	Suburban or Population Area	267	1	10	.....	.....	267	1	10	267	1	10	.....	.....	.....	1,195	8	6	119	10	10	100	
		Country	695	0	0	55	0	0	640	0	0	.....	.....	640	0	0	.....	.....	.....	.....	.....	.....	.....
	Warren	Suburban or Population Area	5,318	1	0	864	2	0	4,453	3	0	3,682	0	0	771	3	0	12,202	13	9	1,220	5	6	83
		Country	30,770	3	0	16,330	2	0	14,440	1	0	11,832	1	0	2,608	0	0	13,425	3	11	1,840	10	5	82
	Total	Suburban or Population Area	7,290	3	29	1,300	1	0	5,981	2	29	4,705	0	39	1,276	1	30	15,646	16	11	1,564	14	1	79
		Country	42,360	3	0	21,384	1	0	20,976	2	0	16,302	2	0	4,674	0	0	26,177	1	5	2,617	14	2	78
Grand Totals		.....	49,651	2	29	22,693	2	0	26,958	0	29	21,007	2	39	5,950	1	30	41,823	18	4	4,182	8	3	78
Forbes	Barmedman	Country	31,559	0	0	6,533	0	0	25,026	0	0	19,811	2	0	5,214	2	0	35,824	7	6	3,582	8	9	79
		Country	32,433	0	0	13,358	2	0	19,074	2	0	18,127	1	0	947	1	0	35,819	0	0	3,581	18	0	95
	Barmedman, East	Country	1,020	2	36	209	0	0	811	2	36	638	0	35	173	2	0	1,842	0	0	184	4	0	79
		Country	15,954	2	0	1,210	2	0	13,844	0	0	10,576	1	0	3,267	3	0	16,805	4	2	1,680	10	5	76
	Condobolin	Country	9,132	3	12	147	3	37	8,984	3	15	8,519	1	8	465	2	7	24,208	1	4	2,420	16	2	95
		Country	30,771	1	28	2,065	0	5	28,706	1	23	26,876	2	28	1,829	2	35	41,225	0	0	4,122	10	0	94
	Forbes	Suburban or Population Area	5,406	1	37	903	3	37	4,497	2	0	4,043	3	5	453	2	35	8,308	19	2	830	17	11	90
		Country	13,760	3	0	1,320	3	0	12,440	0	0	11,923	1	0	516	3	0	19,932	9	11	1,989	5	0	96
	Grenfeil	Country	3,884	1	30	84	2	36	3,749	2	34	2,943	3	26	805	3	8	7,028	15	10	702	17	7	78
		Country	34,989	1	0	393	1	0	34,596	0	0	30,354	0	0	4,242	0	0	46,651	16	8	4,665	3	8	88
Total	Suburban or Population Area	19,394	1	35	1,350	2	30	18,043	3	5	16,145	0	35	1,898	2	10	41,887	16	4	4,188	15	8	89	
	Country	153,567	3	28	24,881	0	5	133,686	3	23	117,668	3	28	16,017	3	35	196,317	18	3	19,631	15	10	83	
Grand Totals		.....	177,962	1	23	26,231	2	35	151,730	2	23	133,814	0	23	17,916	2	5	237,705	14	7	23,770	11	6	88
Goulburn	Boorowa	Suburban or Population Area	14,475	3	30	89	1	0	14,386	2	30	11,080	3	30	3,305	3	0	23,646	8	11	2,364	12	11	77
		Country	14,959	3	30	633	0	0	14,276	3	30	11,364	3	20	2,912	0	10	24,034	5	3	2,403	8	6	80
	Goulburn	Suburban or Population Area	1,233	0	10	.....	.....	1,233	0	10	1,135	2	0	96	2	10	2,358	0	5	235	16	0½	92	
		Country	987	1	0	.....	.....	987	1	0	222	1	0	765	0	0	444	10	0	44	0	0	23	
	Gunning	Suburban or Population Area	5,432	1	20	.....	.....	5,432	1	20	1,749	0	0	3,683	1	20	3,373	17	6	337	7	9	32	
		Country	3,998	3	0	1,920	0	0	2,078	3	0	1,063	0	0	1,015	3	0	2,615	17	6	261	11	9	51
	Moss Vale	Country	1,143	3	0	.....	.....	1,143	3	0	213	0	0	901	3	0	434	0	0	43	8	0	21	
		Country	3,793	0	0	.....	.....	3,793	0	0	1,385	3	0	2,457	1	0	2,163	12	6	216	7	3	35	
	Yass	Suburban or Population Area	2,499	2	0	259	0	20	2,240	1	20	2,134	2	0	105	3	20	4,061	18	9	406	3	10½	95
		Country	15,322	2	7½	853	3	37	14,968	2	10½	13,595	3	30	1,382	2	20	34,175	7	2	3,417	10	8	91
Young	Country	29,269	4	20	2,819	0	2	26,421	0	18	20,162	0	38	6,318	3	20	43,609	14	8	4,360	19	5	76	
	Country	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	Suburban or Population Area	40,756	3	27½	943	0	37	39,813	2	30½	28,888	0	20	10,925	2	10	65,717	6	6	6,571	14	7	73	
	Country	52,859	1	10	5,711	0	22	47,148	0	28	35,128	3	18	12,019	1	10	75,200	6	2	7,520	0	6½	75	
Grand Totals		.....	93,616	0	37½	6,654	1	19	86,961	3	18½	64,016	3	38	22,944	3	20	140,917	12	8	14,091	15	1½	74

* This is exclusive of £38 10s. deposit received on forfeited Conditional Purchase 01-124.

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SCHEDULE XII—continued.

Land Board District.	Land District.	Class of Land.	Total Acreage in Special Areas when proclaimed.			Area thereof since included in Reserves or otherwise rendered unavailable for Conditional Purchase.			Area available for Selection.			Area Selected.			Area Unselected on 31 December, 1885.			Price represented by Land Selected.		Amount received for Deposit Money.		Percentage of Area Selected to Area available for Selection. Per cent.		
			a.	r.	p.	a.	r.	p.	a.	r.	p.	a.	r.	p.	a.	r.	p.	£	s. d.	£	s. d.			
Grafton	Bellingen	Suburban or Population Area	583	3	0	509	3	0	84	0	0	84	0	0	81	0	0	.....	.....	.....	.....	.....
		Country	32,291	0	0	29,475	1	0	11,815	3	0	9,160	3	0	2,715	0	0	15,638	12	6	1,869	7	6	77
	Casino	Suburban or Population Area	345	2	24	.....	.....	345	2	24	82	2	19	263	0	5	625	10	1	62	11	9	24
		Country	6,134	2	0	3,842	0	0	2,292	2	0	1,665	2	0	627	0	0	4,054	0	0	405	8	0	73
	Grafton	Suburban or Population Area	276	0	18	.....	.....	276	0	18	229	1	18	46	3	0	601	12	6	50	3	3	80
		Country	6,158	1	0	1,694	2	0	4,463	3	0	2,574	2	0	1,889	1	0	5,011	5	0	602	1	9	58
	Kempsey	Country	7,038	3	0	2,053	2	0	5,035	1	0	5,035	1	0	.....	.....	7,578	17	6	786	1	0	100
		Suburban or Population Area	1,072	0	23	.....	.....	1,072	0	23	244	0	5	828	0	23	1,122	0	1	112	3	11	23
	Lismore	Country	56,291	2	0	38,044	0	0	18,247	2	0	12,456	0	0	5,791	2	0	33,235	17	6	3,502	6	9	63
		Suburban or Population Area	16,059	2	20	8,621	0	0	7,438	2	20	3,661	1	20	3,477	1	0	7,325	2	6	746	11	3	53
Port Macquarie	Country	360	0	0	.....	.....	360	0	0	100	0	0	260	0	0	150	0	0	15	0	0	28	
	Suburban or Population Area	2,287	2	30	509	3	0	1,777	3	30	556	0	2	1,221	3	28	2,349	2	8	224	18	11	31	
Totals	Country	124,383	2	20	74,730	1	0	43,653	1	20	34,893	1	20	14,770	0	0	73,043	15	0	7,926	16	3	70	
	Suburban or Population Area	2,287	2	30	509	3	0	1,777	3	30	556	0	2	1,221	3	28	2,349	2	8	224	18	11	31	
Grand Totals	Country	126,671	1	10	75,249	0	0	51,431	1	10	35,449	1	22	15,991	3	28	75,392	17	8	8,151	15	2	68	
Hay	Balranald South	Suburban or Population Area	3,045	2	0	.....	.....	3,045	2	0	2,394	1	0	651	1	0	3,987	0	0	398	14	0	78
		Country	32,761	2	0	2,634	1	0	30,077	1	0	17,153	3	0	12,923	2	0	26,567	6	8	2,656	14	8	57
	Deniliquin	Suburban or Population Area	5,763	3	0	.....	.....	5,763	3	0	4,755	1	0	1,098	2	0	14,787	7	6	1,478	14	9	82
		Country	112,905	3	0	16,779	1	0	96,126	2	0	80,412	2	0	15,634	0	0	145,674	8	4	14,567	8	10	83
	Hay	Country	74,581	0	0	45,154	1	0	29,426	3	0	22,353	1	0	7,073	2	0	36,526	12	6	3,652	13	3	76
		Suburban or Population Area	1,384	2	0	.....	.....	1,384	2	0	930	3	0	394	3	0	1,489	12	6	148	19	3	71
	Hillston	Country	5,641	3	0	.....	.....	5,641	3	0	1,436	3	0	4,205	0	0	2,522	7	6	252	4	9	25
		Suburban or Population Area	10,193	3	0	.....	.....	10,193	3	0	8,139	1	0	2,054	2	0	20,264	0	0	2,026	8	0	80
	Totals	Country	225,890	0	0	61,617	3	0	161,272	1	0	121,386	1	0	39,885	0	0	211,290	15	0	21,129	1	6	75
		Suburban or Population Area	236,033	3	0	61,617	3	0	171,466	0	0	129,525	2	0	41,940	2	0	231,654	15	0	23,155	9	6	75
Grand Totals	Country	236,033	3	0	61,617	3	0	171,466	0	0	129,525	2	0	41,940	2	0	231,654	15	0	23,155	9	6	75	
Maitland	Cassilis	Country	2,740	3	0	296	2	0	2,444	1	0	2,060	1	0	384	0	0	3,435	10	0	343	11	0	84
		Country	2,818	0	0	778	2	0	2,039	2	0	1,675	3	0	363	3	0	3,012	15	0	301	5	6	80
	Dungog	Country	906	0	20	.....	.....	906	0	20	714	2	20	191	2	0	2,726	6	8	272	12	8	79
		Population Area	161	3	10	10	0	0	151	3	10	67	3	0	84	0	10	135	10	0	13	11	0	45
	Gosford	Suburban	313	3	17	.....	.....	313	3	17	129	0	24	184	2	33	258	6	0	25	16	8	41
		Country	2,177	3	0	1,448	3	0	729	0	0	360	2	0	363	2	0	657	15	0	65	15	6	49
	Maitland	Population Area	1,990	3	20	.....	.....	1,990	3	20	1,219	1	30	771	1	50	2,178	7	8	217	16	9	61
		Country	1,295	3	0	1,016	0	0	279	3	0	230	0	0	49	3	0	675	0	0	57	10	0	82
	Muswellbrook	Population Area	4,185	3	0	25	3	0	4,160	0	0	2,907	3	0	1,252	1	0	6,780	2	6	678	0	3	70
		Country	5,660	3	0	5,197	0	0	463	3	0	463	3	0	.....	.....	947	7	6	94	14	9	100
	Newcastle	Country	977	1	0	.....	.....	977	1	0	852	1	0	125	0	0	1,392	7	6	139	4	9	87
		Country	150	0	0	150	0	0	150	0	0
	Raymond Terrace	Population Area	273	3	10	.....	.....	273	3	10	67	2	20	206	0	30	169	5	0	16	18	6	25
		Country	984	2	33	.....	.....	984	2	33	984	2	33	.....	.....	.....	1,678	4	6	167	16	5	100
	Scone	Country	1,109	0	0	.....	.....	1,109	0	0	969	0	0	140	0	0	2,228	10	0	222	17	0	87
		Population Area	1,306	3	0	.....	.....	1,306	3	0	1,306	3	0	.....	.....	.....	2,348	17	6	234	17	9	100
	Stroud	Country	7,008	3	0	503	3	0	6,505	0	0	1,803	3	0	4,698	1	0	3,335	2	6	333	10	3	23
		Country	852	3	0	.....	.....	852	3	0	686	3	0	166	0	0	1,351	16	8	135	3	8	81
	Taree	Population Area	1,671	0	20	44	1	0	1,626	3	20	561	0	20	1,065	3	0	870	8	9	87	0	11	34
		Country	202	2	0	.....	.....	202	2	0	81	0	0	121	2	0	162	0	0	16	4	0	40
Totals	Suburban or Population Area	9,903	3	37	80	0	0	9,823	3	37	6,259	2	14	3,564	1	23	12,740	17	5	1,274	1	10	64	
	Country	26,834	0	18	9,240	2	0	17,643	2	18	10,885	1	18	6,758	1	0	21,502	15	4	2,150	5	6	62	
Grand Totals	Country	36,738	0	15	9,320	2	0	27,467	2	15	17,144	3	32	10,322	2	23	34,243	12	9	3,424	7	4	62	

SCHEDULE XII—continued.

Land Board District.	Land District.	Class of Land.	Total Acreage in Special Areas when proclaimed.			Area thereof since included in Reserves or otherwise rendered unavailable for Conditional Purchase.			Area available for Selection.			Area Selected.			Area Unselected on 31 December, 1895.			Price represented by Land Selected.			Amount received for Deposit Money.			Percentage of Area Selected to Area available for Selection.
			a.	r.	p.	a.	r.	p.	a.	r.	p.	a.	r.	p.	a.	r.	p.	£	s.	d.	£	s.	d.	
Moree	Bingara.....	Country	1,833	3	0	483	0	0	1,350	3	0	294	1	0	1,056	2	0	564	2	6	56	9	3	21
	Moree.....	Country	28,000	3	0	1,221	0	0	26,779	3	0	3,445	0	0	23,334	3	0	7,555	14	6	825	3	3	13
	Warialda.....	Country	13,878	3	13	1,723	2	0	12,155	1	13	1,439	0	20	10,716	0	33	2,693	2	9	276	15	0	10
	Walgett.....	Country	6,351	0	0	640	0	0	5,711	0	0	.....	.....	.....	5,711	0	0	.....	.....	.....	.....	.....	.....	.....
	Totals.....	Country	50,064	1	13	4,067	2	0	45,996	3	13	5,178	1	20	40,818	1	33	10,812	19	9	1,158	7	6	11
Grand Totals...		.....	50,064	1	13	4,067	2	0	45,996	3	13	5,178	1	20	40,818	1	33	10,812	19	9	1,158	7	6	11
Orange	Bathurst.....	Suburban or Population Area	837	2	10	.....	.....	.....	837	2	10	80	0	0	757	2	10	120	0	0	12	0	0	9
	Bathurst.....	Country	2,088	3	0	.....	.....	.....	2,088	3	0	1,544	2	0	544	1	0	2,515	0	0	273	11	0	74
	Carecar.....	Country	100	2	30	.....	.....	.....	100	2	30	.....	.....	.....	.....	.....	.....	151	0	8	15	2	1	100
	Cowra.....	Suburban or Population Area	1,788	3	0	27	1	5	1,761	1	35	1,865	1	28	396	0	7	4,573	4	4	457	6	6	78
	Cowra.....	Country	24,942	1	0	927	0	0	24,015	1	0	22,235	3	0	1,779	2	0	41,877	19	1	5,155	3	11	93
	Lithgow.....	Country	4,416	2	0	400	3	0	4,015	3	0	966	3	0	3,049	0	0	2,740	0	0	274	0	0	24
	Lithgow.....	Suburban or Population Area	4,443	0	39	0	0	32	4,443	0	7	2,570	3	39	1,872	0	8	4,967	2	6	496	14	3	58
	Molong.....	Country	23,484	1	0	2,872	0	0	20,612	1	0	19,205	1	0	1,407	0	0	34,668	0	0	3,546	14	0	93
	Mudgee.....	Suburban or Population Area	2,126	3	0	.....	.....	.....	2,126	3	0	1,200	0	0	926	3	0	2,498	2	6	249	16	3	56
	Mudgee.....	Country	3,320	3	0	113	0	0	3,207	3	0	3,264	0	0	943	3	0	3,449	0	0	344	18	0	70
	Orange.....	Country	468	2	0	.....	.....	.....	468	2	0	468	2	0	.....	.....	.....	1,804	0	0	202	18	0	100
	Rylstone.....	Suburban or Population Area	1,688	2	0	.....	.....	.....	1,688	2	0	1,097	1	0	591	1	0	2,195	0	0	219	10	0	65
	Rylstone.....	Country	486	3	0	.....	.....	.....	486	3	0	355	0	0	131	3	0	621	5	0	62	2	6	73
	Wellington.....	Suburban or Population Area	2,678	1	0	5	1	0	2,673	0	0	2,015	2	0	667	2	0	3,551	0	0	355	2	0	76
Wellington.....	Country	379	3	0	1	3	0	378	0	0	378	0	0	.....	.....	.....	567	0	0	56	14	0	100	
Totals.....	Suburban or Population Area	13,663	0	9	32	2	37	13,530	1	12	8,329	0	27	5,201	0	25	17,904	9	4	1,790	9	0	62	
Totals.....	Country	59,688	0	20	4,314	2	0	55,373	2	30	47,518	1	30	7,855	1	0	87,893	4	9	9,931	3	6	86	
Grand Totals...		.....	73,251	0	39	4,347	0	37	68,904	0	2	55,817	2	17	13,056	1	25	105,797	14	1	11,721	12	6	81
Sydney	Campbelltown.....	Country	9,371	0	0	2,020	3	0	7,350	1	0	2,497	3	0	4,852	2	0	4,019	10	0	401	19	0	34
	Liverpool.....	Country	96	2	0	.....	.....	.....	96	2	0	96	2	0	.....	.....	.....	193	0	0	19	6	0	100
	Metropolitan.....	Country	93	2	0	53	2	0	40	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Nowra.....	Suburban or Population Area	271	3	20	271	3	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Nowra.....	Country	471	0	0	59	0	0	412	0	0	298	0	0	114	0	0	593	12	6	59	7	3	72
	Farramatta.....	Suburban or Population Area	552	3	32	.....	.....	.....	552	3	32	48	2	0	504	1	32	339	10	0	33	10	0	9
	Farramatta.....	Country	262	0	0	122	0	0	140	0	0	109	0	0	40	0	0	225	0	0	22	10	0	71
	Penrith.....	Suburban or Population Area	1,430	1	10	1,311	2	10	118	3	0	118	3	0	.....	.....	.....	294	10	0	29	9	0	100
	Penrith.....	Country	1,068	3	0	86	2	0	982	1	0	609	0	0	373	1	0	3,840	5	0	384	0	6	62
	Picton.....	Suburban or Population Area	137	2	13	125	2	33	11	3	20	11	3	20	.....	.....	.....	47	10	0	4	15	0	100
	Picton.....	Country	2,565	1	0	419	2	0	2,145	3	0	1,579	2	0	566	1	0	4,117	0	0	411	14	0	74
	Windsor.....	Suburban or Population Area	4,632	3	10	.....	.....	.....	4,632	3	10	1,625	0	10	3,007	3	0	5,319	10	0	531	19	0	85
	Windsor.....	Country	140	3	0	.....	.....	.....	140	3	0	61	2	0	79	1	0	123	0	0	12	6	0	44
	Totals.....	Suburban or Population Area	7,025	2	5	1,709	0	23	5,316	1	22	1,804	0	30	3,512	0	32	6,001	0	0	600	2	0	34
Totals.....	Country	14,968	3	0	2,761	1	0	11,307	2	0	5,242	1	0	6,065	1	0	13,111	7	6	1,311	2	9	46	
Grand Totals...		.....	21,094	1	5	4,470	1	23	16,623	3	22	7,046	1	30	9,577	1	32	19,112	7	6	1,911	4	9	42

SCHEDULE XII—continued.

Land Board District.	Land District.	Class of Land.	Total Acreage in Special Areas when proclaimed.			Area thereof since included in Reserves or otherwise rendered unavailable for Conditional Purchase.			Area available for Selection.			Area Selected.			Area Unselected on 31 December, 1895.			Price represented by Land Selected.		Amount received for Deposit Money.		Percentage of Area Selected to Area available for Selection.			
			a.	r.	p.	a.	r.	p.	a.	r.	p.	a.	r.	p.	a.	r.	p.	£	s.	d.	£	s.	d.	Per cent.	
Tamworth	Coonabarrabran	Suburban or Population Area	264	0	0				264	0	0				264	0	0								
		Country	1,697	0	0	1,537	0	0	160	0	0	160	0	0				240	0	0	24	0	0	100	
	Gunnedah	Suburban or Population Area	4,028	0	26	323	0	2	3,705	0	24	3,971	0	37	333	3	27	8,235	13	4	823	11	4	91	
		Country	13,556	1	0	2,792	0	0	10,764	1	0	8,131	2	36	2,632	2	4	14,202	14	2	1,420	5	5	75	
	Murrurundi	Suburban or Population Area	581	2	0				581	2	0	125	2	0	456	0	0	251	0	0	25	2	0	21	
		Country	17,785	0	0	2,184	2	10	15,600	1	30	10,208	1	10	5,397	0	20	19,964	11	8	1,996	9	2	65	
	Narrabri	Suburban or Population Area	39	1	28				39	1	28	24	2	32	14	2	36	198	8	4	19	16	10	61	
		Country	36,816	3	0	19,569	1	0	16,747	2	0	11,497	2	0	5,250	0	0	18,921	11	3	1,892	3	2	69	
	Tamworth	Suburban or Population Area	11,140	0	38	378	2	0	10,761	2	38	3,248	1	27	7,513	1	11	13,042	1	8	1,301	4	2	30	
		Country	60,372	0	24	4,703	0	20	55,669	0	4	41,210	3	9	14,459	0	35	86,398	19	9	8,039	18	0	74	
Totals	Suburban or Population Area	16,053	1	12	701	2	2	15,351	3	10	6,769	3	16	8,581	3	34	21,727	3	4	2,172	14	4	44		
	Country	129,727	0	24	30,785	3	30	98,941	0	34	71,208	1	15	27,737	3	19	139,727	16	10	13,972	15	0	72		
Grand Totals			145,780	1	36	31,487	1	32	114,293	0	4	77,973	0	31	36,319	3	13	161,455	0	2	16,145	10	1	68	
Wagga Wagga	Albury	Suburban Area	630	0	0				630	0	0	175	2	30	454	1	10	348	12	6	34	17	3	28	
		Country	21,254	1	3	4,708	0	0	19,546	1	3	16,649	0	3	2,897	1	0	44,942	17	6	4,491	5	9	85	
	Cootamundry	Population Area	1,032	1	17				1,032	1	17	566	0	9	466	1	8	22,064	19	2	2,206	9	11	55	
		Country	65,895	3	10	7,704	2	0	58,191	1	10	51,574	0	20	6,617	0	30	76,289	5	10	7,628	18	7	89	
	Cootamundry, Central	Country	2,167	1	0	2,167	1	0	2,167	1	0	1,842	1	0	325	0	0	4,103	0	0	410	4	0	85	
		Country	98,976	3	10	10,770	2	0	28,206	1	10	25,752	0	36	2,454	0	14	73,072	15	10	7,307	5	7	91	
	Gundagai	Country	17,940	2	0	849	1	0	17,141	1	0	16,817	0	0	324	1	0	34,420	8	4	3,442	0	10	98	
		Country	43,582	1	0	14,842	2	0	28,739	3	0	17,237	2	0	11,502	1	0	45,958	4	2	4,595	16	5	59	
	Tumbarumba	Country	13,684	2	10	1,874	2	0	11,810	0	10	9,218	2	30	2,591	1	20	20,946	10	0	2,094	13	0	78	
		Country	307	1	34				307	1	34	20	0	0	287	1	34	45	0	0	4	10	0	7	
	Tumut	Population Area	226	2	10				226	2	10	166	2	8	60	0	2	62	16	8	6	5	8	74	
		Country	7,451	3	0	4,548	1	0	2,903	2	0	2,743	2	0	160	0	0	4,836	0	0	483	12	0	94	
	Urana	Population Area	994	2	10	660	0	0	334	2	10	294	2	10	40	0	0	1,003	14	2	100	7	5	88	
		Country	66,347	3	28	17,578	1	0	48,769	2	28	41,642	1	0	7,127	1	28	3,915	7	6	391	10	9	89	
	Wagga Wagga	Country	79,307	0	10	7,120	0	0	72,187	0	10	65,204	0	22	6,982	3	28	139,887	12	6	13,988	15	3	90	
		Country																							
	Totals	Suburban or Population Area	3,190	3	31	660	0	0	2,530	3	31	1,222	3	17	1,308	0	14	23,625	2	0	2,352	10	3	48	
Country		359,658	0	31	69,995	3	0	289,662	1	31	248,650	2	31	40,981	3	0	448,371	1	8	44,837	2	2	86		
Grand Totals			362,849	0	22	70,655	3	0	292,193	1	22	249,903	2	8	42,289	3	14	471,896	4	2	47,189	12	5	85	
SUMMARY.																									
Totals	...	Suburban or Population Area	155,215	3	6½	14,931	0	19	140,284	2	27½	91,151	3	33	49,132	2	34½	253,863	0	3	25,373	4	7	65	
		Country	1,346,925	2	34	336,145	1	17	1,010,780	1	17	762,076	0	20	248,704	0	37	1,383,833	5	7	140,497	19	0½	75	
Grand totals for the Colony			1,502,141	2	0½	351,076	1	36	1,151,065	0	4½	853,228	0	13	297,836	2	31½	1,637,696	5	10	165,871	3	7½	74	

SCHEDULE XIII.

RETURN giving particulars with reference to applications received for Appraisement of Conditional Purchases in Special Areas, under Section 36, C.L. Act of 1895.

Land Board District.	Land District.	Applications received.		Applications dealt with by L. L. Board during 1895.						
		No.	Area.	Total number dealt with.	Area.	No. of recommendations that no alterations be made.	No. in which reductions have been recommended.	Total Amount of Reductions.	No. in which increases have been recommended.	Total Amount of Increases.
			a. r. p.		a. r. p.			£ s. d.		£ s. d.
Armidale	Armidale	28	4,290 2 10	18	2,881 3 0	2	16	1,215 10 6	...	.....
	Glen Innes	27	4,313 3 0	25	3,961 3 0	...	25	2,811 14 3	...	.....
	Inverell	24	3,750 2 0	24	3,750 2 0	3	19	3,139 1 0	2	203 0 0
	Pentorfield	12	1,263 2 30	12	1,263 2 30	...	12	785 13 6	...	.....
	Waleha	19	4,432 3 0	...	...	...	...	...	...	.....
	Total	110	18 051 1 0	79	11,857 2 30	5	72	7,951 19 3	2	203 0 0
Bourke	Bourke	5	1,202 1 0	5	1,202 1 0	1	4	116 10 0	...	.....
Cooma	Bega	26	1,947 3 3	26	1,947 3 3	3	23	902 4 7	...	.....
	Bombala	2	613 2 0	...	...	...	...	...	...	.....
	Cooma	23	3,857 0 0	...	...	...	...	...	...	.....
	Eden	15	425 1 30	15	425 1 30	1	13	224 16 11	1	5 0 4
	Milton	9	890 0 0	...	...	...	...	...	...	.....
	Moruya	9	647 0 0	4	263 2 0	...	4	65 17 6	...	.....
	Queanbeyan	18	1,077 2 20	15	821 2 0	0	6	101 4 9	...	.....
Total	102	9,458 1 13	60	3,458 0 33	13	46	1,294 3 9	1	5 0 4	
Dubbo	Coonamble	1	296 0 0	...	...	...	...	...	...	.....
	Dubbo	6	1,111 0 0	1*	40 0 0	...	...	...	...	.....
	Warren	39	9,898 2 0	...	...	...	...	...	...	.....
Total	46	11,305 2 0	1	40 0 0	...	...	...	...	.....
Forbes	Barmedman	39	14,665 1 0	...	...	...	...	...	...	.....
	Barmedman East	58	17,427 0 0	...	...	...	...	...	...	.....
	Condobolin	17	4,938 3 0	...	...	...	...	...	...	.....
	Forbes	85	20,544 2 39	...	...	...	...	...	...	.....
	Grenfell	57	11,726 1 30	...	...	...	...	...	...	.....
	Parkes	83	27,405 1 30	...	...	...	...	...	...	.....
Total	339	96,707 2 19	...	...	...	...	...	...	.....
Goulburn	Boorowa	76	12,697 0 0	76†	12,697 0 0	54	19	1,001 10 0	...	.....
	Goulburn	9	778 3 0	9	778 3 0	1	8	371 10 0	...	.....
	Gunning	20	2,081 2 0	20	2,081 2 0	7	13	507 15 0	...	.....
	Moss Vale	2	100 0 0	2	100 0 0	...	2	100 0 0	...	.....
	Yass	13	2,512 1 20	13	2,512 1 20	8	5	345 16 10	...	.....
	Young	156	26,321 2 7	155	26,303 2 0	13	142	13,031 3 9	...	.....
Total	276	44,491 0 27	275	44,473 0 20	83	180	15,357 15 7	...	.....
Grafton	Bellingen	45	4,917 0 0	...	...	...	...	...	...	.....
	Casino	7	899 0 0	...	...	...	...	...	...	.....
	Grafton	7	898 2 0	...	...	...	...	...	...	.....
	Kempsey	24	3,231 3 0	...	...	...	...	...	...	.....
	Lismore	96	9,319 1 20	...	...	...	...	...	...	.....
	Murwillumbah	12	1,115 0 0	...	...	...	...	...	...	.....
Total	191	20,320 2 20	...	...	...	...	...	...	.....
Hay	Demiquin	219	80,086 3 0	...	...	...	...	...	...	.....
	Hay	47	21,202 0 0	...	...	...	...	...	...	.....
	Hillston	6	1,339 2 0	...	...	...	...	...	...	.....
Total	272	102,628 1 0	...	...	...	...	...	...	.....
Maitland	Cassilis	6	1,817 2 0	6†	1,817 2 0	1	1	48 0 0	...	.....
	Dungog	13	1,358 3 0	13	1,358 3 0	7	6	189 0 0	...	.....
	Gosford	3	170 2 20	...	...	...	...	...	...	.....
	Maitland	6	216 0 0	6§	216 0 0	4	...	...	...	.....
	Muswellbrook	24	2,572 2 0	24||	2,572 2 0	9	8	231 16 7	5	53 8 2
	Scone	1	150 3 0	...	...	...	...	...	...	.....
	Singleton	12	2,072 2 20	12	2,072 2 20	2	10	432 9 2	...	.....
	Stroud	1	223 0 0	...	...	...	...	...	...	.....
Three	1	84 1 0	...	...	...	...	...	...	.....
Total	67	8,660 0 0	61	8,037 1 20	23	25	901 5 9	5	53 8 2	

* Refused, C.P. not having been confirmed.

† Three applications disallowed.

‡ Four applications were withdrawn.

§ Two applications were disallowed.

|| One application was withdrawn and one disallowed.

SCHEDULE XIII—continued.

Land Board District.	Land District.	Applications received.		Applications dealt with by L. L. Board during 1895.						
		No.	Area.	Total number dealt with.	Area.	No. of Recommendations that no alterations be made.	No. in which Reductions have been recommended.	Total Amount of Reductions.	No. in which Increases have been recommended.	Total Amount of Increases.
			a. r. p.		a. r. p.			£ s. d.		£ s. d.
Moree	Bingara	2	640 0 0	...	...	...	...	...	...	...
	Warialda	11	2,817 1 20	...	...	...	...	...	...	...
	Moree	46	12,280 1 0	...	...	...	...	...	...	...
	Total	59	15,737 2 20	...	...	...	...	...	...	...
Orange	Bathurst	7	1,092 0 0	...	...	...	...	...	...	...
	Cowra	78	16,667 1 20	1*	102 2 0	...	...	...	...	...
	Lithgow	3	157 0 0	1†	108 2 0	...	...	...	...	...
	Molong	83	17,237 1 0	2†	117 0 0	...	...	...	...	...
	Mudgee	15	2,253 2 0	...	...	...	...	...	...	...
	Orange	3	186 2 0	...	...	...	...	...	...	...
	Rylstone	8	1,034 0 0	...	...	...	...	...	...	...
	Wellington	6	1,695 2 0	...	...	...	...	...	...	...
	Total	203	40,323 0 20	4	328 0 0	...	...	...	...	...
Sydney	Campbelltown	19	1,652 0 0	19	1,652 0 0	...	19	10 2 0	...	...
	Penrith	5	238 0 0	5	238 0 0	5	...	...	...	...
	Windsor	3	132 1 30	3	132 1 30	...	3	5 15 0	...	...
Total	27	2,022 1 30	27	2,022 1 30	5	22	15 17 0	...	...
Tamworth	Gunnedah	12	1,672 3 10	...	...	...	...	...	...	...
	Murrurundi	30	4,590 2 0	...	...	...	...	...	...	...
	Narrabri	1	254 2 0	...	...	...	...	...	...	...
	Tamworth	123	20,898 1 20	...	...	...	...	...	...	...
Total	166	27,356 0 30	...	...	...	...	...	...	...
Wagga Wagga	Albury	63	11,049 3 10	...	...	...	...	...	...	...
	Cootamundra	199	40,321 2 0	...	...	...	...	...	...	...
	Cootamundra, Central	5	1,842 1 0	...	...	...	...	...	...	...
	Corowa	102	16,684 0 25	...	...	...	...	...	...	...
	Gundagai	64	13,034 3 0	4†	693 3 0	...	...	...	...	...
	Narrandera	47	15,017 2 31	...	...	...	...	...	...	...
	Tumbarumba	32	8,136 1 0	...	...	...	...	...	...	...
	Tumut	13	2,021 2 0	...	...	...	...	...	...	...
	Urana	107	32,429 2 14½	1†	90 0 0	...	...	...	...	...
	Wagga Wagga	221	53,245 1 12	...	...	...	...	...	...	...
Total	853	194,682 3 12½	5	783 3 0	...	...	...	...	...
Grand Total	2,716	592,953 0 31½	517	72,202 3 13	130	358	25,637 11 4	8	261 8 6	

* Application refused, the C.P. having been confirmed after passing of Act of 1895.

† Applications refused, not having been lodged within prescribed time.

SCHEDULE XIV.

RETURN showing the Number of Certificates issued during the year 1895 (in connection with Conditional Purchases under the Repealed Acts) with the Number of Amended Certificates issued on account of alterations.

Number of Certificates	950
Number of Amended Certificates	2
Total	952

SCHEDULE XV.

RETURN showing Number of Transfers of Conditional Purchases received from 1st January to 31st December, 1895, and the Number dealt with, inclusive of those on hand, during that period.

Number of Transfers received	8,591
" " intimated to Treasury	8,243
" Conditional Purchases thereby transferred	16,099*
" " actually transferred	11,517
" Transfers upon which stamp duty was paid	3,292
Amount of stamp duty paid thereon—	
Paid through Lands Department	£3,717 16 0
Paid prior to lodgment	£755 16 0
Total	£4,473 12 0
Number of Transfers registered in Registrar-General's office	8,247
" in Registrar-General's office awaiting registration	Nil
" Crown Solicitor's certificates received	459
" Notices despatched, informing parties, Crown Land Agents, and Chairmen of Local Land Boards of registration of transfers	12,729

* Includes Conditional Purchases transferred more than once during the year.

SCHEDULE XVI.

RETURN showing the Number of Transfers intimated to the Treasury, the Number of C.P.'s. included therein, and the actual Number of C.P.'s. and area thereof transferred during the year ending the 31st December, 1895.

Land District and Land Board District.	No. of Transfers.	No. of C.P.'s.	Area actually transferred.		No. of C.P.'s actually transferred.	Land District and Land Board District.	No. of Transfers.	No. of C.P.'s.	Area actually transferred.		No. of C.P.'s. actually transferred.
			a.	r. p.					a.	r. p.	
Armidale—						Maitland—					
Armidale.....	408	992	103,684	1 9	708	Cassilis	95	207	19,793	1 0	137
Glen Innes.....	92	184	23,149	2 7	161	Dungog	25	61	2,981	2 20	47
Inverell	243	477	41,213	1 20	299	Gosford	22	37	1,240	0 0	20
Tenterfield	42	88	9,618	1 27	78	Maitland.....	9	11	251	1 0	5
Walcha	91	209	28,773	0 6	176	Muswellbrook.....	79	243	11,603	1 25	174
Total	876	1,950	206,438	2 29	1,512	Nowcastle	4	5	238	0 0	4
Bourke—						Paterson	6	10	548	1 0	6
Bourke	13	15	4,726	1 0	13	Raymond Terrace	1	1	500	0 0	1
Brewarrina.....	11	14	6,292	0 0	13	Scone	167	496	31,503	1 0	384
Cobar	3	5	418	0 0	4	Singleton.....	68	138	9,908	0 20	117
Wilcannia	5	11	1,899	2 0	11	Stroud	15	34	4,090	2 0	28
Willyama	2	2	80	0 0	2	Three	99	169	9,219	3 0	122
Total	34	47	12,915	3 0	43	Welloumbi	11	24	827	0 0	18
Cooma—						Total	601	1,436	92,704	1 25	1,063
Bega	71	174	8,387	3 16	133	Moree --					
Bombala	70	153	9,445	1 35	99	Bingara	51	102	10,969	0 0	58
Braidwood	48	153	7,611	2 18	115	Moree	92	130	39,023	3 0	104
Cooma	189	412	31,024	1 33	284	Walgett	26	36	16,778	0 0	28
Eden	32	77	3,078	1 28	61	Warnald.....	55	81	15,331	2 0	65
Milton	19	43	1,769	3 35	80	Total	224	349	82,101	1 0	255
Moruya	39	87	3,566	1 10	67	Orange—					
Queanbeyan	153	430	24,466	2 23	335	Bathurst.....	85	199	9,902	0 31	130
Total	621	1,529	89,350	2 38	1,114	Carcoar	115	267	18,817	2 33	187
Dubbo—						Cowra	78	188	14,140	1 28	122
Coonamble	223	339	81,854	1 32	212	Lithgow	42	99	4,135	1 0	72
Dubbo	165	246	41,565	1 31	166	Molong	417	929	69,724	3 21	519
Nyngan	76	95	34,070	3 24	70	Mudgee	107	212	12,449	3 0	161
Warren	109	142	49,312	1 0	117	Orange	54	120	4,766	2 11	76
Total	573	822	206,803	0 7	565	Rylstone	32	69	4,517	2 2	64
Forbes—						Wellington.....	100	209	13,358	0 33	127
Barnedman	73	107	27,980	0 0	145	Total	1,030	2,292	151,842	1 30	1,458
Condobolin	70	110	26,914	2 0	66	Sydney—					
Forbes	152	245	46,316	0 14	175	Campbelltown	8	13	1,443	0 0	4
Grenfell	76	143	14,931	3 0	87	Kimma	8	14	382	0 0	9
Parkes	135	202	55,387	2 20	151	Nowra	46	73	4,317	3 20	49
Total	506	807	171,529	3 34	624	Parramatta.....	11	12	631	1 0	11
Goulburn—						Penrith	1	1	640	0 0	1
Boorowa	186	456	34,893	2 33	294	Pictou	34	43	2,906	2 0	39
Goulburn	155	340	17,259	0 21	241	Windsor	14	17	916	0 0	16
Gunning	104	259	14,979	2 5	172	Wollongong.....	6	10	305	0 0	6
Moss Vale	63	89	4,453	2 22	65	Total	128	183	11,541	2 20	135
Yass	108	259	14,845	3 12	187	Tamworth—					
Young	192	399	40,501	0 18	316	Coonabarabran	89	163	22,391	3 22	101
Total	798	1,832	126,932	3 31	1,275	Gunnedah	129	228	36,397	0 10	161
Grafton—						Murrurundi	56	138	13,925	1 28	126
Bellingen	57	79	5,439	1 10	67	Narrabri	115	164	35,058	3 0	131
Casino	54	98	17,382	0 0	91	Tamworth	330	677	45,943	1 15	410
Grafton	71	121	9,210	3 0	104	Total	719	1,370	153,716	1 35	929
Kempsey.....	68	118	8,495	2 10	96	Wagga Wagga—					
Lismore	169	247	15,350	2 8	171	Albury	176	302	35,853	3 1	211
Murwillumbah	56	83	7,962	2 4	64	Cootamundra	96	223	19,772	1 29	148
Port Macquarie	32	48	3,307	0 0	37	Cootamundra Central.....	13	46	7,285	0 0	46
Total	507	794	67,147	2 32	630	Corowa	178	285	40,144	3 23	182
Hay—						Gundagai	115	327	30,120	0 36	295
Balranald	4	6	180	0 0	3	Narrandera	95	121	28,328	1 0	79
Deniliquin	347	459	78,426	2 26	278	Tumbarumba	36	66	6,963	2 36	45
Hay	148	190	55,359	2 0	123	Tumut	94	198	16,459	3 0	145
Hillston	7	11	3,501	1 0	9	Urana	127	181	37,838	2 0	137
Wentworth	21	31	5,683	3 0	21	Wagga Wagga	169	242	46,068	2 10	192
Total	527	697	143,151	0 26	434	Total	1,099	1,991	268,835	0 15	1,480
						GRAND TOTAL.....	8,243	16,099	1,785,011	1 11	11,517

SCHEDULE XVII.

RETURN showing Number and Area of Conditional Purchases declared forfeited during the year 1895 for non-fulfilment of the required conditions.

Land Board District and Land District.	Ordinary Lands.						Special Areas.						Total.	
	Original.		Additional.		Non-residential.		Original.		Additional.		Non-residential.			
	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.
		a. r.		a. r. p.		a. r.		a. r. p.		a. r.		a. r.		a. r. p.
Armidale—														
Armidale.....	6	970 0	...	.....	...	.....	...	.....	...	.....	...	.....	6	970 0 0
Glen Innes.....	2	200 0	1	100 0 0	...	.....	...	.....	...	.....	...	.....	3	300 0 0
Inverell.....	4	570 0	...	.....	1	241 0	...	.....	...	.....	...	.....	5	811 0 0
Tenterfield.....	8	695 0	...	.....	1	192 2	...	.....	...	.....	...	.....	4	887 2 0
Walcha.....	9	1,276 0	7	726 2 0	...	.....	...	.....	...	.....	...	.....	16	2,002 2 0
Total.....	24	3,711 0	8	826 2 0	2	433 2	...	.....	...	.....	...	.....	34	4,971 0 0
Cooma—														
Bega.....	2	190 0	...	.....	...	.....	...	.....	...	.....	...	.....	2	190 0 0
Bombala.....	1	100 0	...	.....	...	.....	1	35 0 0	...	.....	...	.....	2	135 0 0
Cooma.....	5	460 0	8	746 0 0	...	.....	...	.....	2	74 0	...	.....	15	1,280 0 0
Eden.....	3	571 2	2	315 2 0	...	.....	...	.....	...	.....	...	.....	5	887 0 0
Milton.....	...	.....	1	84 0 0	...	.....	...	.....	...	.....	...	.....	1	84 0 0
Moruya.....	...	.....	1	291 1 0	...	.....	...	.....	...	.....	...	.....	1	291 1 0
Queanbeyan.....	3	318 2	3	450 0 0	...	.....	...	.....	...	.....	...	.....	6	798 2 0
Total.....	14	1,670 0	15	1,886 3 0	...	.....	1	35 0 0	2	74 0	...	.....	32	3,665 3 0
Dubbo—														
Coonamble.....	5	819 3	...	.....	...	.....	...	.....	...	.....	1	294 0	6	1,113 3 0
Dubbo.....	2	320 0	...	.....	...	.....	...	.....	...	.....	...	.....	2	320 0 0
Nyngan.....	5	1,950 0	...	.....	...	.....	...	.....	...	.....	...	.....	5	1,950 0 0
Total.....	12	3,089 3	...	.....	...	.....	...	.....	...	.....	1	294 0	13	3,383 3 0
Forbes—														
Barnedman, East	2	600 0	1	100 0 0	...	.....	...	.....	...	.....	...	.....	3	700 0 0
Condobolin.....	6	2,590 0	...	.....	...	.....	3	81 0 0	...	.....	...	.....	9	2,671 0 0
Forbes.....	...	.....	...	.....	...	.....	1	2 0 0	...	.....	...	.....	1	2 0 0
Grenfell.....	...	.....	...	.....	...	.....	2	207 0 0	...	.....	...	.....	2	207 0 0
Parkes.....	2	760 0	...	.....	...	.....	1	4 0 0	...	.....	...	.....	3	754 0 0
Total.....	10	3,940 0	1	100 0 0	...	.....	7	294 0 0	...	.....	...	.....	1	4,334 0 0
Goulburn—														
Burrows.....	1	50 0	7	618 3 0	...	.....	...	.....	...	.....	...	.....	8	668 3 0
Goulburn.....	4	232 3	9	811 3 0	...	.....	...	.....	...	.....	...	.....	13	1,044 2 0
Gunning.....	1	130 0	...	.....	...	.....	...	.....	...	.....	...	.....	1	130 0 0
Moss Vale.....	3	330 0	2	370 0 0	2	270 0	...	.....	...	.....	...	.....	7	970 0 0
Yass.....	5	1,150 0	6	495 0 0	...	.....	...	.....	...	.....	...	.....	11	1,645 0 0
Young.....	2	140 0	...	.....	...	.....	1	5 1 12	...	.....	...	.....	3	145 1 12
Total.....	16	2,032 3	24	2,290 2 0	2	270 0	1	5 1 12	...	.....	...	.....	43	4,598 2 12
Grafton—														
Bellingen.....	7	580 0	...	.....	1	40 0	1	170 2 0	...	.....	...	.....	9	790 2 0
Casino.....	8	2,653 2	2	459 0 0	...	.....	...	.....	...	.....	...	.....	10	3,112 2 0
Grafton.....	5	790 0	2	346 1 0	2	360 0	1	74 0 0	...	.....	...	.....	10	1,570 1 0
Kempsey.....	2	490 0	2	260 0 0	...	.....	...	.....	...	.....	...	.....	4	750 0 0
Lismore.....	1	40 0	3	340 0 0	...	.....	...	.....	...	.....	...	.....	4	380 0 0
Murwillumbah.....	1	200 0	...	.....	...	.....	...	.....	...	.....	...	.....	1	200 0 0
Port Macquarie.....	9	1,072 0	3	595 0 0	...	.....	...	.....	...	.....	...	.....	12	1,667 0 0
Total.....	33	5,825 2	12	2,000 1 0	3	400 0	2	244 2 0	...	.....	...	.....	50	8,470 1 0

SCHEDULE XVII—continued.

Land Board District and Land District.	Ordinary Lands.						Special Areas.						Total.	
	Original.		Additional.		Non-residential.		Original.		Additional.		Non-residential.			
	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.
Hay—		a. r.		a. r. p.		a. r.		a. r. p.		a. r.		a. r.		a. r. p.
Deniliquin	1	47 3	...	.....	.....	3	993 3 0	.....	.....	.....	.....	4	1,041 2 0
Hay	2	996 0*	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	996 0 0
Hillston	1	450 0	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	450 0 0
Total	4	1,493 3*	.....	.....	.....	3	993 3 0	.....	.....	.....	.....	7	2,487 2 0
Maitland—														
Dungog .....	.....	.....	.....	.....	1	150 0	.....	.....	.....	.....	.....	1	150 0 0
Gosford	1	50 0	.....	.....	1	78 0	.....	.....	.....	.....	.....	2	128 0 0
Muswellbrook.....	.....	.....	1	72 0 30	.....	.....	.....	.....	.....	.....	.....	1	72 0 30
Raymond Terrace	.....	.....	.....	.....	1	270 0	.....	.....	.....	.....	.....	1	270 0 0
Seone	2	80 0	2	330 0 0	.....	.....	.....	.....	.....	.....	.....	4	410 0 0
Stroud .....	.....	.....	2	480 0 0	.....	.....	.....	.....	.....	.....	.....	2	480 0 0
Taree	1	60 0	6	524 0 0	1	80 0	.....	.....	.....	.....	.....	8	664 0 0
Wollombi	2	280 0	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	280 0 0
Total	6	470 0	11	1,406 0 30	4	578 0	.....	.....	.....	.....	.....	21	2,454 0 30
Orange—														
Bathurst	1	53 2†	4	395 1 0	.....	.....	1	233 1 0	.....	.....	.....	6	632 0 0
Carcoar	3	363 0	1	200 0 0	.....	.....	.....	.....	.....	.....	.....	4	563 0 0
Cowra	1	320 0	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	320 0 0
Lithgow	6	505 1	4	330 0 0	.....	.....	.....	.....	.....	.....	.....	10	835 1 0
Molong	3	1,000 0	2	193 1 0	.....	.....	.....	.....	.....	.....	.....	5	1,193 1 0
Mudgee	2	90 0	1	102 1 0	1	46 0	2	160 0 0	.....	.....	.....	6	398 1 0
Orange	2	122 2	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	122 2 0
Rylstone	3	209 0	2	270 0 0	.....	.....	.....	.....	.....	.....	.....	6	479 0 0
Total	21	2,663 1†	14	1,490 3 0	1	46 0	3	393 1 0	.....	.....	.....	39	4,593 1 0
Sydney—														
Campbelltown ...	3	190 0	.....	.....	.....	.....	2	95 0 0	.....	.....	.....	5	285 0 0
Nowra	1	40 0	1	42 0 0	.....	.....	.....	.....	.....	.....	.....	2	82 0 0
Parramatta	2	184 0	.....	.....	4	211 0	.....	.....	.....	1	80 0	7	475 0 0
Penrith	1	40 0	.....	.....	1	60 0	.....	.....	.....	1	40 0	3	140 0 0
Picton	4	470 0	2	220 0 0	.....	.....	.....	.....	.....	.....	.....	6	690 0 0
Windsor	5	260 0	.....	.....	7	360 0	.....	.....	.....	.....	.....	12	620 0 0
Total	16	1,184 0	3	262 0 0	12	631 0	2	95 0 0	2	120 0	35	2,292 0 0
Tamworth—														
Coonabarabran ...	2	100 0	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	100 0 0
Gunnedah .....	.....	.....	.....	.....	.....	.....	1	7 2 4	.....	.....	.....	1	7 2 4
Narrabri	2	212 0	1	100 0 0	.....	.....	.....	.....	.....	.....	.....	3	312 0 0
Tamworth	3	450 0	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	450 0 0
Total	7	762 0	1	100 0 0	.....	.....	1	7 2 4	.....	.....	.....	9	869 2 4
Wagga Wagga—														
Albury	1	320 0	.....	.....	.....	.....	2	310 0 0	1	150 0	.....	4	780 0 0
Cootamundra	3	340 0	.....	.....	.....	.....	4	98 2 10	.....	.....	.....	7	438 2 10
Gundagai	1	150 0	2	180 0 0	.....	.....	1	78 1 0	.....	.....	.....	4	408 1 0
Narrandera.....	.....	.....	1	320 0 0	.....	.....	.....	.....	1	467 3	.....	2	787 3 0
Tumbarumba.....	6	886 0	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	886 0 0
Do North	1	80 0	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	80 0 0
Tumut.....	2	505 2	4	709 2 0	.....	.....	.....	.....	.....	.....	.....	6	1,215 0 0
Wagga Wagga .....	.....	.....	1	152 0 0	.....	.....	.....	.....	.....	.....	.....	1	152 0 0
Total	14	2,281 2	8	1,361 2 0	.....	.....	7	486 3 10	2	617 3	.....	31	4,747 2 10
Total	177	29,123 2	97	11,724 1 30	24	2,358 2	27	2,555 0 26	4	691 3	3	414 0	332	46,867 1 16

* Includes one C.P., 640 acres, made under C.L.A. Act of 1861.

† Includes one C.P., 53½ acres, under C.L.A. Act of 1861.

SCHEDULE XVIII.

RETURN showing Number and Area of Conditional Purchases declared forfeited during the year 1895 for non-payment of balance, interest, or instalment of purchase money.

Land Board District and Land District.	Crown Lands Alienation Act of 1881.										Crown Lands Act of 1884.									
	Section 13.		Section 14.		Section 19.		Section 21.		Section 22.		Total		Section 26.		Section 42.		Section 47.		Total.	
	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.
Armidale—																				
Armidale	3	a. r. p. 870 2 27	...	a. r. p. .....	...	a. r. p.	2	a. r. p. 300 0 0	2	a. r. p. 220 0 0	7	a. r. p. 1,390 2 27	3	a. r. p. 460 0 0	1	a. r. p. 150 0 0	...	a. r. p.	4	a. r. p. 610 0 0
Glen Innes	1	320 0 0	...	.....	1	40 0 0	1	40 0 0	...	.....	3	400 0 0	2	300 0 0	1	40 0 0	...	.....	3	340 0 0
Inverell .....	...	.....	...	.....	2	276 0 0	...	.....	...	.....	2	276 0 0	...	.....	1	156 0 0	...	.....	1	156 0 0
Tenterfield	3	180 0 0	...	.....	...	.....	1	100 0 0	...	.....	4	280 0 0	...	.....	1	40 0 0	...	.....	1	40 0 0
Total	7	1,370 2 27	...	.....	3	316 0 0	4	440 0 0	2	220 0 0	16	2,346 2 27	6	700 0 0	4	386 0 0	...	.....	9	1,146 0 0
Bourke—																				
Wilcannia	1	80 0 0	...	.....	...	.....	2	92 0 0	...	.....	3	172 0 0	...	.....	...	.....	...	.....	...	.....
Willyama .....	...	.....	...	.....	2	120 0 0	...	.....	...	.....	2	120 0 0	...	.....	...	.....	...	.....	...	.....
Total	1	80 0 0	...	.....	2	120 0 0	2	92 0 0	...	.....	5	292 0 0	...	.....	...	.....	...	.....	...	.....
Cooma—																				
Bega	4	220 0 0	1	40 0 0	...	.....	5	212 0 0	...	.....	10	472 0 0	...	.....	...	.....	...	.....	...	.....
Braidwood .....	...	.....	...	.....	1	80 0 0	1	40 0 0	...	.....	2	120 0 0	...	.....	...	.....	1	50 0 0	...	.....
Eden .....	...	.....	...	.....	...	.....	...	.....	...	.....	...	.....	1	50 0 0	...	.....	...	.....	1	50 0 0
Milton	1	40 0 0	...	.....	...	.....	...	.....	...	.....	1	40 0 0	...	.....	...	.....	...	.....	...	.....
Total	5	260 0 0	1	40 0 0	1	80 0 0	6	252 0 0	...	.....	13	632 0 0	...	.....	1	50 0 0	...	.....	1	50 0 0
Goulburn—																				
Burrowa .....	...	.....	...	.....	...	.....	...	.....	...	.....	...	.....	1	40 0 0	1	40 0 0	1	100 0 0	3	180 0 0
Goulburn	2	744 2 0	...	.....	...	.....	...	.....	...	.....	2	744 2 0	3	210 0 0	1	80 0 0	...	.....	4	320 0 0
Gunning .....	...	.....	...	.....	...	.....	...	.....	...	.....	...	.....	2	627 1 0	...	.....	...	.....	2	627 1 0
Total	2	744 2 0	...	.....	...	.....	...	.....	...	.....	2	744 2 0	6	907 1 0	2	120 0 0	1	100 0 0	9	1,127 1 0
Grafton—																				
Bellingen .....	...	.....	...	.....	...	.....	...	.....	...	.....	...	.....	1	46 0 0	...	.....	...	.....	1	46 0 0
Casino .....	...	.....	...	.....	...	.....	...	.....	...	.....	...	.....	1	640 0 0	...	.....	...	.....	1	640 0 0
Kempsey	2	239 0 0	...	.....	...	.....	2	878 0 0	...	.....	4	617 0 0	2	139 0 0	1	50 0 0	...	.....	3	189 0 0
Port Macquarie .....	...	.....	...	.....	...	.....	...	.....	...	.....	...	.....	1	640 0 0	...	.....	...	.....	1	640 0 0
Total	2	239 0 0	...	.....	...	.....	2	978 0 0	...	.....	4	617 0 0	5	1,465 0 0	1	50 0 0	...	.....	6	1,515 0 0

SCHEDULE XVIII—continued.

Land Board District and Land District.	Crown Lands Alienation Act of 1861.										Crown Lands Act of 1884.										
	Section 13.		Section 14.		Section 19.		Section 21.		Section 22.		Total.		Section 20.		Section 42.		Section 47.		Total.		
	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	
Maitland—		a. r. p.		a. r. p.		r. r. p.		a. r. p.		a. r. p.		a. r. p.		a. r. p.		a. r. p.		a. r. p.		a. r. p.	
Cessilis	3	130 0 0	...	...	...	...	3	120 0 0	...	...	6	250 0 0	1	40 0 0	2	94 1 0	2	279 0 0	5	413 1 0
Dungog	1	40 0 0	...	...	...	...	...	...	...	...	1	40 0 0	...	...	...	...	...	...	...	...
Gosford	1	40 0 0	...	...	...	...	1	40 0 0	...	...	2	80 0 0	...	...	...	...	2	135 0 0	2	135 0 0
Maitland .....	...	...	...	...	...	...	...	...	...	...	...	...	1	50 0 0	...	...	...	...	1	50 0 0
Muswellbrook .....	...	...	...	...	...	...	...	...	...	...	1	87 0 0	...	...	...	...	...	...	1	87 0 0
Newcastle .....	...	...	...	...	...	...	...	...	...	...	...	...	1	44 2 0	...	...	...	...	1	44 2 0
Raymond Terrace .....	...	...	...	...	...	...	...	...	...	...	...	...	1	56 3 0	...	...	...	...	1	56 3 0
Stroud .....	...	...	...	...	...	...	...	...	...	...	...	...	1	100 0 0	...	...	...	...	1	100 0 0
Taree	1	40 0 0	1	40 0 0	1	40 0 0
Wollombi	2	115 8 0	1	49 2 0	3	175 1 0	3	175 1 0
Total	5	210 0 0	...	...	...	...	4	160 0 0	...	...	9	370 0 0	5	282 3 0	7	405 0 0	4	414 0 0	16	1,101 3 0
Orange—																					
Bathurst .....	...	...	2	176 0 0	...	...	1	40 0 0	1	40 0 0	4	236 0 0	3	393 0 0	4	291 0 0	...	...	7	687 0 0
Carcoar .....	...	...	1	100 0 0	...	...	1	140 0 0	...	...	2	240 0 0	...	2	139 3 0	...	...	2	139 3 0	
Lathgow	3	159 2 0	1	47 0 0	4	360 0 0	5	215 0 0	1	40 0 0	14	821 2 0	5	1,140 0 0	10	540 0 0	...	...	15	1,680 0 0
Molong	2	80 0 0	...	...	...	...	3	120 0 0	...	...	5	200 0 0	1	60 0 0	...	...	...	...	1	60 0 0
Mudgee	4	161 0 0	...	...	...	...	...	...	5	210 0 0	9	371 0 0	...	1	40 0 0	...	...	1	40 0 0	
Orange	2	102 2 0	...	...	...	...	...	...	...	2	102 2 0	...	...	1	40 0 0	...	...	1	40 0 0	
Rylstone	2	75 2 26	...	...	1	40 0 0	1	16 2 37	...	...	4	152 1 23	...	1	100 0 0	...	...	1	100 0 0	
Total	13	578 2 26	4	323 0 0	5	400 0 0	11	551 2 37	7	290 0 0	40	2,143 1 23	9	1,593 0 0	18	1,113 3 0	1	40 0 0	28	2,746 3 0	
Sydney—																					
Campbelltown .....	...	...	...	...	...	...	...	...	...	...	...	...	...	1	320 0 0	...	...	1	320 0 0	
Kiama .....	...	...	...	...	...	...	...	...	...	...	...	...	1	200 0 0	...	...	...	1	200 0 0	
Parramatta .....	...	...	...	...	...	...	...	...	...	...	1	40 0 0	...	9	619 2 0	10	659 2 0	...	...
Penrith .....	...	...	...	...	...	...	...	...	...	...	...	...	...	1	62 2 0	1	62 2 0	...	...
Windsor .....	...	...	...	...	...	...	...	...	...	...	2	156 0 0	1	40 0 0	3	175 1 0	6	371 1 0	...	...
Total .....	...	...	...	...	...	...	...	...	...	...	...	3	196 0 0	2	240 0 0	14	1,177 1 0	19	1,613 1 0	
Tamworth—																					
Gunnedah .....	...	...	...	...	...	...	1	40 0 0	...	...	1	40 0 0	...	...	...	...	...	...	...	...
Narrabri	3	180 0 0	...	...	...	...	...	...	...	3	180 0 0	...	...	...	...	...	...	...	...	...
Total	3	180 0 0	...	...	...	...	1	40 0 0	...	...	4	220 0 0	...	...	...	...	...	...	...	...
TOTAL.....	38	3,662 3 13	5	363 0 0	11	916 0 0	30	1,913 2 37	9	510 0 0	93	7,365 2 10	33	5,204 0 0	35	2,364 3 9	20	1,731 1 0	88	9,900 0 9	
GRAND TOTAL..... 181 Conditional Purchases. Area..... 16,665 acres 2 roods 19 perches.																					

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SCHEDULE XX—continued.

Land Board District.	Land District.	The Crown Lands Act of 1884.				The Crown Lands Alienation Act of 1861.				
		Increase in Areas.			Decrease in Areas.	Increase in Areas.			Decrease in Areas.	
		a.	r.	p.	a.	r.	p.	a.	r.	p.
Moree	Bingara	4	2	0	280	0	0			
	Moree	233	1	0	218	2	0			
	Warialda	23	0	0	118	1	20			3 0 0
	Walgett	104	2	0	122	1	0			
Orange	Bathurst	2	3	0	1	0	0			
	Carcoar	15	0	0				7	0	20
	Cowra	2	2	0	1	3	0			8 0 0
	Lithgow	9	0	0				10	2	0
	Molong	49	1	0	49	3	0			4 3 0
	Mudgee	185	3	0	9	0	0			2 0 20
	Orange	35	0	0						9 0 0
	Rylstone	68	0	0						
	Wellington	33	0	0	7	3	0			14 1 0
	Sydney	Nowra							2	3	0
Picton					3	0	0	0	3	0
Windsor					33	2	22			
Tamworth	Coonabarabran	22	0	0				5	0	0
	Gunnedah				86	1	0	0	0	30
	Murrurundi	11	3	0	16	0	0	0	1	0
	Narrabri	23	3	0	376	1	0			30 2 18
	Tamworth	117	3	0	100	3	0	3	1	0
Wagga Wagga	Albury	0	2	0						8 3 0
	Cootamundra				4	3	0			
	Corowa	16	1	0	3	3	0			0 1 0
	Gundagai	7	3	0	46	0	0			2 0 0
	Narrandera				308	1	0			11 3 0
	Urana	95	2	0	232	1	0			
	Wagga Wagga				69	2	0			6 0 0

GRAND TOTALS

		Crown Lands Act of 1884.		a.	r.	p.
Increase in Area				2,047	3	10
Decrease				3,867	2	16
		Crown Lands Alienation Act of 1861.		a.	r.	p.
Increase in Area				124	0	25
Decrease				511	2	12½
Total Increase in Area				2,171	3	35
Total Decrease				4,379	0	28½

SCHEDULE XXI.

SUMMARY of particulars relating to the number and area of Conditional Purchases in existence on the 31st December, 1895.

Particulars.	No.	Area.			No.	Area.		
		a.	r.	p.		a.	r.	p.
Number and area selected up to 31st December, 1894, after deducting number and area cancelled, forfeited, lapsed, disallowed, and for which deeds have issued	147,965	20,316,606	3	28				
Number and area applied for during 1895	1,751	253,431	0	12				
Less net decrease due to disallowances, forfeitures, &c., as below	857	125,960	3	4	149,716	20,570,038	0 0	
„ number and area for which deeds were issued during 1895	790	178,015	2	23				
					1,647	303,976	1 27	
Number and area in existence on 31st December, 1895					148,069	20,266,061	2 13	
Number and area of conditional purchases for which deeds have been issued up to 31st December, 1895					22,610	2,648,329	2 23	

Particulars.	No.	Area.			No.	Area.		
		a.	r.	p.		a.	r.	p.
Disallowed during 1895	446	69,844	1	18				
Declared forfeited during 1895	513	63,532	3	35				
Decrease in area (Schedule XXX)		4,379	0	28				
Converted into homestead selections	3	1,327	0	0	962	133,833	1 39	
Reversals of forfeiture for non-payment—Crown Lands Alienation Act, 1861	68	5,424	1	10				
Reversals of forfeiture for non-payment—Crown Lands Act, 1884	28	3,514	0	0				
Reversals of forfeiture for reasons other than non-payment—Crown Lands Alienation Act, 1861	1	515	0	0				
Reversals of forfeiture for reasons other than non-payment—Crown Lands Act of 1884	7	937	1	30				
Reversals of voidance	1	60	0	0				
Increase in area (Schedule XXX)		2,171	3	35				
					105	12,922	2 35	
Net decrease in number and area due to disallowances, forfeitures, &c.					857	125,960	3 4	

SCHEDULE XXII.

RETURN giving particulars with reference to Applications received for Homestead Selections during 1895.

Land Board District.	Land District.	Blocks made available during 1895.			Blocks applied for during 1895.			Applications confirmed during 1895.			Applications disallowed or withdrawn during 1895.		No. of Blocks including in outstanding applications.
		No.	Area.	Annual rent.	No.	Area.	Annual rent.	No.	Area.	Annual rent.	No.	Area.	
			a. r. p.	£ s. d.		a. r. p.	£ s. d.		a. r. p.	£ s. d.		a. r. p.	
Armidale	Armidale	15	592 2 0	11 2 2	7	278 2 20	5 4 6	..	.....	.....	..	.....	7
Bourke	Bourke	29	408 1 0	100 0 0	10	204 0 20	50 0 0	10	204 0 20	50 0 0	..	.....	..
	Cobar	36	5,204 2 0	65 1 7	2	960 0 0	12 0 0	..	.....	.....	1	640 0 0	1
	Total	66	5,602 1 0	165 1 7	12	1,164 0 20	62 0 0	10	204 0 20	50 0 0	1	640 0 0	1
Cooma	Cooma	31	1,001 3 0	64 15 9	1	30 0 0	1 10 0	..	.....	.....	..	.....	1
	Eden	15	1,265 1 20	21 9 2	5	423 3 0	10 0 2	..	.....	.....	..	.....	7
	Total	46	3,247 0 20	86 4 11	6	453 3 0	11 10 2	..	.....	.....	..	.....	8
Dubbo	Coonamble	6	196 3 11	6 4 7	1	1,230 0 0	16 0 0	..	.....	.....	1	1,280 0 0	..
	Dubbo	7	489 0 24	15 6 0	7	480 0 24	16 0 0	1	97 0 10	3 0 8	..	.....	6
	Warren	11	655 2 9	20 0 2	..	.....	.....	..	.....	.....	..	.....	..
	Total	24	1,341 2 4	42 19 9	8	1,760 0 24	31 6 0	1	97 0 10	3 0 8	1	1,280 0 0	6
Goulburn	Goulburn	10	1,658 1 0	31 1 11	4	672 1 10	12 12 2	4	672 1 10	12 12 2	..	.....	..
	Young	3	2,571 0 17	55 19 4	8	2,571 0 17	55 19 4	7	2,630 0 5	54 8 7	..	.....	1
	Total	13	4,229 1 17	87 1 4	12	3,243 1 27	68 11 6	11	3,202 1 15	67 0 9	..	.....	1
Grafton	Bellingen	45	6,670 0 0	86 8 11	..	.....	.....	..	.....	.....	..	.....	..
	Casino	14	3,125 2 0	39 1 6	..	.....	.....	..	.....	.....	..	.....	..
	Grafton	9	6,330 2 0	36 9 8	1	628 0 0	3 18 6	..	.....	.....	..	.....	1
	Kenpey	19	3,437 0 0	53 4 10	7	376 0 0	18 7 3	6	798 0 0	16 18 0	1	78 0 0	..
	Lismore	125	35,044 2 0	482 9 10	5	765 2 0	18 10 8	..	.....	.....	..	.....	5
	Murwillumbah	27	6,221 0 0	68 10 6	..	.....	.....	..	.....	.....	..	.....	..
	Total	240	69,889 2 0	766 5 3	13	2,269 2 0	40 16 5	6	798 0 0	16 18 0	1	78 0 0	6
	Hay	Denillquin	31	10,054 2 0	438 10 5	31	10,054 2 0	438 10 5	18	12,399 1 0	230 6 5	7	3,094 0 0	6
Hay		2	1,693 2 0	27 6 0	1	565 0 0	14 2 6	1	565 0 0	14 2 6	..	.....	1
Hillston		6	3,346 0 0	31 7 6	5	2,389 0 0	27 1 9	3	1,057 1 0	15 10 9	1	640 0 0	1
Total		39	23,524 0 0	497 4 8	37	22,598 2 0	479 14 8	22	14,621 2 0	300 10 8	8	3,034 0 0	8
Maitland	Gosford	12	216 2 30	9 16 9	6	96 0 0	4 5 0	..	.....	.....	..	.....	6
	Newcastle	53	4,505 0 0	46 5 11	1	75 1 0	1 8 3	..	.....	.....	..	.....	1
	Singleton	14	1,215 3 0	22 15 11	4	360 0 0	6 16 0	..	.....	.....	..	.....	4
	Three	37	8,295 2 0	104 14 6	..	.....	.....	..	.....	.....	..	.....	..
	Total	116	14,535 3 30	183 13 1	11	525 1 0	12 8 3	..	.....	.....	..	.....	11
Sydney	Campbelltown	117	2,538 1 8	47 14 1	..	.....	.....	..	.....	.....	..	.....	..
	Nowra	3	100 3 20	2 7 1	3	100 3 20	2 7 1	..	.....	.....	..	.....	3
	Penrith	46	1,311 2 21	21 1 6	..	.....	.....	..	.....	.....	..	.....	..
	Pictou	5	697 1 0	3 12 10	..	.....	.....	..	.....	.....	..	.....	..
	Windsor	58	4,330 3 30	60 12 2	6	361 0 30	6 19 7	..	.....	.....	..	.....	6
	Total	259	8,978 3 39	144 7 8	9	462 0 10	9 6 8	..	.....	.....	..	.....	9
Tamworth	Tamworth	6	2,312 3 0	37 16 5	5	1,993 1 0	49 16 8	5	1,993 1 0	49 16 8	..	.....	..
Wagga Wagga	Cootamundra	33	8,260 2 0	152 4 5	26	6,278 2 0	118 18 10	2	303 0 0	6 2 7	..	.....	24
	Cootamundra Central	5	2,439 2 0	43 9 5	4	2,172 0 0	37 12 5	..	.....	.....	..	.....	4
	Corowa	13	4,406 1 0	92 13 0	13	4,406 1 0	92 13 0	2	583 3 0	14 11 11	2	640 0 0	11
	Narrandera	12	12,945 3 0	167 11 5	6	5,603 1 0	83 12 10	3	2,497 1 0	46 15 6	..	.....	3
	Urana	46	3,440 1 0	86 7 6	2	644 2 0	16 2 3	1	324 2 0	8 2 3	..	.....	1
	Wagga Wagga	31	8,774 1 0	211 8 7	31	8,774 1 0	211 8 7	..	.....	.....	..	.....	31
	Total	145	46,266 2 0	753 14 4	82	27,878 3 0	560 7 11	8	3,708 2 0	75 12 3	2	640 0 0	74
Grand Total	964	164,520 1 30	2,795 11 1	202	62,576 1 21	1,331 2 9	63	24,024 3 5	572 8 0	13	6,572 0 0	131	

SCHEDULE XXIII.

RETURN showing Number and Area of Conditional Purchases converted into Homestead Selections during the Year 1895.

Land Board District.	Land District.	No. of C.Ps. Converted.	Area.
Grafton	Casino	1	acres. 47
Wagga Wagga	Tumbarumba	2	1,280
Total		3	1,327

SCHEDULE XXIV.

RETURN showing the Number and Area of Conditional Leases applied for during 1895, with amount of Deposits and Survey Fees received.

Local Land Board District.	Land District.	No.	Area	Deposits.	Survey Fees.
			a. r. p.	£ s. d.	£ s. d.
Armidale	Armidale	46	15,126 1 20	126 1 2	262 1 6
	Glen Innes	10	1,756 0 0	14 12 10	45 3 11
	Inverell	65	18,046 2 0	150 7 9	346 17 7
	Tenterfield	49	12,400 3 0	103 6 11	252 11 10
	Walcha	12	3,394 3 0	28 5 11	64 2 9
	Total	182	50,724 1 20	422 14 7	970 17 6
Bourke	Brewarrina East	9	13,800 0 0	115 0 0	98 18 3
Cooma	Bombala	18	5,549 0 0	46 4 10	101 11 1
	Braidwood	10	1,429 1 0	11 18 3	41 18 3
	Cooma	41	7,449 3 0	62 1 10	189 9 10
	Eden	3	630 0 0	5 5 0	14 6 11
	Milton	1	129 0 0	1 0 0	4 2 6
	Moruya	31	3,902 1 0	32 10 6	126 13 4
	Queanbeyan	39	7,605 0 0	63 7 8	180 11 7
	Total	143	26,686 1 0	222 8 1	658 13 6
Dubbo	Coonamble	64	40,207 1 0	335 1 4	475 1 11
	Dubbo	38	28,801 3 0	240 0 4	301 2 10
	Nyngan	10	10,247 1 0	85 7 11	90 15 3
	Warren	30	25,425 0 0	211 17 6	253 3 0
	Total	142	104,681 1 0	872 7 1	1,120 3 0
Forbes	Barnedman	13	5,928 3 0	49 8 2	84 9 7
	Barnedman East	13	4,260 0 0	35 10 0	75 2 2
	Condobolin	10	4,800 2 0	40 0 4	68 16 7
	Forbes	15	9,983 0 0	83 4 3	115 15 11
	Grenfell	7	1,928 3 0	16 1 6	37 17 8
	Parkes	16	8,565 3 0	71 7 8	112 19 8
	Total	74	35,466 3 0	295 11 11	495 1 7
Goulburn	Boorowa	9	2,406 3 0	20 1 2	46 15 8
	Goulburn	10	1,592 2 0	13 5 5	43 11 11
	Gunning	5	1,612 0 0	13 8 8	28 4 5
	Moss Vale	8	2,300 0 0	19 18 4	43 10 2
	Yass	5	2,222 0 0	18 10 4	31 15 9
	Total	37	10,223 1 0	85 3 11	193 17 11
Grafton	Bellingen	6	1,100 3 0	9 3 6	27 5 8
	Casino	1	400 0 0	3 6 8	6 11 3
	Kempsey	1	50 0 0	0 8 4	3 3 9
	Port Macquarie	2	175 0 0	1 9 2	7 6 3
	Total	10	1,725 3 0	14 7 8	44 6 11
Hay	Balranald South	2	2,400 0 0	20 0 0	19 11 11
	Deniliquin	13	9,694 0 0	80 15 8	100 15 10
	Hay	12	10,760 3 0	89 14 7	106 0 10
	Hillston	3	610 0 0	5 1 8	14 14 5
	Total	30	23,464 3 0	195 11 11	241 3 0
Maitland	Cassilis	29	6,479 1 0	54 0 1	143 18 6
	Dungog	10	2,298 3 0	19 3 2	47 12 8
	Muswellbrook	14	1,310 0 0	10 18 4	52 2 6
	Paterson	3	222 0 0	1 17 0	10 19 5
	Raymond Terrace	1	240 0 0	2 0 0	5 5 0
	Scone	15	4,638 0 0	38 13 2	82 11 7
	Singleton	1	100 0 0	0 16 8	3 15 9
	Stroud	2	100 0 0	0 16 8	6 7 6
	Taree	2	220 0 0	1 16 8	8 1 3
	Wollombi	3	240 0 0	2 0 0	10 10 0
	Total	80	15,848 0 0	132 1 9	371 7 2

SCHEDULE XXIV—continued.

Local Land Board District	Land District.	No.	Area.			Deposits.			Survey Fees.		
			a.	r.	p.	£	s.	d.	£	s.	d.
Moree	Bingara	14	10,587	0	0	88	4	6	111	11	6
	Moree	32	28,366	1	0	236	7	10	280	3	0
	Walgett	11	12,936	2	0	107	16	1	109	4	7
	Warialda	38	21,782	2	0	181	10	6	268	1	3
	Total	95	73,672	1	0	613	18	11	769	0	4
Orange	Bathurst	6	1,791	1	0	14	18	8	32	8	10
	Carcoar	20	10,414	0	0	86	15	8	139	15	4
	Cowra	2	90	0	0	0	15	0	6	3	9
	Lithgow	8	1,679	1	0	13	19	11	39	5	9
	Molong	22	6,267	2	0	52	4	7	117	13	6
	Mudgec	39	10,145	3	0	84	11	0	206	5	7
	Orange	2	280	0	0	2	6	8	8	5	0
	Rylstone	13	2,431	0	0	20	5	2	61	4	7
	Wellington	13	6,070	2	0	50	11	9	85	4	6
	Total	125	39,169	1	0	326	8	5	696	6	10
Sydney	Nowra	2	460	0	0	3	16	8	9	18	9
	Pietermaritzburg	15	4,174	2	0	33	15	9	75	17	0
	Windsor	1	80	0	0	0	13	4	3	15	0
	Total	18	4,714	2	0	38	5	9	89	10	9
Tamworth	Coonabarrabran	26	14,995	2	0	124	19	4	178	14	1
	Gunnedah	18	11,816	1	0	98	9	5	136	14	0
	Murrumbidgee	5	2,933	1	0	24	8	11	38	8	9
	Narrabri	32	15,630	3	0	130	5	3	215	3	9
	Tamworth	56	19,311	2	0	160	18	9	327	12	2
	Total	137	64,687	1	0	539	1	8	896	12	9
Wagga Wagga	Albury	1	640	0	0	5	6	8	8	1	3
	Cootamundra	9	2,294	0	0	19	2	5	48	0	0
	Gundagai	3	958	3	0	7	19	10	17	3	2
	Narrandera	3	2,875	0	0	23	19	2	28	11	11
	Tumbarumba	2	520	0	0	4	6	8	10	15	8
	Tumut	8	1,623	0	0	13	10	6	37	17	8
	Urana	1	180	0	0	1	10	0	4	13	9
	Wagga Wagga	11	4,347	2	0	36	4	9	71	1	5
	Total	38	13,438	1	0	112	0	0	226	4	10
	Grand Totals	1,120	478,301	3	20	3,985	1	8	6,872	4	4

SCHEDULE XXV.

RETURN showing the Number and Area of Conditional Lease Applications confirmed or disallowed during 1895.

Local Land Board District.	Land District.	Applications made during 1895.				Applications made prior to 1st January, 1895.				Total.			
		Confirmed.		Disallowed.		Confirmed.		Disallowed.		Confirmed.		Disallowed.	
		No.	a.	r.	p.	No.	a.	r.	p.	No.	a.	r.	p.
Armidale	Armidale	16	4,976	3	20	5	2,632	0	0	23	5,285	2	30
	Glen Innes	2	527	3	0	7	1,936	0	0	5	2,090	0	0
	Inverell	10	1,339	2	0	15	4,332	0	0	3	790	0	0
	Tenterfield	10	2,106	3	0	35	10,140	1	0	9	2,463	3	0
	Walcha	4	454	1	0	31	3,686	1	0	21	11,479	3	0
Total	42	9,404	0	20	29	11,486	0	0	16	5,048	0	0	
Bourke	Brewarrina East	7	11,463	0	0	1	1,920	0	0	9	14,175	0	0
	Total	7	11,463	0	0	1	1,920	0	0	9	14,175	0	0
Cooma	Bega	1	50	0	0	1	50	0	0	2	100	0	0
	Bombala	2	508	0	0	5	2,160	0	0	10	2,400	2	0
	Braidwood	1	99	1	0	12	1,378	0	0	6	1,578	0	0
	Cooma	14	2,100	1	0	6	944	1	0	2	144	1	0
	Eden	2	180	0	0	1	450	0	0	6	810	0	0
	Milton	1	120	0	0	1	120	0	0	1	180	0	0
	Moruya	15	1,956	2	0	9	1,160	0	0	1	120	0	0
	Queanbeyan	23	3,517	2	0	9	2,520	0	0	16	2,107	2	0
	Total	66	8,382	1	0	31	7,333	2	0	34	19,859	2	0

SCHEDULE XXV—continued.

Local Land Board District.	Land District.	Applications made during 1895.				Applications made prior to 1st January, 1895.				Total.			
		Confirmed.		Disallowed.		Confirmed.		Disallowed.		Confirmed.		Disallowed.	
		No.	a. r. p.	No.	a. r. p.	No.	a. r. p.	No.	a. r. p.	No.	a. r. p.	No.	a. r. p.
Dubbo	Coonamble	6	1,058 0 0	31	18,049 0 0	22	9,947 0 0	11	2,030 2 0	28	11,000 0 0	42	27,109 2 0
	Dubbo	7	2,442 3 0	9	3,153 0 0	3	3,782 3 0	5	3,601 1 0	15	6,225 2 0	14	11,654 1 0
	Nvngan	..	..	2	2,080 0 0	6	3,295 3 0	..	..	6	3,295 3 0	2	2,080 0 0
	Warren	..	..	11	7,832 0 0	8	1,637 0 0	..	..	8	1,637 0 0	11	7,832 0 0
	Total	18	3,495 3 0	53	36,114 0 0	44	18,712 2 0	16	12,561 3 0	57	22,208 1 0	69	48,675 3 0
Forbes	Barmedman	5	2,386 1 0	4	1,109 1 0	..	..	..	..	5	2,386 1 0	4	1,109 1 0
	Barmedman East	6	2,274 1 0	1	148 0 0	1	711 0 0	..	..	7	2,985 1 0	1	148 0 0
	Condobolin	6	3,533 3 0	4	1,266 3 0	3	960 0 0	..	..	9	4,493 3 0	4	1,266 3 0
	Forbes	..	..	4	1,816 1 0	5	1,612 0 0	..	..	5	1,612 0 0	4	1,816 1 0
	Grenfell	1	84 0 0	4	1,380 0 0	1	599 3 0	..	..	2	663 3 0	4	1,380 0 0
	Parkes	2	2,070 0 0	3	2,920 0 0	2	1,050 0 0	..	..	4	3,720 0 0	3	2,920 0 0
Total	20	10,928 1 0	25	8,640 1 0	12	4,932 3 0	..	..	32	15,861 0 0	25	8,640 1 0	
Goulburn	Boorowa	3	150 3 0	1	600 0 0	2	409 0 0	..	..	5	568 3 0	1	600 0 0
	Goulburn	6	644 3 0	2	434 2 0	13	2,053 2 0	1	60 0 0	19	2,938 1 0	3	494 2 0
	Gunning	1	610 2 0	1	640 0 0	1	120 0 0	..	..	2	730 2 0	1	640 0 0
	Moss Vale	4	894 0 0	1	200 0 0	4	1,237 3 0	..	..	8	2,131 3 0	1	200 0 0
	Yass	1	42 0 0	1	130 0 0	4	404 2 0	..	..	5	506 2 0	1	130 0 0
	Young	..	..	..	..	1	40 0 0	..	..	1	40 0 0	..	..
Total	15	2,651 0 0	6	2,054 2 0	25	4,324 3 0	1	60 0 0	40	6,975 3 0	7	2,114 2 0	
Grafton	Bellingen	4	921 0 0	1	100 0 0	..	..	..	..	4	921 0 0	1	100 0 0
	Casino	1	400 0 0	..	..	1	150 0 0	1	274 0 0	1	400 0 0	1	274 0 0
	Grafton	..	..	..	..	2	380 0 0	..	..	3	430 0 0	..	..
	Kempsey	1	50 0 0	..	..	..	..	..	..	..	..	..	..
Total	6	1,871 0 0	1	100 0 0	3	530 0 0	1	274 0 0	9	1,901 0 0	2	374 0 0	
Hay	Deniliquin	3	3,026 0 0	3	1,001 0 0	..	..	..	..	3	3,026 0 0	3	1,001 0 0
	Hay	3	7,296 1 0	2	1,324 1 0	7	3,390 2 0	4	3,240 0 0	13	10,670 3 0	6	5,064 1 0
	Hillston	3	610 0 0	..	..	2	912 0 0	..	..	5	1,522 0 0	..	..
Total	19	15,932 1 0	5	2,325 1 0	9	4,292 2 0	4	3,240 0 0	28	20,254 3 0	9	6,065 1 0	
Maitland	Casalis	20	5,034 2 0	4	600 0 0	9	2,090 0 0	5	1,320 0 0	29	7,724 2 0	9	2,010 0 0
	Dungog	8	1,424 0 0	1	540 0 0	..	..	..	..	8	1,424 0 0	1	540 0 0
	Muswellbrook	6	610 0 0	5	290 0 0	1	40 0 0	1	120 0 0	7	650 0 0	6	410 0 0
	Paterson	3	222 0 0	..	..	1	120 0 0	..	..	4	342 0 0	..	..
	Raymond Terrace	1	240 0 0	..	..	..	..	..	..	1	240 0 0	..	..
	Scone	7	1,036 0 0	3	1,319 0 0	16	8,060 2 0	1	191 0 0	23	9,096 2 0	4	1,510 0 0
	Singleton	1	100 0 0	..	..	..	..	..	..	1	100 0 0	..	..
	Stroud	1	40 0 0	1	60 0 0	3	503 3 0	..	..	4	843 3 0	1	60 0 0
	Taree	1	140 2 0	..	..	2	130 0 0	..	..	3	270 2 0	..	..
	Wollombi	1	40 0 0	..	..	..	..	..	..	1	40 0 0	..	..
	Total	49	8,557 0 0	14	2,390 0 0	32	11,844 1 0	7	1,631 0 0	81	20,731 1 0	21	4,530 0 0
	Moree	Bingara	4	3,402 3 0	2	660 0 0	16	10,641 2 0	6	3,840 0 0	20	14,044 1 0	8	4,500 0 0
Moree		16	17,405 3 0	6	4,675 0 0	25	25,473 3 0	4	1,573 3 0	41	42,884 2 0	10	6,248 3 0
Walgett		6	8,900 0 0	2	1,238 2 0	4	4,301 1 0	3	2,528 0 0	12	13,101 1 0	5	3,766 2 0
Warialda		11	7,691 0 0	3	975 0 0	20	6,684 0 0	2	632 0 0	31	14,376 0 0	5	1,507 0 0
Total		37	37,299 2 0	13	7,548 2 0	67	47,105 2 0	15	8,473 3 0	104	84,405 0 0	28	16,022 1 0
Orange	Bathurst	3	545 1 0	2	286 0 0	2	913 2 0	..	..	5	1,458 3 0	2	286 0 0
	Carcoar	1	615 0 0	5	3,202 0 0	8	1,321 1 0	2	450 0 0	9	1,936 1 0	7	3,652 0 0
	Cowra	..	..	2	30 0 0	..	..	..	..	2	30 0 0	..	..
	Lithgow	1	150 0 0	1	151 1 0	1	100 0 0	1	49 0 0	2	250 0 0	2	200 1 0
	Molong	6	541 1 0	3	1,080 0 0	23	6,652 2 0	4	923 0 0	29	7,695 3 0	7	2,008 0 0
	Mudgee	15	2,713 0 0	4	1,264 2 0	23	7,546 1 0	1	360 0 0	38	10,259 1 0	5	1,624 2 0
	Orange	1	40 0 0	..	..	4	1,232 3 0	..	..	5	1,272 3 0	..	..
	Rylstone	10	2,230 1 0	1	60 0 0	13	3,930 1 0	2	509 0 0	23	6,210 2 0	3	509 0 0
	Wellington	5	2,140 2 0	3	2,830 0 0	3	3,179 0 0	..	..	13	5,319 2 0	3	2,830 0 0
	Total	41	8,975 1 0	21	9,613 3 0	32	24,325 2 0	10	2,290 0 0	123	38,800 3 0	31	11,009 3 0
	Sydney	Nowra	1	400 0 0	1	400 0 0
Pictou		6	1,313 0 0	4	734 2 0	6	2,632 0 0	1	100 0 0	12	3,045 0 0	5	834 2 0
Windsor		1	80 0 0	..	..	..	..	..	..	1	80 0 0	..	..
Total	7	1,393 0 0	5	1,134 2 0	6	2,632 0 0	1	100 0 0	13	4,025 0 0	6	1,234 2 0	
Tamworth	Coonabarrabran	5	1,708 0 0	7	3,439 0 0	14	7,111 3 0	4	2,120 0 0	19	8,810 3 0	11	6,600 0 0
	Gunnedah	4	1,170 0 0	7	7,416 3 0	11	4,127 3 0	..	..	16	5,297 3 0	7	7,416 3 0
	Murrurundi	1	734 2 0	..	..	6	1,997 2 0	1	120 0 0	7	2,732 0 0	1	120 0 0
	Narrabri	7	3,422 3 0	11	4,301 3 0	26	21,733 2 0	3	1,345 0 0	33	25,206 1 0	14	6,146 3 0
	Tamworth	23	7,807 0 0	3	475 0 0	59	25,032 2 0	10	4,135 0 0	82	32,339 2 0	13	4,610 0 0
	Total	40	14,892 1 0	28	16,173 2 0	116	60,053 0 0	18	7,720 0 0	156	74,045 1 0	46	23,898 2 0
Wagga Wagga	Albury	1	640 0 0	..	..	1	360 0 0	..	..	2	1,600 0 0	..	..
	Cootamundra	3	876 2 0	..	..	2	891 0 0	..	..	5	1,707 2 0	..	..
	Gundagai	2	258 3 0	1	600 0 0	4	905 2 0	3	700 2 0	6	1,264 1 0	4	1,360 2 0
	Narrandera	1	635 0 0	2	2,240 0 0	..	..	1	1,280 0 0	3	635 0 0	3	3,520 0 0
	Tembarumba	1	400 0 0	..	..	2	510 3 0	4	1,380 0 0	3	1,210 3 0	4	1,380 0 0
	Tumut	2	109 0 0	1	150 0 0	1	236 3 0	2	142 2 0	3	405 3 0	3	292 2 0
	Urana	..	..	1	180 0 0	..	..	..	..	..	..	1	180 0 0
	Wagga Wagga	..	..	2	1,000 0 0	5	1,636 1 0	..	..	6	1,636 1 0	2	1,000 0 0
	Total	10	3,079 1 0	7	4,170 0 0	15	5,440 1 0	10	3,563 0 0	25	8,519 2 0	17	7,733 0 0
	Grand Totals	362	185,213 3 20	239	112,012 3 0	592	225,606 0 30	102	45,406 2 0	924	363,880 0 10	341	157,509 1 0

SCHEDULE XXVI.

RETURN showing the Number and Area of Conditional Leases Transferred and the Number of Transfers passed during the year 1895.

Land Board and Land District.	No. of Leases Transferred.	No. of Transfers passed.	Area.		Land Board and Land District.	No. of Leases Transferred.	No. of Transfers passed.	Area.	
			a.	r. p.				a.	r. p.
Armidale—					Maitland—				
Armidale	108	141	47,013	2 30	Cassilis	42	56	17,439	1 0
Glen Innes	15	17	5,026	1 0	Dungog	6	7	1,101	3 0
Inverell	56	75	28,013	0 0	Muswellbrook	3	3	525	0 0
Tenterfield	16	18	4,331	2 0	Paterson	2	5	613	1 0
Walcha	40	55	15,655	0 0	Raymond Terrace	1	2	273	3 0
Total	235	306	100,089	1 30	Scone	48	61	24,048	2 0
Bourke—					Singleton	16	17	4,912	2 0
Bourke	8	8	8,672	0 0	Stroud	3	3	1,644	3 0
Brewarrina	1	1	1,238	0 0	Taree	13	15	3,048	3 0
Do East	8	11	13,276	2 0	Wollombi	4	4	472	2 0
Wilcannia	1	1	1,920	0 0	Total	138	173	54,080	0 0
Total	18	21	25,106	2 0	Moree—				
Cooma—					Bingara	13	14	6,788	2 0
Boga	4	4	315	1 0	Moree	75	112	77,109	0 0
Bombala	7	7	1,919	3 0	Walgett	23	25	30,730	1 0
Braidwood	7	9	1,748	0 0	Do North	1	3	300	0 0
Cooma	46	50	12,745	3 0	Warialda	17	20	7,767	3 0
Eden	2	2	85	0 0	Total	129	174	122,695	2 0
Moruya	4	4	545	0 0	Orange—				
Queanbeyan	42	49	14,005	2 0	Bathurst	23	36	6,734	2 0
Total	112	125	31,364	1 0	Carcoar	41	54	16,453	2 0
Dubbo—					Cowra	18	25	4,410	3 0
Coonamble	144	199	171,441	1 0	Lithgow	15	18	3,689	1 0
Dubbo	83	122	66,943	3 0	Molong	40	49	10,397	0 0
Nyngan	45	58	64,880	2 0	Mudgee	26	34	6,415	3 0
Warren	68	92	79,636	1 0	Orange	11	15	3,650	1 0
Total	340	471	382,901	3 0	Rylstone	16	17	5,169	3 0
Forbes—					Wellington	37	51	13,275	0 0
Barnedman	52	64	41,923	1 0	Total	227	299	70,195	3 0
Do East	8	12	3,471	3 0	Sydney—				
Condoblin	54	93	68,247	3 0	Campbelltown	1	2	189	0 0
Forbes	31	42	18,833	0 0	Penrith	1	1	490	0 0
Grenfell	28	37	14,814	0 0	Picton	7	7	2,023	0 0
Parkes	94	128	102,825	3 0	Total	9	10	3,302	0 0
Total	267	376	250,115	2 0	Tamworth—				
Goulburn—					Coonabarrabran	38	43	25,551	1 0
Boorowa	52	70	17,568	3 0	Gunnedah	26	27	28,203	2 0
Goulburn	23	27	3,842	3 0	Murrurundi	29	33	16,709	2 0
Gunning	17	19	3,809	1 0	Narrabri	104	133	103,424	1 0
Moss Vale	3	3	649	0 0	Tamworth	82	143	39,463	3 0
Yass	14	16	2,967	3 0	Total	279	379	213,352	1 0
Young	13	19	5,033	2 0	Wagga Wagga—				
Total	122	154	33,871	0 0	Albury	16	22	5,915	2 0
Grafton—					Cootamundra	18	21	8,897	3 0
Bellingen	2	4	289	2 0	Do Central	7	9	3,540	2 0
Casino	21	23	10,230	2 0	Gundagai	7	7	1,473	0 0
Grafton	11	14	2,445	1 0	Narrandera	17	27	16,026	2 0
Kempsey	8	12	1,838	0 0	Tumbarumba	4	7	1,791	0 0
Liamore	3	3	895	1 0	Do North	3	3	2,108	3 0
Murwillumbah	2	2	438	0 0	Tumut	22	32	5,471	3 3
Port Macquarie	3	3	373	0 0	Urana	5	6	4,309	2 0
Total	50	61	16,509	2 0	Wagga Wagga	11	13	6,182	0 0
Hay—					Total	110	147	55,715	3 3
Deniliquin	14	31	9,048	3 0	Grand Total	2,134	2,865	1,486,564	0 33
Hay	71	123	104,035	2 0					
Do North	3	3	4,506	1 0					
Hillston	6	6	3,943	2 0					
Do North	1	1	1,176	0 0					
Wentworth	3	5	4,555	0 0					
Total	98	169	127,265	0 0					

	Total No of C. Leases Transferred.	Total No. of Transfers Passed.	Area.	
			a.	r. p.
Eastern Division	1,079	1,405	392,605	1 33
Central „	1,037	1,438	1,071,591	2 0
Western „	18	22	22,367	1 0
Grand Total	2,134	2,865	1,486,564	0 33

SCHEDULE XXVII.

RETURN showing the Total Number, Area, and Rent of Conditional Leases notified as Forfeited during the year 1895.

Land Board District and Land District.	No.	Area.	Rent.	Land Board District and Land District.	No.	Area.	Rent.
Armidale—		acres.	£ s. d.	Maitland—		acres.	£ s. d.
Armidale	13	5,046½	57 19 4	Cassilis	2	1,000	10 8 4
Glen Innes	4	1,830	29 9 2	Dungog	1	254½	4 4 10
Inverell	5	1,988½	20 19 9	Gosford	2	330	2 12 6
Tenterfield	3	1,870	19 11 8	Muswellbrook	1	240	2 10 0
Walcha	18	7,591½	98 14 0	Palerson	1	150	1 11 3
	43	18,326½	226 13 11	Raymond Terrace	1	150	1 5 0
Cooma—				Scone	2	810	8 18 2
Bega	1	50	0 12 6	Stroud	4	809½	11 8 8
Bombala	3	780	5 3 9	Three	6	1,505½	19 16 5
Braidwood	4	1,297½	14 9 11	Wollombi	3	240	2 3 4
Cooma	27	6,464½	68 6 7		23	5,489½	64 18 6
Eden	3	130	2 4 2	Morco—			
Milton	1	227	2 16 9	Bingsra	2	1,160	10 3 4
Queanbeyan	7	2,001	26 10 4				
	46	10,950	120 4 0	Orange—			
Dubbo—				Bathurst	5	2,176½	25 3 7
Coonamble	3	1,373	18 13 4	Carcoar	11	4,087½	45 17 1
Dubbo	2	823	10 3 3	Cowra	1	100	0 16 8
Nyngan	4	3,771	37 8 6	Lithgow	10	1,445½	18 5 8
	9	5,967	66 5 1	Molong	5	2,789½	20 15 8
Forbes—				Mudgee	4	1,133½	13 9 1
Barmedman	4	2,193	21 3 7	Orange	3	650	7 6 11
Barmedman East	1	131	1 4 7	Rylstone	7	1,790	19 6 3
Condobolin	8	8,720	60 3 7	Wellington	2	167	2 8 11
Forbes	1	112½	1 8 1		48	14,239½	153 9 10
Parkes	2	2,250	14 15 0	Sydney—			
	16	13,406½	98 14 10	Campbelltown	1	63	0 17 3
Goulburn—				Pieton	2	561	6 9 5
Boorowa	12	2,124½	22 7 4		3	630	7 6 8
Goulburn	26	4,768½	51 12 9	Tamworth—			
Gunning	6	1,243½	16 16 6	Coonabarrabran	1	150	0 18 9
Moss Vale	4	1,311	18 11 10	Gunnedah	1	565	8 4 10
Yass	14	5,964½	63 6 3	Narrabri	3	760	8 12 8
Young	3	666	5 16 6	Tamworth	6	1,896½	20 7 7
	65	16,077½	178 11 2		11	3,371½	38 3 10
Grafton—				Wagga Wagga—			
Bellingen	8	2,095½	25 15 6	Albury	13	7,176½	71 12 10
Casino	16	7,450	129 2 7	Cootamundra	2	540	6 5 0
Grafton	8	2,480½	28 6 10	Gundagai	10	5,613½	57 12 4
Kempsey	1	120	3 0 0	Narrandera	2	1,860	11 15 0
Lismore	1	65	2 0 0	Tumbarumba	13	8,296	83 8 4
Murwillumbah	5	2,312½	45 8 0	Tumut	11	4,904½	64 15 7
Port Macquarie	6	2,226	29 13 0	Wagga Wagga	1	125	1 0 10
	45	16,749½	264 5 11		52	28,515½	286 9 11
Hay—				SUMMARY.			
Baranald	1	1,920	16 0 0	Eastern Division	329	111,020½	1,310 16 3
Hillston	2	3,270	16 8 9	Central "	36	27,132½	220 19 6
	3	5,190	32 8 9	Western "	1	1,920	16 0 0
				Grand Total	366	140,072½	1,547 15 9

SCHEDULE XXVIII.

RETURN showing the total number of Conditional Leases converted under section 25, Act of 1889, during 1895.

Division.	Wholly converted.	Partly converted.	Total number.	Area converted.	Rent of area converted.
Central	82	51	133	a. r. p.	£ s. d.
Eastern	77	76	153	75,006 2 0	1,144 1 0
				23,651 0 0	374 15 7
Total	159	127	286	98,657 2 0	1,518 16 7

SCHEDULE XXIX.

RETURN showing the Conditional Leases Gazetted during the year 1895, and the Conditional Leases in existence on the 31st December, 1895.

Division of the Colony.	Conditional Leases Gazetted in 1895.			Gazetted Conditional Leases in existence on 31st December, 1895.			Conditional Leases in existence on 31st December, 1895, inclusive of those applied for under the Act of 1889, and not yet dealt with		
	No.	Area.	Rent.	No.	Area.	Rent.	No.	Area.	Rent.
Central	275	a. r. p. 181,055 3 0	£ s. d. 1,950 5 3	7,402	a. r. p. 7,330,353 3 12	£ s. d. 88,597 13 3	7,783	a. r. p. 7,589,003 3 12	£ s. d. 90,758 2 8
Eastern	693	196,767 2 6	2,159 10 8	13,943	4,764,030 1 36	57,940 19 3	14,494	5,119,791 0 29	60,905 11 8
Western .....	..	..	..	206	243,807 2 19	2,541 4 10	206	243,807 2 19	2,541 4 10
Total	968	377,823 1 6	4,109 15 11	21,551	12,338,191 3 27	149,079 17 4	22,483	12,953,202 2 20	154,204 19 2

SCHEDULE XXX.

RESULT of Sales by Auction during the year 1895.

Land Board and Land District.	Town Land.					Suburban Land.					Country Land.				
	Offered.		Sold.		Amount Realised.	Offered.		Sold.		Amount Realised.	Offered.		Sold.		Amount Realised.
	Lots.	Area.	Lots.	Area.		Lots.	Area.	Lots.	Area.		Lots.	Area.	Lots.	Area.	
	a. r. p.		a. r. p.	£ s. d.	a. r. p.		a. r. p.	£ s. d.	a. r. p.		a. r. p.	£ s. d.			
Armidale—															
Armidale	84	36 3 37½	21	9 1 14½	569 10 0	47	451 1 16	12	24 3 32½	244 6 0	16	933 0 20	13	715 1 15	1,096 8 1
Glen Innes	19	8 2 7¼	5	1 3 20½	84 0 0	29	11 3 12½	3	1 0 20	44 0 0	4	678 0 0	...	...	...
Inverell	4	2 0 0	...	...	...	...	...	...	...	...	6	550 2 0	3	84 0 0	179 12 6
Tenterfield .....	...	...	...	...	...	...	...	...	...	...	7	660 0 17	5	563 1 17	726 16 9
Walcha .....	...	...	...	...	...	2	2 0 0	1	1 0 0	15 0 0	2	102 0 0	1	51 0 0	66 6 0
Bourke—															
Bourke	98	27 3 3	39	10 2 0	897 0 0	4	40 1 24	...	...	...	4	18 1 20	3	13 1 20	107 0 0
Brewarrina	10	2 2 24	...	...	...	...	...	...	...	...	5	336 2 30	...	...	...
Cobar	1	0 2 0	1	0 2 0	5 0 0	...	...	...	...	...	...	...	...	...	...
Wilcannia	11	3 1 35	...	...	...	...	...	...	...	...	12	188 3 0	...	...	...
Willyama	9	2 1 0	4	1 0 0	29 0 0	...	...	...	...	...	...	...	...	...	...
Cooma—															
Bega	5	1 3 11¼	2	0 1 38½	22 10 0	4	9 0 15	1	3 1 6	40 0 0	6	158 3 4	4	93 1 4	1,209 0 0
Bombala	1	0 2 0	...	...	...	...	...	...	...	...	15	606 3 0	7	277 0 30	388 11 11
Braidwood .....	...	...	...	...	...	31	71 0 8	10	13 2 11	77 0 0	15	394 0 20	2	16 1 24	37 15 0
Cooma	95	24 0 32½	20	5 0 1¼	94 0 0	39	187 2 30	8	49 0 37	196 10 0	38	1,965 2 12	12	263 2 2	418 3 8
Eden	6	2 3 10	6	2 3 10	40 0 0	...	...	...	...	...	1	12 3 0	1	12 3 0	44 5 0
Moruya	6	2 2 10½	4	1 2 29½	16 0 0	...	...	...	...	...	41	377 3 27	22	171 0 5	838 10 11
Queanbeyan	44	19 3 17	5	2 0 32	39 0 0	4	1 2 22½	1	0 1 0	6 10 0	6	235 1 24	5	55 1 24	106 2 6
Dubbo—															
Coonamble	30	15 0 0	5	2 2 0	22 2 0	...	...	...	...	...	11	3,612 3 0	5	1,035 3 0	1,290 18 9
Dubbo	1	0 1 0	1	0 1 0	20 0 0	48	101 1 21	2	2 1 37	11 0 0	2	147 3 18	2	147 3 18	326 10 0
Nyngan	91	45 1 8	15	7 2 0	603 5 0	46	207 0 30	24	101 0 33	610 0 0	...	...	...	...	...
Warren .....	...	...	...	...	...	...	...	...	...	...	5	1,995 2 0	...	...	...
Forbes—															
Barmeduan	13	5 2 0	13	5 2 0	242 10 0	...	...	...	...	...	7	1,370 1 0	2	7 0 0	14 1 0
Condobolin	28	18 3 35	1	0 1 35	50 0 0	51	137 1 34	13	45 0 14	127 0 0	...	...	...	...	...
Forbes	20	8 0 21	9	3 3 10½	142 0 0	20	45 0 35	10	24 1 38	165 2 6	18	1,248 3 22	14	940 0 35	1,497 13 8
Grenfell .....	...	...	...	...	...	2	5 1 8	...	...	...	2	153 1 36	1	147 0 0	227 17 0
Parkes	78	23 0 29½	27	8 1 39½	415 6 0	14	15 2 35½	2	1 1 0	137 10 0	24	61 0 15	10	34 3 24½	132 5 0

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SCHEDULE XXX—continued.

Land Board and Land District.	Town Land.					Suburban Land.					Country Land.				
	Offered.		Sold.		Amount Realised.	Offered.		Sold.		Amount Realised.	Offered.		Sold.		Amount Realised.
	Lots.	Area.	Lots.	Area.		Lots.	Area.	Lots.	Area.		Lots.	Area.	Lots.	Area.	
		a. r. p.		a. r. p.	£ s. d.		a. r. p.		a. r. p.	£ s. d.		a. r. p.		a. r. p.	£ s. d.
Goulburn—															
Boorowa	20	9 0 10	...	.....	.....	17	107 2 5	3	18 1 37	55 10 0	6	387 1 0	2	45 2 0	149 16 11
Goulburn .....	...	.....	...	.....	.....	32	123 1 38	4	14 1 24	58 0 0	23	2,302 1 30	8	212 3 0	335 0 8
Gunning	14	5 1 29½	2	0 3 30	12 0 0	...	.....	...	.....	.....	4	495 3 0	...	.....	.....
Moss Vale .....	...	.....	...	.....	.....	...	.....	...	.....	.....	5	508 1 32	...	.....	.....
Yass .....	...	.....	...	.....	.....	...	.....	...	.....	.....	7	568 0 0	...	.....	.....
Young	127	35 2 26¼	13	3 2 0	279 15 0	70	269 3 14½	19	119 1 34	627 3 0	20	146 1 0	12	69 2 31	232 15 4
Grafton—															
Bellingen	106	33 1 25	23	7 2 6	254 10 0	25	98 3 39	4	3 3 29	23 0 0	18	122 2 11	2	11 3 28	29 6 0
Casino .....	...	.....	...	.....	.....	1	0 3 10½	1	0 3 10½	15 0 0	...	.....	...	.....	.....
Grafton	26	12 3 16½	8	3 3 18	130 0 0	52	220 3 38	29	126 0 32	524 1 0	11	615 1 22	7	225 1 16	393 14 0
Kempsey .....	...	.....	...	.....	.....	...	.....	...	.....	.....	26	341 1 20	1	5 0 0	10 0 0
Lismore .....	...	.....	...	.....	.....	24	29 1 13	10	17 0 25	159 15 0	2	26 1 20	2	26 1 20	52 15 11
Murwillumbah .....	...	.....	...	.....	.....	...	.....	...	.....	.....	2	83 1 30	2	83 1 30	110 10 8
Port Macquarie .....	...	.....	...	.....	.....	...	.....	...	.....	.....	7	421 3 0	...	.....	.....
Hay—															
Bulranald .....	...	.....	...	.....	.....	...	.....	...	.....	.....	1	2 0 0	1	2 0 0	20 0 0
Deniliquin	95	44 2 10	69	33 1 18	288 4 0	1	0 2 15	...	.....	.....	13	2,336 1 0	6	724 1 0	1,179 17 6
Hay	12	6 0 0	...	.....	.....	...	.....	...	.....	.....	18	5,405 0 0	10	3,354 2 0	5,137 19 9
Hillston	79	36 3 4	9	3 2 17½	53 10 0	...	.....	...	.....	.....	...	.....	...	.....	.....
Wentworth	6	3 0 0	4	2 0 0	19 0 0	3	3 0 0	1	1 0 0	6 0 0	...	.....	...	.....	.....
Maitland—															
Cassilis .....	...	.....	...	.....	.....	2	4 0 0	2	4 0 0	41 0 0	5	202 0 10	3	120 3 20	202 16 3
Gosford	18	8 2 11	2	0 3 30	34 10 0	...	.....	...	.....	.....	3	77 1 0	...	.....	.....
Maitland .....	...	.....	...	.....	.....	...	.....	...	.....	.....	1	50 0 0	...	.....	.....
Muswellbrook	41	19 2 6	18	8 1 36	32 0 0	...	.....	...	.....	.....	4	97 2 0	4	97 2 0	285 3 8
Newcastle	1	0 1 0	1	0 1 0	399 0 0	...	.....	...	.....	.....	12	40 0 38½	2	15 3 21	23 16 9
Scone .....	...	.....	...	.....	.....	...	.....	...	.....	.....	8	662 3 30	3	105 3 0	162 7 6
Singleton .....	...	.....	...	.....	.....	...	.....	...	.....	.....	4	174 2 0	...	.....	.....
Stroud .....	...	.....	...	.....	.....	...	.....	...	.....	.....	18	2,747 1 0	3	457 3 0	857 5 10
Taree	1	0 0 19	1	0 0 19	4 0 0	...	.....	...	.....	.....	13	512 0 20	2	16 2 0	25 7 7
Moree—															
Bingara .....	...	.....	...	.....	.....	6	8 2 38	6	8 2 38	137 7 0	...	.....	...	.....	.....
Moree	143	70 3 23	65	31 3 23	854 1 6	...	.....	...	.....	.....	4	866 0 39	1	442 2 0	554 12 6
Walgett	1	1 2 4	1	1 2 4	20 0 0	4	831 1 0	4	831 1 0	1,039 1 3
Warialda	77	32 2 31½	52	22 2 11	767 3 0	68	94 1 20	16	30 1 37	306 5 0	1	40 0 0

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SCHEDULE XXXII—continued.

Land Board District.	Land District.	Town.			Suburban.			Country.		
		No. of Lots.	Area.	Amount forfeited.	No. of Lots.	Area.	Amount forfeited.	No. of Lots.	Area.	Amount forfeited.
			a. r. p.	£ s. d.		a. r. p.	£ s. d.		a. r. p.	£ s. d.
Goulburn	Boorowa	8	2 2 22	7 0 0	3	22 1 35	15 7 6			
	Goulburn	1	0 2 0	1 5 0						
	Gunning	6	3 0 0	6 0 0						
	Moss Vale	1	0 2 0	4 0 0						
	Nowra	3	0 2 27	6 17 6						
	Young	4	1 0 20	46 17 6	16	16 1 33	28 2 9	4	13 0 5½	12 4 3
Grafton	Bellingen	6	2 0 29	14 15 0						
	Casino	1	0 1 35	6 10 0	2	1 3 7½	2 7 6			
	Grafton	10	4 0 36½	19 5 0	3	9 1 8	10 12 6			
	Kempsey	4	1 2 8	4 1 9						
	Lismore	2	0 2 19½	5 12 6	4	4 2 31	13 15 0			
	Port Macquarie	2	0 2 0	1 1 6				2	44 0 0	25 0 0
Hay	Hay	4	2 0 0	9 12 6						
	Hillston	6	2 0 38½	19 5 3	1	7 1 21	26 5 0			
Maitland	Gosford	5	1 0 5½	12 0 0	1	7 0 32	9 0 0			
	Muswellbrook				1	0 3 3	14 0 0			
	Newcastle	2	0 3 11	3 5 0				8	1 3 15½	325 0 0
	Scone	4	1 2 18½	8 14 8	2	3 2 12	10 0 0			
	Singleton				7	17 0 33	65 2 6			
	Stroud	14	6 1 33	14 11 0	1	2 1 12	1 17 6			
	Taree	5	2 0 36	9 0 0						
Moree	Moree	4	2 0 0	14 5 6						
	Walgett	1	0 2 0	5 0 0						
	Warialda	1	0 2 0	2 10 0						
Orange	Bathurst							3	8 2 18	12 10 0
	Cowra	4	0 2 22½	8 11 3	1	6 0 0	7 10 0			
	Lithgow	11	4 1 39½	37 5 0	2	29 3 20	79 15 0			
	Molong	2	0 3 4	7 0 0	1	1 3 0	6 0 0			
	Mudgee	3	1 1 20	9 10 0	1	1 0 0	1 5 0			
	Rylstone	5	2 0 16½	7 17 9						
Sydney	Liverpool				1	1 0 0	5 0 0			
	Parramatta				3	10 1 29	29 17 6	11	45 3 15½	161 1 0
	Picton	13	6 0 5	113 6 3	9	32 0 30	70 14 3			
	Sydney							27	80 0 38	2,711 13 2
	Windsor	5	1 0 38	22 1 3	1	0 3 16	9 0 0			
Tamworth	Coonabarabran	3	1 1 20	6 5 0						
	Gunnedah	5	2 2 0	20 10 3						
	Murrumbidgee				7	7 0 23	6 12 6			
	Narrabri	10	3 1 25	33 2 6						
Wagga Wagga	Albury	3	0 3 0	2 5 0	1	2 2 0	6 10 0			
	Cootamundra	18	6 0 39½	72 4 8				11	10 0 33	17 19 8
	Corowa	3	1 2 0	4 17 6	1	3 0 17	2 0 0			
	Narrandera	7	3 0 18½	25 8 2						
	Tumbarumba	8	3 1 30	12 15 0						
	Tumut	1	0 1 31	1 0 0	7	9 2 15½	51 3 6			
	Urana	3	1 2 0	3 5 0	1	2 1 0	2 17 6			
	Wagga Wagga	8	2 1 32	142 1 3						
Total		303	119 1 29½	1,020 3 3	117	328 2 34½	633 11 11	72	234 1 25½	3,355 18 8

Grand total, Town, Suburban, and Country : 492 lots, 682 a. 2 r. 9½ p., £5,009 13s. 10d.

* The sales annulled, but the annulling of which has been reversed, are not included in this Return.

SCHEDULE XXXIII.

RETURN of Improvement Purchase Applications under Section 46 of the Crown Lands Act of 1884.

Land Board.	Land District.	Applications received prior to 1895.			Applications received during 1895.				Land alienated during the year.					
		Number refused.	Number approved.	Number declared lapsed.	Number received.	Number refused.	Number lapsed.	Number approved.	Town.			Suburban.		
									Lots.	Area.	Amount realised exclusive of fines.	Lots.	Area.	Amount realised exclusive of fines.
								a. r. p.	£ s. d.		a. r. p.	£ s. d.		
Armidale	Armidale		5	2	5		2	5	1 0 2½	06 0 0	3	1 2 0	19 10 0	
	Glen Innes	1												
	Inverell		1		1									
	Tenterfield			2										
Bourke	Bourke		9	3	4	2	2	3	0 3 0	08 3 6	1	0 1 0	2 10 0	
	Wilcannia	1			2									
	Willyama	3		2	9	1	2				2	1 0 27	35 0 0	
Cooma	Bega	1			2	1	1							
	Braidwood		1		1						2	2 0 0	7 0 0	
	Cooma		1								1	0 1 0	5 0 0	
	Moruya				4									
	Queanbeyan		1					1	0 1 0	12 0 0				
Dubbo	Coonamble	1	1											
	Dubbo		2	1	4	1	1	4	1 0 0	70 0 0				
Forbes	Barnedman	12	12		69	10	2	24	6 0 0	806 10 0				
	Condobolin			1	5	1								
	Forbes		1		2		4	1	0 1 0	20 0 0				
	Grenfell		6		5		1	1	0 1 0	28 0 0	1	1 0 0	7 0 0	
	Parkes	7			13		8	7	1 2 38	140 0 0	9	5 3 4½	189 3 0	
Grafton	Casino		2					3	0 2 10	15 0 0				
Hay	Hillston		3		1		1	5	1 1 0	40 0 0				
Orange	Bathurst	4	1		3	1		2	0 2 0	19 0 0				
	Carcoar	2	1		1		1	1	0 1 0	5 0 0				
	Cowra				1			1	0 1 0	125 0 0				
	Mudgee		1											
	Wellington	1	1	1	1						1	1 0 0	2 0 0	
Sydney	Nowra				1		1	1	0 1 0	7 10 0				
Tamworth	Tamworth				3									
Wagga Wagga	Cootamundra	1	2	1	1	1		1	0 1 0	15 0 0				
	Tumut	1			1									
Totals		47	51	13	125	19	2	45	14 2 35½	995 3 0	10	12 3 31½	268 8 0	

NOTE.—No country land was alienated during the year.

SCHEDULE XXXIV.

RETURN of Applications received and Lands alienated during the year 1895 under the Special Purchase Clauses of the Crown Lands Acts of 1884 and 1889.

Land Board District.	Land District.	Section 63.			Section 64			Section 66.			Section 67			Section 42 of Act 1889.		Total amount received for each Land District.				
		Applications received during the year.	Applications completed during the year.		Purchase Money, exclusive of Fines.	Applications received during the year.	Applications completed during the year.		Purchase Money, exclusive of Fines.	Applications received during the year.	Applications completed during the year.		Purchase Money, exclusive of Fines.	Cases completed during the year.						
			No.	Area.			No.	Area.			No.	Area.		No.	Area.					
			a. r. p.	£ s. d.		a. r. p.	£ s. d.		a. r. p.	£ s. d.		a. r. p.	£ s. d.	a. r. p.	£ s. d.					
Armidale	Armidale	1							1	1	1 0 24	11 13 0	1	1 2 30	11 13 0					
	Inverell																			
Bourke	Brewarrina										7 2 0	18 12 6			18 12 6					
Cooma	Bega										35 0 0	183 4 0			183 4 0					
	Cooma												3	0 3 0						
	Milton	1																		
	Queanbeyan													1	0 2 0					
Dubbo	Coonamble																			
	Dubbo												1							
	Warren												1							
Forbes	Forbes																			
Goulburn	Boorooan													2	3 3 0					
	Goulburn																			
	Moss Vale												1			10 0 0				
	Young																			
Grafton	Grafton																			
	Kempsey																			
	Lismore																			
	Murwillumbah													4	13 2 20					
Hay	Hay													1	3 8 0					
	Billston																			
Maitland	Maitland																			
	Muswellbrook													3	13 2 0					
	Newcastle	2												1		51 14 0				
	Scone																			
	Taree	1	0 1 12	110 7 8										6	23 0 0	110 7 8				
Orange	Bathurst															8 18 7				
	Carcoar																			
	Cowra																			
	Lithgow																			
	Molong																			
	Mudgee																			
	Orange																			
	Wellington																			
Sydney	Liverpool	1			1	0 3 23	107 7 9									107 7 9				
	Nowra																			
	Parramatta																			
	Sydney	1	0 1 2½	457 3 0	16	17	3 0 80½	2,294 5 6	15	4	12 0 26½	354 10 3	1			3,108 7 0				
	Windsor								7	5	130 0 15	337 0 6				337 0 6				
Tamworth	Coonabarabran													1		290 1 2				
	Narrabri																			
	Tamworth													10	3 0 16	60 0 0				
Wagga Wagga	Corowa													2						
	Gundagai													1	5 2 22	89 18 6				
	Tumbarumba																			
	Wagga Wagga													2	6 0 0	23 10 0				
	Totals	4	2	0 2 14½	567 10 8	17	21	4 0 13½	2,401 13 3	20	10	142 1 12½	700 18 4	44	15	391 0 23	1,050 10 4	26	84 0 30	4,720 12 7

SCHEDULE XXXV

RETURN showing the number of applications to surrender lands in exchange for other lands under the provisions of the Crown Lands Acts, received during the year 1895 and previous years, and the number disposed of and outstanding on 31st December, 1895.

Division of Colony.	Local Land Board District.	Number of Applications outstanding on 31 Dec., 1894.	Number of Applications received during 1895.	Number and area accepted by the Governor-in-Council during 1895.		Number of Applications refused or withdrawn during 1895.	Number of Applications outstanding on 31 Dec., 1895.
				Number.	Area.		
Eastern	Armidale	14	8		a. r. p.		22
	Cooma	4	5			1	8
	Forbes	1	1			1	1
	Goulburn	5	4			1	8
	Grafton	2	2				4
	Maitland		4				4
	Orange	1	1				2
	Sydney		1				1
	Tamworth		10			3	7
	Wagga Wagga	4	6				10
Central	Dubbo	16	6	2	7,706 2 0		20
	Forbes	21	15	7	14,511 0 0	4	25
	Hay	30	16	3	26,677 2 0	8	35
	Moree	21	10	9	32,180 3 0	4	18
	Tamworth	11	14	3	12,224 3 24	5	17
	Wagga Wagga	56	19	25	39,580 3 30	13	37
Western	Bourke	9	4	3	2,426 0 0		10
	Hay	7	5	3	4,490 0 0		9
	Moree	1					1
Totals		*203	131	55	139,797 2 14	40	239

* Includes applications for exchange for lands in the Eastern Division revived under the section 47 of the Crown Lands Act of 1895

SCHEDULE XXXVI.

RETURN showing the number, area, and nature of Deeds of Grant prepared during the year 1895.

No. of Deeds of Grant.	Area.	Nature of Grant.
1	a. r. p. 255 0 0	Sale by Auction, under clause 23 of the Crown Lands Alienation Act of 1861.
1,422	33,783 2 29	Do do 61 do Act of 1884.
50	189 3 35	Do "Field of Mars," 38 Vic. No. 3.
26	5 1 32½	Do "Newcastle Pasturage," 53 Vic. No. 1.
1	43 0 0	Purchases in virtue of Improvements under the 8th clause of Crown Lands Alienation Act of 1861.
5	489 0 0	Do do 2nd clause of Crown Lands Alienation Act of 1875.
82	30 3 30½	Do do 46th clause of Crown Lands Act of 1884.
22	4 3 25	Do do "Newcastle Pasturage," 53 Vic. No. 1.
692	152,483 3 6	Conditional Purchases under clauses 13, 14, 19, 21, and 22 of the Crown Lands Alienation Act of 1861
98	25,531 3 17	Do do 24, 26, 42, and 47 of the Crown Lands Act of 1884.
4	6 3 23½	Purchases under the 9th and 11th clauses of the Crown Lands Alienation Act of 1861.
63	502 3 24	Do clauses 63, 64, 66, 67, and 69 of the Crown Lands Act of 1884.
8	85 1 4	Alienation under the 42nd clause of the Crown Lands Act of 1889.
137	84,706 0 25	Do part 1 of the 46th clause of the Crown Lands Act of 1889.
7	812 0 23½	Do 2 do do
13	375 1 13½	Dedications under clauses 5 of the Crown Lands Alienation Act of 1861, 32 of Crown Lands Alienation Act of 1875, and 104 of Crown Lands Alienation Act of 1884.
3	482 0 0	Miscellaneous.
2,634	299,788 1 8½	Total.

SCHEDULE XXXVII.

RETURN showing the number, area, and rental of Pastoral Leases and Occupation Licenses current during 1895.

Pastoral Leases.				Occupation Licenses.			
Number of Leases.	Division of Colony.	Area.	Annual Rental.	Number of Licenses.	Division of Colony.	Area.	Annual License Fee.
491 307	Central	Acres. 14,814,475	£ s. d. 161,910 3 10	315 313 568 218 212	Eastern	Acres. 3,671,019	£ s. d. 10,567 2 1
	Western	38,612,218	179,268 12 1		Eastern (Preferential) ..	3,580,773	18,673 11 8
					Central	6,399,972	33,539 6 8
					Central (Preferential)...	3,738,899	18,850 15 6
					Western	23,426,621	42,097 12 9
798		53,426,693	341,178 15 11	1,626		40,817,284	123,728 8 8

SCHEDULE XXXVIII.

RETURN giving particulars as to Refunds granted during the year 1895 on account of land withdrawn from Pastoral Lease and Occupation License.

Pastoral Leases.				Occupation Licenses.			
Division.	Number of Pastoral Leases.	Area withdrawn.	Amount of refund granted.	Division.	Number of Occupation Licenses.	Area withdrawn.	Amount of refund granted.
		Acres.	£ s. d.			Acres.	£ s. d.
Central	81	67,098	3,282 7 11	Eastern	58	39,442	252 15 1
Western	26	30,760	327 13 8	Eastern (Preferential) ..	89	71,193	686 2 2
				Central	180	272,735	1,985 6 9
				Western	60	702,282	2,966 14 8
Totals	107	97,858	3,610 1 7	Totals	387	1,085,652	5,890 18 8

Grand Totals.

Cases	494
Area withdrawn	1,183,510 acres.
Amount refunded	£9,501 0s. 3d.

SCHEDULE XXXIX.

RETURN showing the number of transfers of Pastoral Leases, Preferential Occupation Licenses, and Occupation Licenses, completed during the year 1895.

Division.	Pastoral Leases.	Preferential Occupation Licenses.	Occupation Licenses.
Eastern .....	.....	16	10
Central	80	3	62
Western	35	.....	23
Totals	115	19	95

SCHEDULE XL.

RETURN showing Applications received during 1895, under Section 8 of the Crown Lands Act of 1895, for the attachment of Resumed Areas to Leasehold Areas.

WESTERN DIVISION.

No. and Name of Resumed Area.	Area to be attached to Leasehold.	No. and Name of Resumed Area.	Area to be attached to Leasehold.
	Acres.		Acres.
22. Kallara	488,716	196. Murtee	75,546
45. Mootwingie	39,520	211. Wiltageona	92,583
54. Trida	137,050	217. Mena Murtee	214,796
63. Redan	17,420	220. Olive Downs	45,700
71. Moira Plains	39,940	240. Dunlop	304,280
84. Baden Park	63,475	251. Mulga No. 1	13,258
142. Wangaron	16,100	257. Toorale	322,966
158. Centre Block C	29,960	259. Warratta	31,881
*175. Torrens Creek Road to Mount Wood L.A.	33,700	316. Boundary	2,247
181. Belford	48,900		

* Application refused.

SCHEDULE XLI.

RETURN of Occupation Licenses offered for sale by Auction or by Tender, showing the number and area offered; the number of times offered; and the number and area sold during the year 1895.

By Auction.						By Tender.							
Division.	No. of times offered during 1895.		Total No. offered.	Area offered.	No. sold.	Area sold.	Division.	No. of times offered during 1895.		Total No. offered.	Area offered.	No. sold.	Area sold.
	1	2						1	2				
Eastern	45	...	45	Acres.	6	Acres.	Eastern	45	1	46	Acres.	18	Acres.
Do (Preferential) ..	1	...	1	37,840	1	37,840							
Central	1	...	1	3,640	...	.....					
Western	7	...	7	31,470	1	3,833							
Total	54	...	54	577,565	8	116,573	Total	45	1	46	649,340	18	245,200

Grand Totals.

Total number offered 100; area 1,226,905 acres.
 " " sold 26; area 361,773 acres.

SCHEDULE XLII.

RETURN showing number of applications lodged under section 9 of the "Crown Lands Act of 1895" for reappraisal of Pastoral Leases and Occupation Licenses, Western Division.

Land Board District.	Pastoral Leases.			Occupation Licenses.		
	No. applications accepted.	No applications refused.	Total	No. applications accepted.	No. applications refused.	Total.
Bourke	200	2	202	117	1	118
Hay	50	2	52	19	.....	19
Moree	13	2	15	8	.....	8
Totals	263	6	269	144	1	145

SCHEDULE XLIII.

RETURN giving particulars of new Appraisements of License Fees determined under the 81st section of the Crown Lands Act of 1884, and gazetted during 1895.

Division of Colony.	Resumed Area.		Previous rate per section.	Rate per section, as determined after appraisal.	
	No.	Name.			
Eastern	78	Long Reach	£ s. d. 4 0 0	£ s. d. 3 10 0	} Total number reappraised, 5; area, 82,311 ac.; annual license fee, £238 5s. 2d.
	310	Tooma	3 0 0	1 13 4	
	347	Laura	3 6 8	3 10 0	
	419	Barry	2 0 0	1 16 0	
	514	Wandoo Wondong	4 0 0	1 12 0	
Eastern (Preferential)	78A	Long Reach	7 6 8	3 0 0	} Total number reappraised, 11; area, 138,308 ac.; annual license fee, £625 16s. 10d.
	189A	Enmore	5 6 8	3 5 0	
	310A	Tooma	4 0 0	2 0 0	
	314A	Stony Batler	6 13 4	4 10 0	
	347A	Laura	6 13 4	2 13 4	
	409A	Winscombe	7 6 8	3 10 0	
	419A	Barry	3 6 8	2 10 0	
	480A	Burrawong	4 13 4	1 6 8	
	490A	Clerkness	6 13 4	4 0 0	
	497A	Stony Creek	6 13 4	3 10 0	
522A	Abington	8 0 0	4 0 0		
Central	435	West Bogan, Nos. 2 and 3	2 13 4	1 0 0	} Total number reappraised, 3; area, 238,638 ac.; annual license fee, £524 14s. 6d.
	437	Canonbar	2 0 0	1 6 8	
	515	Mungary West	5 6 8	4 0 0	
Western.....	3	Weilmoringle	2 0 0	0 5 6	} Total number reappraised, 13; area, 2,473,513 ac.; annual license fee, £1,922 18s. 7d.
	9	Bucknbee	2 13 4	0 9 0	
	22	Kallara	1 16 9	0 14 0	
	72	Willara	1 14 0	0 11 0	
	88	Talyale	1 14 0	0 9 0	
	90	Lissington	1 6 8	0 9 0	
	184	Curranyalpa	2 0 0	0 9 0	
	185	Nocoleche	1 17 0	0 9 0	
	206	Belalie	2 0 0	0 7 2	
	214	Cuthro	1 5 0 ⁵	0 8 9	
	229	Billilla	1 13 4	0 12 3	
	240	Dunlop	2 0 0	0 10 6	
	250	Wunauring	1 14 0	0 9 0	

SCHEDULE XLIV.

RETURN showing the number of Pastoral Leases forfeited or surrendered during 1895, and also the number of Preferential Occupation Licenses and Occupation Licenses not renewed for that year.

Pastoral Leases.	Preferential Occupation Licenses.	Occupation Licenses.
Western Division	Eastern Division	Eastern Division
2	27	25
		Central "
		12
		Western "
		8
Total	Total	Total
2	27	45

SCHEDULE XLV.

RETURN showing Pastoral Leases in the Central Division extended under the provisions of the 43rd Section of the Crown Lands Act of 1889, which will expire during 1896 and succeeding years.

No.	Name of Pastoral Lease.	Date of Expiration of Lease.	Term of Extension.	No.	Name of Pastoral Lease.	Date of Expiration of Lease.	Term of Extension.
PASTORAL LEASES THAT WILL EXPIRE IN 1896.				PASTORAL LEASES THAT WILL EXPIRE IN 1898—continued.			
6	Gurley	10 July, 1896	1 year.	289	Wentworth Gully	10 April, 1898	2 years 9 months.
48	Bland	10 Dec., "	1 year 5 months.	303	Mourabic	10 July, "	3 years.
52	Tyreel	10 April, "	9 months.	317	Welbon	10 Jan., "	2 " 6 months.
59	Graulgumbone	10 July, "	1 year.	347	Burrabogie	10 July, "	3 years.
241	Sandy Creek and Wagga Wagga.	10 " "	1 " "	388	Buckingbong.....	10 " "	3 " "
276	Carinda	10 Jan., "	6 months.	400	Old Harbour	10 " "	3 " "
343	Perricoota	10 July, "	1 year.	409	Hartwood	10 Jan., "	2 " 6 months.
420	Cowl Cowl.....	10 " "	1 " "	414	Tulloona	10 July, "	3 years.
447	Nevertire	10 " "	1 " "	469	Albert Waterhole	10 Nov., "	3 " 4 months.
601	Mundawaddera	30 " "	1 " "	490	The Meadows	10 July, "	3 years.
619	Moirra	30 " "	1 " "	532	More Devil	10 " "	3 " "
639	Bunarbra	30 " "	1 " "	563	Edgeroi	30 April, "	2 " 9 months.
674	Tongamba.....	4 Aug., "	1 " "	577	Grubben Plains	30 July, "	3 years.
700	Willic	4 " "	1 " "	622	Grong Grong	30 Jan., "	2 " 6 months.
PASTORAL LEASES THAT WILL EXPIRE IN 1897.				PASTORAL LEASES THAT WILL EXPIRE IN 1899.			
3	Wagugoberemby	10 Jan., 1897	1 year 6 months.	13	Benerembah	10 July, 1899	4 years.
12	Kunopia.....	10 July, "	2 years.	24	South Condoublin.....	10 " "	4 " "
30	Oregon	10 April, "	1 year 9 months.	43	Nyingay	10 " "	4 " "
50	Gundare	10 July, "	2 years.	46	Eli Elwah	10 " "	4 " "
66	Blue Nobby	10 " "	2 " "	58	Dobikin	10 " "	4 " "
84	Brogan Plains	10 Nov., "	2 " 4 months.	65	Weeloug	10 " "	4 " "
95	Garrivilla	10 July, "	2 " "	69	Spicer's Creek	10 " "	4 " "
98	Buddabadah	10 " "	2 " "	74	Boyd	10 " "	4 " "
106	Bugilbone	10 " "	2 " "	75	Tregalana	10 Mar., "	3 " 8 months.
154	Colombo Creek.....	10 " "	2 " "	86	West Gungelman	10 July, "	4 years.
172	Drilool	10 Jan., "	1 " 6 months.	87	Tugland	10 " "	4 " "
186	Booloroo	10 July, "	2 " "	88	Goonal	10 Jan., "	3 " 6 months.
197	Worrina	10 April, "	1 year 9 months.	113	Yarraldool.....	10 July, "	4 years.
238	North Gouonambil.....	10 July, "	2 years.	116	Tenderburine	10 " "	4 " "
248	Weemabah	10 " "	2 " "	121	Willewa	10 Jan., "	3 " 6 months.
251	Oreel	10 Jan., "	1 year 6 months.	135	Belgoreen	10 July, "	4 years.
271	Gennaren	10 " "	1 " 6 " "	155	Merkadool.....	10 " "	4 " "
293	Coolah	10 May, "	1 " 10 " "	156	Murrulebale	10 Jan., "	3 " 6 months.
294	Murgah	10 July, "	2 years	204	Berrembed	10 July, "	4 years.
305	Bunarba.....	10 April, "	1 year 9 months.	215	Yanuna	10 " "	4 " "
315	Uardry	10 July, "	2 years.	219	Goangra.....	10 " "	4 " "
320	Brewarrina	10 Jan., "	1 year 6 months.	222	Coubail	10 " "	4 " "
339	Gogeldrie	10 July, "	2 years.	236	Noinby (Upper)	10 " "	4 " "
346	O'Brien's Creek	10 " "	2 " "	252	Buttabone	10 " "	4 " "
423	Cumbooglecumbong.....	10 " "	2 " "	253	Warran Downs.....	10 " "	4 " "
458	Midkin	10 " "	2 " "	277	Cobladah	10 Jan., "	3 " 6 months.
516	Mungiebundie	10 Oct., "	2 " 3 months.	295	Ujumbarella	10 July, "	4 years.
517	Lower Mithul Creek	10 July, "	2 years.	319	Gillinghall	10 " "	4 " "
520	Hermitage Plains Block M.	10 " "	2 " "	325	Sandholes	10 Jan., "	3 " 6 months.
527	The Springs	10 " "	2 " "	331	Yarrowah	10 July, "	4 years.
562	Whalan	30 " "	2 " "	379	Cowl Murryan	10 " "	4 " "
569	Trinkey	30 " "	2 " "	403	Mocubria	10 " "	4 " "
589	Merrivva	30 Jan., "	1 year 6 months.	413	Curralberrama	10 April, "	3 " 9 months.
679	Trigamon	4 May, "	1 " 9 " "	422	Berry Jerry and Arajoel	10 July, "	4 years.
681	Gragin and Graman	4 Feb., "	1 " 6 " "	446	Bundaburrab	10 " "	4 " "
714	Eurumbedah.....	7 Sept., "	2 years.	448	Curugundi	10 " "	4 " "
724	Borambole.....	13 April, "	1 year 6 months.	467	Burbugate	10 Jan., "	3 " 6 months.
752	Tarawinda.....	10 July, "	2 years.	473	Brookong	10 " "	3 " 6 " "
PASTORAL LEASES THAT WILL EXPIRE IN 1898.				PASTORAL LEASES THAT WILL EXPIRE IN 1900.			
39	Puckawidgee.....	10 Jan., 1898	2 years 6 months.	488	Brue Plains	10 July, "	4 years.
44	Gorian	10 July, "	3 years.	494	Morago	10 " "	4 " "
51	Coradgery	10 Oct., "	3 " 3 months.	496	Burradoon	10 " "	4 " "
62	Yarringerry	10 July, "	3 years.	501	Bungle Gully.....	10 Jan., "	3 " 6 months.
70	North Malonga.....	10 " "	3 " "	549	Bocabigal	30 July, "	4 years.
108	Nyang	10 " "	3 " "	550	Biamble	30 " "	4 " "
130	Flagstone Creek	10 " "	3 " "	566	Tebelery	30 April, "	3 " 9 months.
131	Moroco	10 " "	3 " "	570	Walla Walla and Caran-gatell.	30 July, "	4 years.
132	Egan Creek	10 " "	3 " "	581	Millic	30 " "	4 " "
136	Upper Merry Morry	10 Jan., "	2 " 6 months.	593	Nanima	30 " "	4 " "
141	Bogewong	10 " "	2 " 6 " "	613	Opposite Derribong.....	30 " "	4 " "
165	Cocketgedong	10 July, "	3 years.	620	Tubbo	30 " "	4 " "
167	Tala	10 " "	3 " "	627	Ariah	30 " "	4 " "
176	Pomingalarna	10 Jan., "	2 years 6 months.	630	Yarrabee	30 Jan., "	3 " 6 months.
200	Widgiewa	10 " "	2 " 6 " "	634	Kooba	30 April, "	3 " 9 " "
201	Caidmurra.....	10 July, "	3 years.				
214	Bando.....	10 " "	3 " "				
228	Gelam.....	10 " "	3 " "				
231	Singoramba Block A	10 " "	3 " "				
235	Beremegad	10 Jan., "	2 " 6 months.				
243	Coolatai	10 July, "	2 years.				
249	Spring Creek	10 " "	3 " "				
263	Momalong.....	10 " "	3 " "				
279	Merrybone.....	10 " "	3 " "				

SCHEDULE XLV—continued.

No.	Name of Pastoral Lease.	Date of Expiration of Lease.	Term of Extension.	No.	Name of Pastoral Lease.	Date of Expiration of Lease.	Term of Extension.
PASTORAL LEASES THAT WILL EXPIRE IN 1899—continued.				PASTORAL LEASES THAT WILL EXPIRE IN 1900—continued.			
638	Bourke's Creek.....	30 July, 1899	4 years.	169	Haddon Riggs	10 July, 1900	5 years.
649	Morangarell and Narraburra Creek.	4 Feb., "	3 years 6 months.	170	Gorman's Hill West ..	10 "	5 "
663	Tulcumbah	4 "	3 " 6 "	173	Carwell	10 "	5 "
668	Billabong, West	4 "	3 " 6 "	174	Wingadee	10 "	5 "
692	Wallandoon	4 "	3 " 6 "	175	Panjee	10 "	5 "
743	Euroka, South	30 Nov., "	4 " 4 "	177	Nelgowrie	10 "	5 "
178	Yanko Block A	10 "	5 "	181	Warroo	10 "	5 "
182	Ford's Creek.....	10 "	5 "	182	Ford's Creek.....	10 "	5 "
184	Boronga	10 "	5 "	184	Boronga	10 "	5 "
187	The Overflow	10 "	5 "	187	The Overflow	10 "	5 "
188	Centre Block, No. 3 ..	10 April "	4 years 9 months.	188	Centre Block, No. 3 ..	10 April "	4 years 9 months.
190	Burrar	10 July "	5 years.	190	Burrar	10 July "	5 years.
191	Malaraway and Millie North.	10 January "	4 years 6 months.	191	Malaraway and Millie North.	10 January "	4 years 6 months.
192	Barbigal	10 July "	5 years.	192	Barbigal	10 July "	5 years.
193	Derri Derri	10 "	5 "	193	Derri Derri	10 "	5 "
195	Urawilkey.....	10 "	5 "	195	Urawilkey.....	10 "	5 "
196	Conapaira	10 "	5 "	196	Conapaira	10 "	5 "
199	Wallamgambone	10 "	5 "	199	Wallamgambone	10 "	5 "
202	Tyrie	10 "	5 "	202	Tyrie	10 "	5 "
205	Woodlands	10 "	5 "	205	Woodlands	10 "	5 "
206	Kuargo or Tory Wee Waa.	10 April "	4 years 9 months.	206	Kuargo or Tory Wee Waa.	10 April "	4 years 9 months.
207	Bomely	10 July "	5 years.	207	Bomely	10 July "	5 years.
208	Goorianawa	10 "	5 "	208	Goorianawa	10 "	5 "
209	Narah	10 "	5 "	209	Narah	10 "	5 "
211	Meroc.....	10 "	5 "	211	Meroc.....	10 "	5 "
213	Geurie	10 "	5 "	213	Geurie	10 "	5 "
217	Oxley	10 "	5 "	217	Oxley	10 "	5 "
218	The Troffs	10 "	5 "	218	The Troffs	10 "	5 "
221	Bundalla	10 January "	4 years 6 months.	221	Bundalla	10 January "	4 years 6 months.
223	New Myregall	10 July "	5 years.	223	New Myregall	10 July "	5 years.
226	Orange Plains	10 "	5 "	226	Orange Plains	10 "	5 "
229	Gorah	10 "	5 "	229	Gorah	10 "	5 "
230	Gillenbine or Gobondry	10 January "	4 years 6 months.	230	Gillenbine or Gobondry	10 January "	4 years 6 months.
232	Cariginda	10 July "	5 years.	232	Cariginda	10 July "	5 years.
233	Berembed, North.....	10 "	5 "	233	Berembed, North.....	10 "	5 "
234	Ulinda	10 "	5 "	234	Ulinda	10 "	5 "
246	Bokemer	10 "	5 "	246	Bokemer	10 "	5 "
247	Melrose Block D.....	10 "	5 "	247	Melrose Block D.....	10 "	5 "
250	Terramungamine	10 "	5 "	250	Terramungamine	10 "	5 "
254	Coonimbia	10 "	5 "	254	Coonimbia	10 "	5 "
256	Canoon Point	10 "	5 "	256	Canoon Point	10 "	5 "
257	Caroonboon	10 January "	4 years 6 months.	257	Caroonboon	10 January "	4 years 6 months.
258	Buckyinguy	10 July "	5 years.	258	Buckyinguy	10 July "	5 years.
260	Tabratong	10 "	5 "	260	Tabratong	10 "	5 "
261	Waterloo	10 "	5 "	261	Waterloo	10 "	5 "
264	Binya	10 "	5 "	264	Binya	10 "	5 "
265	Blowclear, West	10 "	5 "	265	Blowclear, West	10 "	5 "
266	Mowablaa	10 "	5 "	266	Mowablaa	10 "	5 "
272	Tharambone	10 "	5 "	272	Tharambone	10 "	5 "
273	Merrigal Back	10 "	5 "	273	Merrigal Back	10 "	5 "
274	Mount Harris	10 "	5 "	274	Mount Harris	10 "	5 "
278	Toorawandi	10 "	5 "	278	Toorawandi	10 "	5 "
281	Derra Derra	10 "	5 "	281	Derra Derra	10 "	5 "
282	Wera	10 "	5 "	282	Wera	10 "	5 "
283	Burren	10 "	5 "	283	Burren	10 "	5 "
284	Thehangering, East ..	10 "	5 "	284	Thehangering, East ..	10 "	5 "
285	Trialgara	10 "	5 "	285	Trialgara	10 "	5 "
288	Emu Plains	10 "	5 "	288	Emu Plains	10 "	5 "
291	Mimosa, West	10 "	5 "	291	Mimosa, West	10 "	5 "
298	Ballandry	10 "	5 "	298	Ballandry	10 "	5 "
300	Woollandool	10 "	5 "	300	Woollandool	10 "	5 "
301	Wirrah	10 January "	4 years 6 months.	301	Wirrah	10 January "	4 years 6 months.
304	Bolaro	10 July "	5 years.	304	Bolaro	10 July "	5 years.
307	Goobang.....	10 "	5 "	307	Goobang.....	10 "	5 "
312	Queensborough.....	10 "	5 "	312	Queensborough.....	10 "	5 "
313	Boona, West.....	10 "	5 "	313	Boona, West.....	10 "	5 "
314	Calimo	10 "	5 "	314	Calimo	10 "	5 "
316	New Babinda	10 "	5 "	316	New Babinda	10 "	5 "
318	Pullingawarina.....	10 "	5 "	318	Pullingawarina.....	10 "	5 "
320	New Kirban	10 "	5 "	320	New Kirban	10 "	5 "
321	Upper Boomley	10 "	5 "	321	Upper Boomley	10 "	5 "
324	Sandy Camp.....	10 "	5 "	324	Sandy Camp.....	10 "	5 "
326	Gunningbar	10 "	5 "	326	Gunningbar	10 "	5 "
327	Glen Quin	10 "	5 "	327	Glen Quin	10 "	5 "
330	Biniguy	10 "	5 "	330	Biniguy	10 "	5 "
332	Carlisle	10 "	5 "	332	Carlisle	10 "	5 "
335	Burrongong	10 "	5 "	335	Burrongong	10 "	5 "
337	Gunnibong.....	10 "	5 "	337	Gunnibong.....	10 "	5 "
341	Marthaguy Creek.....	10 "	5 "	341	Marthaguy Creek.....	10 "	5 "
342	Coonong	10 "	5 "	342	Coonong	10 "	5 "
345	Brewon	10 "	5 "	345	Brewon	10 "	5 "
350	Aratula	10 "	5 "	350	Aratula	10 "	5 "
352	Pier Pier	10 "	5 "	352	Pier Pier	10 "	5 "
353	Beanbah.....	10 "	5 "	353	Beanbah.....	10 "	5 "
2	Botheroe	10 July, 1900	5 years.				
4	Poon Boon	10 "	5 "				
7	Combaddello and Nepicakalina.	10 "	5 "				
9	Gournama	10 "	5 "				
10	Calga	10 "	5 "				
15	Caragabal	10 Feb., "	4 years 7 months.				
16	Marrar	10 July, "	5 years.				
17	Womboin	10 "	5 "				
18	Belaringar	10 "	5 "				
20	Euratha	10 "	5 "				
22	Peter Duffity.....	10 "	5 "				
23	Benduck	10 "	5 "				
27	Denykymine	10 "	5 "				
29	Keri Keri	10 "	5 "				
33	Kiacatoo	10 "	5 "				
34	Bogamildi	10 "	5 "				
36	Caigan	10 "	5 "				
37	Upper Wyalong, No. 3	10 "	5 "				
38	Kulgara	10 "	5 "				
41	Balgay	10 "	5 "				
49	Gumin Gumin	10 "	5 "				
54	West Mandamah.....	10 "	5 "				
55	East Billabong	10 March, "	5 "				
57	Polly Brewan	10 July, "	5 "				
61	Billabong	10 "	5 "				
64	Native Dog	10 "	5 "				
68	Nap Nap	10 "	5 "				
71	Berida	10 "	5 "				
72	Pevensey	10 "	5 "				
73	Uabba	10 "	5 "				
76	Yanga	10 "	5 "				
77	Chah Sing	10 "	5 "				
79	Ulimambri.....	10 "	5 "				
80	Weebollabolla	10 "	5 "				
83	Wollongough.....	10 "	5 "				
85	Mumblebone.....	10 "	5 "				
91	Bardenda	10 "	5 "				
92	Gillendoon.....	10 "	5 "				
93	Nebea	10 "	5 "				
96	Ganmain	10 "	5 "				
97	Therribri	10 "	5 "				
99	Mungranby & Bourbeen	10 "	5 "				
101	Kildary	10 "	5 "				
105	Cocopara, East.....	10 "	6 "				
107	Welbendungah.....	10 January "	4 years 6 months.				
109	Boonook	10 July "	5 years.				
110	North Gogelderie.....	10 "	5 "				
112	Colliburl	10 "	5 "				
114	Bundilla	10 "	5 "				
117	Toogimbic	10 "	5 "				
118	Killarney	10 "	5 "				
119	Warry	10 "	5 "				
120	Illiliwa	10 "	5 "				
122	Wingenbah	10 "	5 "				
123	Moolpa	10 "	5 "				
124	Bocabula	10 "	5 "				
125	Barmedman	10 "	5 "				
126	Bolagany	10 "	5 "				
127	Bulgandramine	10 "	5 "				
128	Wolla Wolla	10 "	5 "				
129	Quambone	10 "	5 "				
133	Ungatee	10 "	5 "				
134	Boramibil	10 "	5 "				
138	Warragan	10 "	5 "				
139	Haddon Rigg	10 "	5 "				
140	Gineroi	10 January "	4 years 6 months.				
144	Liewah	10 July "	5 years.				
148	Gunningbland	10 "	5 "				
149	Geeron or Derangibal	10 "	5 "				
150	Ellengerah	10 "	5 "				
153	Colane	10 "	5 "				
158	South Yathong	10 "	5 "				
159	The Brigalows	10 "	5 "				
160	Tuppall	10 "	5 "				
161	Quambone	10 "	5 "				
162	Lake Cowal	10 April "	4 years 9 months.				
166	Crcuorne	10 July "	5 years.				

SCHEDULE XLV—continued.

No.	Name of Pastoral Lease.	Date of Expiration of Lease.	Term of Extension.	No.	Name of Pastoral Lease.	Date of Expiration of Lease.	Term of Extension.
PASTORAL LEASES THAT WILL EXPIRE IN 1900—continued.				PASTORAL LEASES THAT WILL EXPIRE IN 1900—continued.			
354	North Wakool	1 July, 1900	5 years	539	Naradhan	10 July, 1900	5 years.
356	Cobra	10 "	" "	540	Gunyer Warildi	10 January "	4 years 6 months.
358	South Urama	10 "	" "	541	Mandamah	30 July, "	5 years.
359	Bimble	10 "	" "	543	Youngara Creek	30 "	" "
360	Malonga	10 "	" "	544	Tarriaro	30 "	" "
362	Merrigal	10 "	" "	546	Barra Barra	30 "	" "
364	Crawhey	10 "	" "	548	Borea Creek	30 "	" "
365	Euglo	10 "	" "	551	Dandaloo	30 "	" "
366	Quabathoo	10 "	" "	552	Lower Willie, East	30 "	" "
367	Bundy	10 "	" "	553	Rocky Creek	30 "	" "
368	Kerriwah	10 "	" "	555	Lower Balabla	30 April, "	4 years 9 months.
373	Sandridge	10 "	" "	556	Balladoran	30 July, "	5 years.
374	The Boebung Swamp ..	10 "	" "	564	Binda	30 "	" "
380	Murrumbogie	10 "	" "	571	Galaragambone	30 "	" "
382	Eugeldry	10 "	" "	572	Egelabra	30 "	" "
383	Narromine	10 "	" "	574	Bongabong	30 "	" "
385	Thorndale	10 "	" "	576	Timberlybungan	30 "	" "
386	Merryanbone	10 "	" "	578	Canonba	30 "	" "
387	Pullal	10 "	" "	586	Gulgo	30 "	" "
391	Cullengally	10 "	" "	587	Buddigower	30 "	" "
393	Zara	10 "	" "	588	Coghill	30 "	" "
394	Rodangora	10 "	" "	590	Quandary, South	30 "	" "
395	Bangheet	10 "	" "	591	Towyul	30 "	" "
398	Bartley's Creek	10 "	" "	593	Burroway	30 "	" "
399	Parmidman	10 "	" "	596	Terrangan	30 "	" "
401	Cornalla	10 "	" "	597	Bygaleree	30 "	" "
404	Tareelari	10 "	" "	598	Bundemar	30 "	" "
405	Huntawang	10 "	" "	599	Wonhobbie	30 "	" "
406	Barratta	10 "	" "	600	Wambungatang	30 "	" "
407	Bunna Bunna	10 "	" "	602	Cooma	30 "	" "
410	Upper Wyalong	10 "	" "	605	Warrana	30 "	" "
412	Murrill Creek	10 "	" "	606	Buddabudah	30 "	" "
418	Yanna	10 "	" "	609	Boolarrol	30 "	" "
424	South Thononga	10 "	" "	611	Tenandra	30 "	" "
432	Willan	10 "	" "	612	Wyabra	30 "	" "
433	Middle Field	10 "	" "	615	Mellool	30 "	" "
435	West Bogan, Nos. 2 & 3	10 "	" "	618	Curra and Currawinnia	30 "	" "
437	Canonba	10 "	" "	623	Merringreen	30 "	" "
440	Quandary, North	10 "	" "	626	Woorooma	30 "	" "
444	Geweroo	10 "	" "	628	Baan Baa, South	30 "	" "
445	Minore	10 "	" "	631	Euroka	30 "	" "
449	Youlhung	10 "	" "	636	Bumbaldry	30 "	" "
459	Nangerybone	10 "	" "	637	Choolendaadi	30 "	" "
464	Gandymungydell	10 "	" "	648	Condobolin	4 August, "	" "
465	Demliquin	10 "	" "	652	Mungerbumbone	4 "	" "
468	Merrigal, Marthaguy ..	10 "	" "	653	Murrumbidgee	4 "	" "
470	Bundyulumbalah	10 "	" "	656	Engowra	4 "	" "
471	West Bogan, No 7	10 "	" "	657	Lindsay	4 "	" "
472	Pilliga	10 January "	4 years 6 months.	660	Narrau	4 "	" "
474	East Broolong	10 July, "	5 years.	661	Mullah	4 "	" "
475	Bourbah	10 "	" "	664	Ulonga	4 "	" "
477	Callubri	10 "	" "	675	Gunbar	4 "	" "
478	Derribong	10 "	" "	677	Hermitage Plains, Block	4 "	" "
479	Mittagong	10 January "	4 years 6 months.		A 2.		
480	Tabratong, West	10 July, "	5 years.	678	Narrawin	4 "	" "
481	Youe	10 "	" "	680	Murrungandy	4 "	" "
484	Success	10 "	" "	683	Mahonga	4 "	" "
485	Barellan	10 "	" "	684	Yalgogoring, North	4 "	" "
486	Gunning, East	10 "	" "	685	Kalkibertoo, North	4 "	" "
489	Ooma	10 "	" "	687	Yerrinan	4 "	" "
492	Warree	10 "	" "	689	Melrose	4 "	" "
493	Booolool	10 "	" "	691	Wallangra	4 Feb., "	4 years 6 months.
498	Burrawang	10 "	" "	696	Gowang	4 August, "	5 years.
499	Palisthon	10 "	" "	698	Budgery	4 "	" "
500	Colli	10 "	" "	701	Lake Cowal	4 "	" "
502	Mimosa	10 "	" "	702	Wilga Downs	4 "	" "
504	Terebone	10 "	" "	706	Myall Creek	4 "	" "
508	Kookaburragong	10 "	" "	710	Wandoo Wondong	4 "	" "
509	Arramagong, West	10 "	" "	712	Upper Wyalong, No. 2	7 Sept., "	" "
510	New Geraldambone	10 "	" "	719	Cobauragay	7 "	" "
511	Gunnegaldra	10 "	" "	722	Piedmont	7 "	" "
512	Monument Flats	10 "	" "	736	Combogolong	10 July, "	" "
513	Genauagie	10 "	" "	737	Culmier	10 "	" "
515	Mungary, West	10 "	" "	739	Brundah, North	30 "	" "
518	Moombooldool	10 "	" "	740	Wallanbillan, East	30 "	" "
519	Mulga or Glenariff, Block B.	10 "	" "	741	Wallanbillan	30 "	" "
522	Old Biamble	10 "	" "	742	Euroka, North	30 "	" "
525	Goolgnubla	10 "	" "				
526	Quiamong	10 "	" "	PASTORAL LEASES THAT WILL EXPIRE IN 1901.			
529	Yalgogrin, South	10 "	" "	723	Gonn	4 Mar., 1901	5 years.
530	Narraway	10 "	" "	729	Noorong	" "	" "
533	Wangrewally	10 "	" "				
534	Merri Merri	10 "	" "	PASTORAL LEASES THAT WILL EXPIRE IN 1902.			
536	Yalgogrin	10 "	" "	735	Mogong	4 July, 1902	5 years.
538	Ginghet	10 "	" "				

SCHEDULE XLVI.

RETURN showing Pastoral Leases that expired during the year 1895.

No.	Name of Pastoral Lease.	Area (approximate).	Date of Expiration of Lease.	Remarks.
CENTRAL DIVISION.		Acres.		
1	Urombong	10,360	10 July, 1895 ...	Preferential Occupation License applied for.
5	Binnia	8,002	do	do do
8	Weetaliba	26,144	do	do do
*11	Eric Eric	40,182	do	do do
14	Mulwala and Savernake	9,140	do	do do
19	Coonabarabran	3,740	do	do do
21	Wandary	4,340	do	do do
25	Campbell's Island	2,440	do	do do
26	Narrandera	32,380	do	do do
28	Cadow	19,459	do	do do
31	Boomanoomana	10,505	do	do do
32	Bullenbong	8,571	do	do do
35	Bundulla	4,878	do	do do
*40	Telleraga	16,771	do	do do
42	Mullengudgerly	8,602	do	do do
*45	Youngee Plain	12,700	do	do do
47	Ballaree	12,800	do	do do
*53	Yarraggin	72,098	do	do do
56	South Balladoran	8,664	do	do do
60	Bone and Premier	17,565	do	do do
63	Four Bob Camp	11,000	do	do do
67	Belubula	6,581	do	do do
*81	Wondoobar	20,678	do	do do
82	Merool Creek	17,180	do	do do
*89	Mooloomoon	6,778	do	do do
90	Wargam	13,840	do	do do
94	Weelah or Gradgerly	8,067	do	do do
100	Esperance	5,630	do	do do
102	Tootal	2,350	do	do do
*103	Merri Merrigal	110,905	do	do do
104	Wanganong Plains	1,677	do	do do
111	Wargambegal	12,750	do	do do
*115	Milby	17,515	do	do do
142	North Yanco	22,120	do	do do
143	Back Esperance	8,100	do	do do
145	Nyngan East	5,640	do	do do
146	Minna Minane	6,560	do	do do
147	June	2,670	do	do do
152	Bull Plain	3,804	do	do do
157	Tregalana East	4,448	do	do do
163	North Yathong	2,011	do	do do
164	Tarramia	9,307	do	do do
168	Warrowrie	1,918	do	do do
171	Togammain	41,852	do	do do
179	Merobone	6,258	do	do do
*180	Milhey West	18,200	do	do do
183	Yallaroi	54,030	do	do do
189	Book Book	3,680	do	do do
194	Oakey Creek	4,007	do	do do
198	Carabost	20,550	do	do do
203	Gibbican	9,600	do	do do
*210	Jerilderie	8,733	do	do do
212	Milkengowrie	5,775	do	do do
216	Gulgo South	4,826	do	do do
220	Bygo	22,363	do	do do
224	Colombo Plain	5,501	do	do do
225	Balagula	5,097	do	do do
227	Hanging Rock	3,281	do	do do
237	Armatree	9,353	do	do do
239	Boyong	2,529	do	do do
240	Warriaberry and St. Giles	9,920	do	do do
242	Barooga	3,546	do	do do
244	Nowley	21,876	do	do do
245	Quilbone	18,363	do	do do
255	Mungyer	112,034	do	do do
259	Cryon	26,740	do	do do
262	Tucklan and Yarrow Creek	17,720	do	do do
267	Yaddra	15,360	do	do do
269	Wardry	13,283	do	do do
275	Butherwah	10,580	do	do do
*280	Mouthmain	18,000	do	do do
286	Upper Darroobalgie	2,197	do	do do
287	West Bland Plain	5,915	do	do do
290	Kiambir	13,760	do	do do
292	Bent's Hill	2,800	do	do do
296	Yagaba	18,682	do	do do
297	Come-by-Chance and Jimalong Josey	11,776	do	do do
299	Murray Downs	17,112	do	do do
302	Crown Camp	9,980	do	do do
306	Billeroy	6,883	do	do do
*308	Coppymurrumbil	48,467	do	do do
309	Tourable	12,917	do	do do
310	Burrel or Gunnible	5,457	do	do do
311	Mickygunnegal	8,200	do	do do

* Extension of lease granted, but subsequently withdrawn by lessee.

SCHEDULE XLVI—*continued.*

No.	Name of Pastoral Lease.	Area (approximate).	Date of Expiration of Lease.	Remarks.
CENTRAL DIVISION— <i>continued.</i>		Acres.		
323	Armitree	6,059	10 July, 1895	Preferential Occupation License applied for.
333	Gidgenboyne	5,400	do	No Preferential Occupation License applied for.
334	Pullanmung	20,503	do	Preferential Occupation License applied for.
*336	Terry Hie Hie	126,721	do	do
338	Myall Plains	880	do	do
340	Wowingragong	3,056	do	do
*344	Collymongool	69,729	do	do
348	Bingara	23,859	do	do
349	Bulgandra	1,684	do	do
351	Murray	5,250	do	do
355	South Merrowie	6,425	do	do
357	Collindina	4,952	do	do
361	Geramy	825	do	do
369	Ringwood	790	do	do
370	Wangan	66,887	do	do
*371	Warbreccan	3,833	do	do
372	Molly	21,724	do	do
375	Howlong	500	do	No Preferential Occupation License applied for.
376	Coree	17,183	do	Preferential Occupation License applied for.
377	Half-moon Plain	1,674	do	do
*378	Modway and Gamber Gamber West	11,424	do	do
381	Buraja	2,925	do	do
384	Back Tenandra	6,360	do	do
389	New Breelong	17,000	do	do
*390	Youendah	48,916	do	do
392	Wee Waa South	34,670	do	do
396	Wongagong	3,718	do	do
397	Bearbong	22,500	do	do
402	Gamber Gamber East	4,513	do	do
408	Toole's Creek	1,485	do	do
411	Grahweed	43,379	do	do
415	Moonagee	19,407	do	do
*416	Bulbodney	34,480	do	do
417	Cocopara	8,587	do	do
419	Houlaghan's Creek North	6,461	do	do
421	Yanko	6,030	do	do
425	Tooloon	18,912	do	do
426	Opposite Coonamble or Eramie	8,706	do	No application for Preferential Occupation License.
428	Quonmoona and Geanmoney	7,655	do	Preferential Occupation License applied for.
429	Lalaltec South	814	do	do
431	Kulki	1,800	do	do
434	Cathandrl No. 2	16,410	do	do
436	Lower Ningear	9,520	do	do
438	Umutbee and Toonga	21,127	do	do
439	Back Ran	15,200	do	do
*441	Bullerawa	132,280	do	do
442	Yerra Yerra	1,907	do	do
443	Greenbah Creek	19,206	do	do
451	Warregal	10,549	do	do
452	Kentucky	1,825	do	do
453	North-east Mangoplal	3,237	do	do
454	Goree	7,913	do	do
455	Willurah	19,057	do	do
456	Kyeamba	5,838	do	do
457	Tim Pot Alley	16,069	do	do
460	Back Gilgandra	7,600	do	do
461	Honeybungle	24,500	do	do
462	Mangoplal	1,739	do	do
463	Gunambil	13,288	do	do
*466	Eumonyhareenyha	1,420	do	No application for Preferential Occupation License.
476	Upper Bugaldi	6,200	do	Preferential Occupation License applied for.
482	Bundidgery	4,570	do	do
*483	Micabil	17,208	do	do
*487	Buck Wardy	19,100	do	do
495	Gregadoo	1,100	do	do
*497	West Bogan No. 1	25,355	do	do
503	Sandy Creek	18,760	do	do
506	Slaughter-house Plain	7,810	do	do
507	Coreen	6,258	do	do
514	Bumble	25,400	do	do
521	Back Yamma	7,961	do	do
524	Ulumbie	17,080	do	do
531	New Wyregal	11,000	do	do
535	Gobbagombalin and Tooyal	24,270	do	do
537	Carroll	6,077	do	do
*542	Moonbi or Bogandillon	37,592	30 July, 1895	do
*545	Trowell Creek Station	25,033	do	do
*547	Bolero Block A North	14,500	do	do
554	Walla Walla	5,108	do	do
557	Oura	3,498	do	do
*560	Tucka Tucka	17,776	do	do
561	Mungadal	11,500	do	do
565	Carnerney	2,463	do	do
567	Carbucky	45,640	do	do
568	Lower Droubalgie	1,849	do	do
*573	Bald Ridge	8,600	do	do
*575	Cowabee	13,897	do	do

* Extension of lease granted, but subsequently withdrawn by lessee.

SCHEDULE XLVI—continued.

No.	Name of Pastoral Lease.	Area (approximate).	Date of Expiration of Lease.	Remarks
CENTRAL DIVISION—continued.		Acres.		
579	Boranda	5,000	30 July, 1895...	Preferential Occupation License applied for.
*580	Belar	33,967	do	do do
582	Kerarbury	16,506	do	do do
583	Quat Quatta	2,746	do	No Preferential Occupation License applied for
584	Dinby	9,100	do	Preferential Occupation License applied for.
585	Iandra	4,597	do	do do
603	Mathoura	6,600	do	do do
604	Bundure	7,936	do	do do
607	Wallenanine	25,440	do	do do
610	Embie	6,562	do	do do
616	Boonal	18,398	do	do do
617	Tycannah	8,105	do	do do
621	Wathagar	3,031	do	do do
624	Humula	25,142	do	do do
629	Myall Downs	12,266	do	do do
632	Back Daroubalgie	9,300	do	do do
633	Milton Vale	4,369	do	do do
635	Nangunia and Warmatta	1,161	do	do do
640	Breeza	37,747	do	do do
641	Triangular Plain	482	4 Aug., 1895 ..	do do
642	West Breelong	3,640	do	do do
643	Gunnedah Station	2,445	do	No Preferential Occupation License applied for.
644	Houlaghans Creek, South	10,092	do	Preferential Occupation License applied for.
645	Illumurgalia, East	5,080	do	do do
646	Bengalla	48,767	do	do do
647	Bandon	1,834	do	do do
653	Tomanbil	7,168	do	do do
654	Wooyco	154,319	do	do do
665	Dundallamel	4,947	do	No Preferential Occupation License applied for.
666	Merelyula	2,484	do	Preferential Occupation License applied for.
669	New Gradgery	960	do	do do
671	Big River	26,689	do	do do
673	Noveronie	18,167	do	do do
682	South Mahonga Forest	713	do	do do
686	Merah	99,669	do	do do
688	Warwillah	8,895	do	do do
*690	Willeroon	69,737	do	do do
693	Goolhi	35,083	do	do do
699	Kindra Creek	7,942	do	do do
707	Oberne	28,347	do	do do
708	Keera	78,072	do	do do
709	Obella	26,046	do	do do
715	Elong Elong	1,880	7 Sept., 1895...	do do
*718	Back Creek and Nobby's Lagoon	22,285	do	do do
721	Borah	39,200	do	do do
723	West Bogan No. 6	24,252	do	do do
725	Dundoo Hills	32,800	13 Oct., 1895...	do do
726	Nelungaloo	5,156	do	do do
727	Pinnacle	17,513	do	do do
738	Brundah	3,525	30 July, 1895...	do do
746	Groongal	6,400	10 do	do do
747	Wyvern	4,800	do	do do
748	Bringagee	9,800	do	do do
750	Dunwerian	12,400	4 Aug., 1895...	do do

* Extension of lease granted but subsequently withdrawn by lessee.

SCHEDULE XLVII.

RETURN showing the number and area embraced in Applications for Homestead Leases made in 1895, and the action thereon.

Land Board District.	Land District.	No. of Applications received and the area embraced by such Applications.		Deposits lodged with Applications for Homestead Leases	1895 Applications.		
		No.	Area.		No. granted.	No. refused.	No. outstanding.
Bourke	Bourke	12	acres. 93,861	£ s. d. 391 1 9	2	5	5
	Brewarrina	3	20,934	87 4 6	1	1	1
	Cobar	9	61,175	254 17 11	4	3	2
	Wilcannia	37	219,840	916 0 0	.....	5	32
	Willyama	13	67,425	280 18 9	.....	2	11
Hay	Balranald	10	55,520	231 6 8	1	3	6
	Hillston, North	1	3,800	15 16 8	.....	1	.....
	Wentworth	12	64,763	269 16 11	.....	2	10
Moree	Walgett, North	9	26,405	110 0 5	.....	3	6
		106	613,723	2,557 3 7	8	25	73

SCHEDULE XLVIII.

RETURN showing the number and area of Applications for Homestead Leases granted, refused, and permitted to be withdrawn, during 1895, and also number outstanding at the end of that year.

Land Board District.	Land District.	No. granted	Area.	Annual Rental.	Number refused and permitted to be withdrawn.	Number outstanding at the end of 1895.
			Acres.	£ s. d.		
Bourke	Bourke	18	134,278	615 13 2	11	5
	Brewarrina.....	11	93,363	548 6 3	3	1
	Cobar	5	40,463	165 16 5	3	2
	Wilcannia	10	44,641	199 9 3	7	36
	Willyama	12	87,014	263 4 3	4	15
Hay	Balranald	7	40,095	162 8 8	5	8
	Hillston North	2	6,783	35 19 11	1	2
	Wentworth	6	38,436	91 8 11	5	16
Moree	Walgett North	5	30,748	258 8 5	6	8
		76	515,321	2,340 15 3	45	93

SCHEDULE XLIX.

RETURN showing the number of Transfers of Homestead Leases completed during the year 1895, and number outstanding at the end of that year.

Number completed	184	Number outstanding.....	104
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SCHEDULE L.

RETURN showing the number, area, and rent of Homestead Leases forfeited during 1895.

Land Board District.	Land District.	Forfeited.		
		No. of Leases.	Area embraced in such Leases.	Annual Rental.
			acres.	£ s. d.
Bourke	Bourke	10	80,696	390 10 8
	Brewarrina	3	27,977	153 10 7
	Cobar	1	10,240	42 13 4
	Wilcannia	2	12,798	90 13 1
	Willyama	4	10,323	83 2 1
Hay	Hillston North	2	5,760	22 2 8
	Wentworth	1	10,240	34 2 8
		23	158,034	766 15 1

SCHEDULE LI.

RETURN showing number of Applications lodged for re-appraisal of Homestead Leases under Section 9 of the Crown Lands Act of 1895.

Land Board District.	Land District.	No. of Applications accepted.	No. of Applications refused.	Totals.
Bourke	Bourke	315	1	316
	Brewarrina	121	2	123
	Cobar	21	...	21
	Wilcannia	40	1	41
	Willyama	31	2	33
Hay	Balranald	37	2	39
	Hay North	45	...	45
	Hillston North	50	...	50
	Wentworth	9	1	10
Moree	Walgett North	60	2	62
		729	11	740

SCHEDULE LII.

RETURN showing the number, area, and rent of Homestead Leases in existence at the end of 1895.

Land Board District.	Land District.	No. of Leases.	Area embraced in such Leases.	Rent determined.
			acres.	£ s. d.
Bourke	Bourke	371	3,389,304	20,980 11 9
	Brewarrina	159	1,433,217	15,396 11 2
	Cobar	57	492,527	2,415 3 5
	Wilcannia	119	893,232	5,040 0 4
	Willyama	102	640,745	1,731 2 0
Hay	Balranald	88	725,111	4,190 17 1
	Hay North	62	570,555	4,602 0 3
	Hillston North	79	606,514	3,684 12 0
	Wentworth	69	505,035	2,044 2 10
Moree	Walgett North	121	1,014,196	8,889 17 2
		1,227	10,250,437	68,974 18 0

SCHEDULE LIII.

RETURN giving particulars with reference to Applications received for Settlement Leases during 1895.

Land Board District.	Land District.	Farms made available during 1895.			Farms applied for during 1895.			Applications confirmed during 1895.			Applications disallowed, withdrawn, &c., during 1895.		No. of Farms included in outstanding Applications.
		No.	Area.	Annual Rent.	No.	Area.	Annual Rent.	No.	Area.	Annual Rent.	No.	Area.	
Bourke	Brewarrina	3	9,113	142 7 11	3	9,113	142 7 11	2	6,071	94 17 3	1	3,042	..
	Brewarrina East	4	10,726	134 1 0	4	10,726	134 1 0	..	..	..	..	..	..
	Cobar	2	7,907	42 9 11	2	7,907	42 9 11	1	3,818	20 17 8	1	4,149	..
	Total	9	27,806	318 19 4	9	27,806	318 19 4	3	9,889	115 14 11	2	7,191	4
Dubbo	Coomamble	17	62,215	592 14 2	13	36,158	441 8 11	..	..	..	..	..	13
	Dubbo	1	3,105	38 16 3	1	3,105	38 16 3	1	3,105	38 16 3	..	..	..
	Nyngan	7	25,945	284 15 6	2	9,596	99 19 2	..	..	..	..	..	..
	Warren	5	14,937	211 12 5	6	14,937	211 12 5	..	..	..	..	..	..
	Total	30	96,202	1,117 18 3	21	63,396	791 16 9	1	3,105	38 16 3
Forbes	Barnedman	3	13,509	94 13 1	2	8,399	62 13 1	..	..	..	..	..	2
	Condobolin	16	47,124	563 15 2	16	49,271	581 9 6	8	21,772	290 3 11	2	5,735	6
	Parke	3	20,825	102 7 10	..	..	..	..	..	..	..	..	..
	Total	22	81,459	750 16 1	18	67,661	644 2 7	8	21,772	290 3 11	2	5,735	8
Hay	Deniliquin	3	4,037	79 10 3	3	4,037	79 10 3	1	1,892	28 4 0	1	1,341	2
	Hay	2	0,412	117 13 0	2	0,412	117 13 0	1	4,722	59 0 8	1	4,689	..
	Hillston	7	17,260	161 14 7	..	..	..	..	..	..	..	..	..
	Total	12	30,709	258 17 10	5	13,449	197 3 3	2	6,414	87 4 8	2	6,030	2
Moree	Wariaida	2	1,094	29 10 3	..	..	..	..	..	..	..	..	..
	Walgett	6	16,689	220 8 11	6	16,689	220 8 11	..	..	..	..	..	6
	Total	8	16,774	240 19 2	6	16,689	220 8 11	..	..	..	..	..	6
Tamworth	Coomabarrabran	6	13,253	183 2 0	1	1,280	26 13 4	1	1,280	26 13 4	..	..	..
	Murrumbidgee	1	640	24 0 0	1	640	24 0 0	..	..	..	..	..	1
	Narrabri	10	21,024	450 8 6	10	24,024	450 8 0	2	2,780	53 18 0	..	..	8
	Tamworth	3	1,976	27 7 4	2	1,324	19 4 0	1	640	10 18 4	..	..	1
	Total	20	39,892	684 18 0	14	27,267	520 6 4	4	4,796	91 5 5	..	..	10
Wagga Wagga	Urana	2	1,153	19 4 4	2	1,153	19 4 4	1	535	8 18 5	1	617	1
	Grand Total	103	293,985	3,400 13 0	75	506,913	2,712 1 6	19	66,512	932 3 7	7	10,574	61

* Applied for again.

SCHEDULE LIV.

RETURN of Applications for Special Leases, and action taken thereon during the year 1895.

Land Board District.	Land District.	Number of Applications.			Applications granted.			Declined, lapsed, &c.		Pending.	
		Outstanding in 1894.	Made during 1895.	Total	Number.	Area.	Rent.	Number.	Area.	Number.	Area.
Armidale	Armidale	2	..	2	2	a. r. p. 337 0 0	£ s. d. 30 0 0	..	..	..	..
	Glen Innes	1	1	1	..	..	..	..	..	1	25 0 0
	Inverell	3	2	5	1	200 0 0	10 0 0	1	10 0 0	3	380 0 0
	Tenterfield	1	2	3	1	20 0 0	10 0 0	1	13 0 0	1	60 0 0
Bourke	Bourke	6	16	22	4	695 0 0	42 0 0	4	324 2 11	14	2,783 2 0
	Brewarrina	1	1	2	1	10 0 0	10 0 0	..	..	1	1 0 0
	Cobar	1	..	1	1	320 0 0	10 0 0	..	..	..	..
	Wilcannia	2	1	3	1	10 0 0	10 0 0	1	80 0 0	1	320 0 0
	Willyama	2	4	6	1	250 0 0	10 0 0	2	165 0 0	3	35 0 0
Cooma	Bombala	2	1	3	..	..	..	2	30 0 0	1	67 0 0
	Cooma	2	1	3	1	10 0 30	10 0 0	1	5 0 0	1	5 0 0
	Eden	1	..	1	1	134 0 0	16 5 0	..	..	..	..
	Milton	..	2	2	2	6 0 6	10 0 0	..	..	..	..
	Moruya	1	..	1	1	0 0 4	15 0 0	..	..	..	..
Dubbo	Coomamble	1	..	1	..	..	..	1	320 0 0	..	..
	Dubbo	3	7	10	1	25 0 10	10 0 0	4	45 0 0	5	814 0 0
	Nyngan	1	4	5	..	..	..	1	10 0 0	4	205 0 0
	Warren	..	11	11	..	..	..	..	..	11	3,288 0 0
Forbes	Barnedman East	..	1	1	..	..	..	..	..	1	100 0 0
	Condobolin	..	1	1	..	..	..	..	..	1	320 0 0
	Forbes	4	..	4	..	..	..	3	330 0 0	1	209 0 0
Goulburn	Parke	..	2	2	..	..	..	1	5 0 0	1	5 0 0
	Goulburn	..	4	4	2	10 0 0	21 5 0	1	5 0 30	2	14 0 0
	Moss Vale	1	..	1	..	..	..	..	..	1	68 0 0
Grafton	Young	1	..	1	..	..	..	1	1 0 0	..	..
	Bellingen	2	4	6	1	10 0 0	10 0 0	1	10 0 0	4	15 0 0
	Casino	2	1	3	2	60 0 0	50 0 0	..	..	1	1 2 0
	Grafton	3	16	19	5	80 3 10	117 2 8	3	377 0 0	11	23 0 20
	Kempsey	1	..	1	2	20 1 20	25 0 0	..	..	..	..
	Lismore	10	7	17	5	130 2 15	72 0 0	5	141 0 0	7	293 0 0
	Murwillumbah	4	6	10	..	..	..	3	262 0 0	7	466 0 0
Port Macquarie	1	1	2	..	..	..	..	..	2	9 0 0	

SCHEDULE LIV—continued.

Land Board District.	Land District.	Number of Applications			Applications granted.			Declined, lapsed, &c.		Pending.	
		Outstanding in 1894.	Made during 1895.	Total.	Number.	Area.	Rent.	Number.	Area.	Number.	Area.
Hay	Balranald	2	...	2	1	a. r. p. 2 1 16	£ s. d. 10 0 0	...	a. r. p.	1	a. r. p. 10 0 0
	Deniliquin	5	5	10	2	32 0 0	20 0 0	...	8	717 2 0	
Maitland	Hay	2	2	4	...	...	...	...	4	357 1 17	
	Hillston	...	2	2	...	...	...	...	2	12 0 0	
	Gosford	...	3	3	1	0 1 37	30 0 0	1	0 1 2	1	150 0 0
	Maitland	2	...	2	2	0 0 38½	115 0 0	...	...	...	...
	Muswellbrook	...	1	1	...	...	...	...	1	0 2 0	
	Newcastle	11	13	24	12	37 0 16½	183 0 0	2	0 3 27½	10	30 1 9½
	Paterson	...	1	1	...	...	...	...	1	2 1 24	
	Raymond Terrace	3	...	3	2	0 0 8½	20 10 0	...	...	1	0 0 4½
	Stroud	2	6	8	1	5 0 0	15 0 0	1	163 0 0	6	628 2 0
	Tarce	3	4	7	3	6 2 12	40 0 0	2	6 0 0	2	4 0 0
Moree	Bingera	1	...	1	...	...	...	1	5 2 0	...	...
	Moree	...	24	24	2	89 2 15	43 5 0	4	135 0 0	20	5,370 0 0
	Walgett	3	...	3	2	3 0 0	20 0 0	...	...	1	1 2 4
	Walgett North	3	3	6	1	1 2 0	10 0 0	2	50 0 0	3	506 0 0
	Warialda	...	3	3	...	...	...	...	3	97 0 0	
Orange	Bathurst	...	1	1	...	...	...	...	1	0 2 0	
	Cowra	...	1	1	1	4 0 0	5 0 0	...	...	...	...
	Lithgow	1	8	9	2	5 0 0	20 0 0	1	8 0 0	6	69 3 29
	Mudgee	...	2	2	...	...	...	...	2	30 0 0	
	Orange	1	...	1	...	...	...	1	83 0 0	...	...
	Rylstone	...	2	2	...	...	...	...	2	74 2 0	
	Wellington	...	...	...	1	13 2 0	10 0 0	...	...	...	...
	Campbelltown	3	...	3	1	0 1 25	10 0 0	...	...	2	123 0 0
	Metropolitan	60	47	107	47	6 3 31½	1,545 0 0	9	13 1 17½	51	15 2 17½
	Nowra	1	...	1	...	...	...	...	1	80 0 0	
Sydney	Parramatta	17	7	24	9	6 2 1½	63 0 0	3	0 1 14½	13	2 0 32½
	Penrith	2	...	2	...	...	...	...	2	78 0 0	
	Pictou	7	...	7	...	...	...	...	7	59 0 0	
	Windsor	7	...	7	...	...	...	...	7	64 0 0	
	Gunnedah	...	6	6	1	11 0 0	4 0 0	...	...	5	55 0 0
	Murrumbidgee	...	1	1	...	...	...	...	1	13 0 0	
	Narrabri	1	11	12	5	1,039 2 0	50 0 0	3	205 0 0	4	382 2 0
Wagga Wagga	Tamworth	...	5	5	...	...	...	...	5	589 0 0	
	Albury	...	1	1	...	...	...	...	1	2 0 0	
	Cootamundra	2	2	4	1	3 0 0	10 0 0	1	5 0 0	2	103 0 0
	Corowa	2	4	6	1	0 1 35	4 0 0	2	322 0 0	3	13 0 1
	Gundagai	5	2	7	3	53 0 0	35 0 0	1	4 0 0	3	275 0 0
	Narrandera	3	2	5	3	20 0 0	40 0 0	...	...	2	4 0 0
	Tumbarumba	...	1	1	...	...	...	...	1	30 0 0	
	Urana	...	1	1	...	...	...	1	2 3 0	...	...
	Wagga Wagga	2	2	4	1	10 0 0	16 10 0	3	10 1 1½	...	...
	Total	209	269	478	140*	3,690 1 11½	2,807 17 8	74	3,148 0 23½	270	19,457 1 39½

* Six leases granted were by purchase at auction. No preliminary applications.

SCHEDULE LV.

RETURN showing Number, Area, and Rental of Special Leases forfeited during 1895.

Land Board District and Land District.	No. of Leases.	Area.	Rent.	Land Board District and Land District.	No. of Leases.	Area.	Rent.
Armidale—		a. r. p.	£ s. d.	Maitland—		a. r. p.	£ s. d.
Inverell	1	3 0 0	12 0 0	Gosford	1	1 0 0	15 0 0
Bourke—				Muswellbrook	1	0 2 0	27 0 0
Bourke	4	770 3 0	75 16 0	Newcastle	1	3 1 14	60 0 0
Willyama	3	19 1 18	35 0 0	Moree—			
Dubbo—				Walgett	1	3 0 0	15 0 0
Dubbo	1	2 0 0	10 0 0	Orange—			
Forbes—				Cowra	1	0 3 33	10 0 0
Forbes	1	20 0 0	10 0 0	Lithgow	1	15 0 0	25 0 0
Parkes	1	1 0 0	10 0 0	Sydney—			
Goulburn—				Metropolitan	3	0 1 35½	45 16 8
Goulburn	1	7 0 0	20 0 0	Parramatta	2	0 0 7½	7 0 0
Grafton—				Tamworth—			
Grafton	1	0 0 3	5 0 0	Tamworth	1	10 0 0	10 0 0
Lismore	2	0 3 14	32 0 0	Wagga Wagga—			
Port Macquarie	1	3 2 0	5 0 0	Albury	1	2 0 0	10 0 0
Hay—				Corowa	1	1 0 0	20 0 0
Balranald	1	1 1 0	10 0 0	Narrandera	2	6 1 26	20 0 0
Total	33	872 1 31	489 12 8	Total	33	872 1 31	489 12 8

SCHEDULE LVI.

NUMBER, Area, and Rent of Special Leases which terminated during 1895.

Land Board District and Land District.	No. of Leases.	Area.	Rent.	Land Board District and Land District.	No. of Leases.	Area.	Rent.
Armidale—		a. r. p.	£ s. d.	Moree—		a. r. p.	£ s. d.
Armidale	2	6 1 0	20 0 0	Walgett	1	5 0 0	10 0 0
Bourke—				Walgett North	1	1 0 0	10 0 0
Brewarrina	1	3 0 0	10 0 0	Orange—			
Cooma—				Lithgow	1	20 0 0	12 10 0
Eden	1	0 1 0	10 0 0	Sydney—			
Moruya	1	2 3 0	10 0 0	Metropolitan	24	4 3 39½	880 0 0
Dubbo—				Nowra	1	14 0 0	10 0 0
Warren	1	6 0 0	10 0 0	Parramatta	2	0 0 8½	25 0 0
Forbes—				Tamworth—			
Forbes	1	40 0 0	10 0 0	Narrabri	1	20 0 0	10 0 0
Grafton—				Wagga Wagga—			
Port Macquarie	1	1 0 19	12 0 0	Cootamundra	1	100 0 0	15 0 0
Hay—				Corowa	1	3 1 0	10 0 0
Deniliquin	5	58 2 0	80 0 0	Narrandera	1	2 0 0	10 0 0
Hay	1	7 1 17	10 0 0				
Maitland—				Totals	53	311 3 11½	1,225 0 0
Gosford	1	4 2 16	12 0 0				
Newcastle	2	6 2 32	16 0 0				
Taree	2	5 0 0	32 10 0				

SCHEDULE LVII.

RETURN of Special Leases current on 31st December, 1895, inclusive of Special Leases which terminated on 31st December, 1895.

Land Board District and Land District.	No. of Leases.	Area.	Rent.	Land Board District and Land District.	No. of Leases.	Area.	Rent.
Armidale—		a. r. p.	£ s. d.	Maitland— <i>continued.</i>		a. r. p.	£ s. d.
Armidale	4	343 1 0	50 0 0	Newcastle	25	53 0 13	304 10 0
Inverell	4	402 0 0	42 0 0	Paterson	1	0 0 24½	10 0 0
Tenterfield	2	23 2 0	20 0 0	Raymond Terrace	4	40 0 12½	37 10 0
Bourke—				Scone	1	10 0 0	10 0 0
Bourke	28	2,123 0 12	346 0 0	Singleton	4	254 1 0	47 0 0
Brewarrina	9	439 3 20	110 0 0	Stroud	4	45 0 0	45 10 0
Cobar	5	914 0 0	57 10 0	Taree	13	93 0 13½	191 5 0
Wilcannia	8	438 2 16	102 0 0	Moree—			
Willyama	25	1,920 1 5	329 0 0	Bingara	1	10 0 0	10 0 0
Cooma—				Moree	8	362 0 15	123 5 0
Bega	2	5 0 0	15 0 0	Walgett	3	8 0 0	30 0 0
Cooma	1	10 0 30	10 0 0	Walgett North	5	46 2 0	65 0 0
Eden	6	135 2 13½	81 5 0	Orange—			
Milton	7	41 0 6	82 0 0	Carcoar	1	20 0 0	10 0 0
Moruya	5	192 1 3	60 0 0	Cowra	2	67 1 0	15 0 0
Dubbo—				Lithgow	12	119 2 7	161 0 0
Coonamble	1	8 2 2	10 0 0	Molong	1	1 3 28	10 0 0
Dubbo	4	238 3 10	45 0 0	Mudgee	1	20 0 0	10 0 0
Nyngan	1	4 2 0	10 0 0	Rylstone	2	27 0 0	20 0 0
Warren	3	76 0 0	40 0 0	Wellington	2	18 2 0	20 0 0
Forbes—				Sydney—			
Forbes	2	42 3 0	20 0 0	Campbelltown	5	227 2 24	67 15 0
Parkes	4	40 0 0	46 0 0	Kiama	4	0 1 13	32 0 0
Goulburn—				Liverpool	4	0 1 4	22 0 0
Burrowa	1	80 0 0	11 0 0	Metropolitan	184	101 0 26½	9,807 0 0
Goulburn	2	10 0 0	21 5 0	Nowra	2	14 0 0	12 0 0
Young	2	232 1 0	16 6 0	Parramatta	30	18 3 39	245 0 0
Grafton—				Wollongong	3	1 0 33½	37 0 0
Bellingen	4	30 1 11	40 0 0	Tamworth—			
Casino	4	100 0 2	75 0 0	Coonabarabran	2	52 0 0	22 0 0
Grafton	14	213 0 4½	246 2 8	Gunnedah	4	62 2 12	34 0 0
Kempsey	2	20 1 20	25 0 0	Narrabri	12	1,485 2 0	136 0 0
Lismore	14	143 0 7½	195 8 0	Tamworth	1	0 2 0	10 0 0
Murwillumbah	2	3 1 6	20 0 0	Wagga Wagga—			
Port Macquarie	4	12 0 38½	42 0 0	Albury	1	2 0 0	10 0 0
Hay—				Cootamundra	3	153 0 0	37 10 0
Balranald	2	5 3 0	20 0 0	Corowa	3	4 0 35	34 0 0
Deniliquin	19	1,357 2 32	281 10 0	Gundagai	3	53 0 0	35 0 0
Hay	12	1,277 0 17	152 5 0	Narrandera	4	22 0 0	50 0 0
Hillston	1	5 0 0	10 0 0	Tumut	1	0 3 38	5 0 0
Wentworth	1	2 0 0	10 0 0	Tumbarumba	1	2 0 0	10 0 0
Maitland—				Urana	2	6 1 25	20 0 0
Dungog	1	0 0 14	10 0 0	Wagga Wagga	1	10 0 0	16 10 0
Gosford	5	5 1 3½	82 0 0				
Maitland	3	0 1 2	117 0 0				
Muswellbrook	1	1 0 0	15 0 0				
				Total	575	14,344 0 38½	14,628 6 8

Three leases standing forfeited in 1894 return were afterwards restored in 1895.

SCHEDULE LVIII.

RETURN of Scrub Leases under section 35 of the Crown Lands Act of 1889 current on 31st December, 1895, and of applications received, leases granted, forfeited, and expired during 1895.

Land Board District and Land District.	No. of Applications.			Area of outstanding applications.	Area applied for during 1895.	Total area.	Applications declined or withdrawn.				Leases granted during 1895.			Leases forfeited during 1895.			Leases expired during 1895.			Leases current on 31st Dec., 1895.		
	Outstanding from 1894.	Received during 1895.	Total.				Outstanding from 1894.	Received during 1895.	Total.	No. not finally dealt with.	No.	Area.	Annual rent.	No.	Area.	Annual Rent.	No.	Area.	Annual Rent.	No.	Area.	Annual Rent.
Hay—				acres.	acres.	acres.					acres.	£ s. d.		acres.	£ s. d.		acres.	£ s. d.		acres.	£ s. d.	
Deniliquin .....	..	..	..	.....	.....	.....	..	..	..	..	.....	.....	..	.....	.....	..	1	640	0 18 2		
Hay	2	1	3	14,480	10,232	24,712	..	1	1	1	2,630½	2 3 10	1	10,240	8 10 8	..	1	2,630½	2 3 10			
Hillston	1*	..	1	19,200	.....	19,200	..	..	..	..	5,000	4 3 4	..	.....	.....	..	2	15,240	42 11 4		
Hillston North.....	..	..	..	.....	.....	.....	..	..	..	..	.....	.....	..	.....	.....	..	2†	10,040	88 3 4		
Wentworth .....	..	..	..	.....	.....	.....	..	..	..	..	.....	.....	..	.....	.....	..	1	1,391	1 9 0		
Maitland—																						
Scone .....	..	..	..	.....	.....	.....	..	..	..	..	.....	.....	..	.....	.....	..	1	560	1 0 0		
Singleton .....	..	..	..	.....	.....	.....	..	..	..	..	.....	.....	..	.....	.....	..	2	1,072	30 0 0		
Moree—																						
Bingara .....	..	..	..	.....	.....	.....	..	..	..	..	.....	.....	..	.....	.....	..	1	3,910	3 1 2		
Moree.....	2	5	7	13,000	19,090	32,090	2	1	3	4	.....	.....	..	.....	.....	10‡	74,957	16 7 6	4	63,059	89 1 3
Warialda	1§	4	5	3,000	9,580	12,580	..	1	1	3	3,000	10 0 0	..	.....	.....	..	2	5,500	10 19 6		
Sydney—																						
Nowra .....	..	..	..	.....	.....	.....	..	..	..	..	.....	.....	..	.....	.....	..	1	1,920	1 10 0		
Tamworth—																						
Narrabri.....	1	2||	3	9,440	15,800	25,240	..	..	..	2	3,560	1 13 6	..	.....	.....	..	2	9,220	1 16 0		
Wagga Wagga—																						
Tumut .....	..	..	..	.....	.....	.....	..	..	..	..	.....	.....	..	.....	.....	..	1	175	0 6 3		
Totals	7	12	19	59,120	54,702	113,822	2	3	5	10	4	19,210½	18 0 8	1	10,240	8 10 8	10	74,957	16 7 6	21	121,357½	272 19 10

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* Included in Hay District return in 1894 report. † One of these leases was forfeited when report for 1894 was compiled, but forfeiture was afterwards reversed. ‡ In nine of these cases applications have been made for extension of term of lease under the provisions of Sec. 26 (Subsec. VI), C.L. Act, of 1895. § Included in Moree Land District return in 1894 report. ¶ One of these applications is partly in the Narrabri Land District and partly in the Coonabrabrau Land District.

SCHEDULE LIX.

RETURN showing Number, Area, and Rent of Leases of Inferior Crown Lands current on 31st December, 1895, and of Leases granted and forfeited during 1895.

Land Board District.	Land District.	Leases granted during 1895.			Leases declared forfeited and cancelled during 1895.			Leases current on 31st December, 1895.		
		No.	Area.	Rent.	No.	Area.	Rent.	No.	Area.	Rent.
				£ s. d.			£ s. d.			£ s. d.
Bourke	Wilcannia	...	...	...	1	64,000	26 0 0	...	...	...
Cooma	Bombala	...	...	...	...	...	...	12	166,099	235 17 6
Forbes	Parkes	...	...	...	...	...	...	2	6,261½	26 1 10
Hay	Bairnald	1	2,000	3 15 0	...	...	...	2	23,500	43 15 0
	Hillston North	...	...	...	...	...	...	1	45,450	17 15 0
	Wentworth	...	...	...	...	...	...	1	141,000	27 10 0
Sydney	Nowra	...	...	...	1	4,000	16 13 4	...	...	...
Wagga Wagga	Narandera	7	17,900	10 17 6	...	...	...	23	106,165	70 17 6
Totals		8	19,900	14 12 6	2	68,000	42 13 4	41	488,475½	421 16 10

SCHEDULE LX.

RETURN showing the action taken during 1895 in respect of Residential Leases.

Land Board District and Land District.	Number of Applications.			Area applied for	No. of applications disallowed and withdrawn.	No. of applications in course of action on 31 Dec., 1895.	Leases granted during 1895.			Leases declared forfeited during 1895.			Leases current on 31st December, 1895.		
	Outstanding on 31/12/94.	Received during 1895.	Total to be dealt with.				No.	Area.	Annual Rent.	No.	Area.	Annual Rent.	No.	Area.	Annual Rent.
Armidale—			a r. p.				a r. p.	£ s. d.		a r. p.	£ s. d.		a r. p.	£ s. d.	
Armidale	4	7	11	130 0 0	3	4	4	40 0 0	6 0 0	12	120 0 0	19 5 0	10	160 0 0	11 0 0
Inverell	5	2	10	100 0 0	...	3	7	70 0 0	7 10 0	1	1 0 0	2 0 0	6	60 0 0	6 10 0
Tenterfield	1	...	1	10 0 0	...	1	...	...	...	1	10 0 0	3 0 0	1	10 0 0	3 0 0
Walcha	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bourke—															
Cobar	3	...	3	30 0 0	1	1	1	10 0 0	1 10 0	...	...	...	1	10 0 0	1 10 0
Willyama	1	3	4	45 0 0	2	1	1	10 0 0	1 0 0	2	20 0 0	3 15 0	15	150 0 0	26 5 0
Cooma—															
Bega	1	...	1	4 0 0	1	...	...	...	...	1	10 0 0	1 0 0	1	10 0 0	2 0 0
Bombala	...	...	...	90 0 0	5	3	1	7 3 21	3 0 0	1	2 0 10	1 0 0	1	7 3 21	3 0 0
Braunwood	2	1	3	30 0 0	...	1	2	14 1 5	2 5 0	...	...	...	3	10 1 5	3 10 0
Moruya	...	...	...	10 0 0	...	1	...	...	...	...	...	...	1	10 0 0	1 10 0
Queanbeyan	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dubbo—															
Dubbo	...	...	...	...	...	...	...	...	...	...	...	...	1	10 0 0	2 10 0
Forbes—															
Forbes	1	1	2	20 0 0	1	1	1	10 0 0	2 0 0	...	...	...	5	60 0 0	11 15 0
Grenfell	1	1	2	20 0 0	1	1	1	10 0 0	2 0 0	...	...	...	5	60 0 0	11 5 0
Parkes	1	...	1	10 0 0	1	...	...	...	...	...	...	...	4	40 0 0	8 10 0
Goulburn—															
Boorowa	1	1	2	20 0 0	2	1	1	...	...	...	...	...	19	182 3 6	30 15 0
Goulburn	1	1	2	10 0 0	1	1	1	...	...	...	...	...	1	10 0 0	2 0 0
Young	...	...	...	20 0 0	2	...	...	...	...	...	...	...	...	...	...
Grafton—															
Bellingen	...	...	...	...	...	...	...	...	...	...	...	...	1	10 0 0	1 0 0
Grafton	...	...	...	...	...	...	...	...	...	1	10 0 0	3 15 0	...	...	...
Murwillumbah	1	1	2	10 0 0	1	...	...	...	...	...	...	...	...	...	...
Moree—															
Bingara	1	1	2	30 0 0	...	1	1	10 0 0	2 10 0	...	...	...	5	34 0 0	7 0 0
Orange—															
Bathurst	3	2	5	29 0 0	...	2	3	9 2 21	3 0 0	1	10 0 0	1 0 0	8	59 2 21	8 5 0
Carcoar	3	2	5	60 0 0	...	4	1	6 8 17	1 0 0	1	10 0 0	1 0 0	9	86 3 17	9 15 0
Molong	...	...	...	...	...	...	...	...	...	...	...	...	3	30 0 0	3 10 0
Mudgee	6	7	13	102 0 0	4	3	6	41 1 10½	7 13 5	1	5 0 0	1 0 0	27	244 1 37½	33 8 5
Orange	2	2	4	40 0 0	...	3	...	...	...	...	...	...	1	10 0 0	1 0 0
Wellington	1	1	2	10 0 0	1	...	...	...	...	...	...	...	2	20 0 0	2 0 0
Tamworth—															
Tamworth	...	2	2	20 0 0	...	2	...	...	...	...	...	...	2	20 0 0	4 0 0
Wagga Wagga—															
Cootamundry	1	1	2	2 0 0	...	2	...	...	...	...	...	...	...	...	...
Gundagai	2	20	12	163 1 9	10	2	2	13 0 0	2 0 0	...	...	...	12	38 1 23	10 7 0
Tumbarumba	4	4	8	60 0 0	1	2	1	10 0 0	1 0 0	...	...	...	6	60 0 0	6 10 0
Tumbarumba North	3	2	5	60 0 0	2	1	2	20 0 0	2 0 0	...	...	...	2	20 0 0	2 0 0
Tumut	1	4	5	90 0 0	1	4	...	...	...	...	...	...	4	40 0 0	4 5 0
Wagga Wagga	...	1	1	20 0 0	...	1	...	...	...	...	...	...	...	...	...
Totals	44	68	112	1,225 1 9	37	42	33	273 0 0½	42 8 5	8	55 0 10	13 10 0	169	1,583 1 10½	256 0 5

SCHEDULE LXI.

RETURN showing Number, Area, and Rent of Snow Leases current on the 31st December, 1895, and of Snow Leases granted and forfeited during 1895.

Land Board District.	Land District.	Leases granted during 1895.			Leases declared forfeited and cancelled during 1895.			Leases current on December 31st, 1895.		
		No.	Area.	Rent.	No.	Area.	Rent.	No.	Area.	Rent.
				£ s. d.			£ s. d.			£ s. d.
Cooma	Cooma	4	17,210	144 16 10	10	38,070	608 11 11	13	47,340	512 15 11
Wagga Wagga	Tumut	...	...	...	1	4,050	8 8 9	3	24,100	50 4 3
	Tumbarumba	...	...	...	...	...	...	2	11,540	55 1 3
	Total	4	17,210	144 16 10	11	42,120	617 0 8	18	82,980	618 1 5

SCHEDULE LXII.

RETURN showing Number and Area of Annual Leases applied for and granted under Section 33 of Crown Lands Act of 1889, and the number disallowed and withdrawn during 1895.

Land Board District.	Land District.	No. of Applications received during 1895.	Area applied for during 1895.	No. of Applications disallowed and withdrawn during 1895, including applications made during previous years.	No. of Applications approved, and in virtue of which Leases have been granted during 1895, including applications made during previous years.	Area of Leases Granted.	Rent.
			a. r. p.			a. r. p.	£ s. d.
Armidale	Armidale	95	5,904 2 0	14	67	45,873 2 0	336 13 11
	Glen Innes	64	44,917 0 0	16	39	24,785 0 0	177 6 3
	Inverell	97	92,311 3 0	10	52	35,019 3 0	249 18 6
	Tenterfield	183	125,576 2 0	25	240	161,036 3 0	745 1 2
	Walcha	15	13,730 0 0	2	7	5,038 0 0	31 16 0
	Total	454	335,582 3 0	67	405	271,753 0 0	1,540 15 10
Bourke	Bourke	2	960 0 0	.....	4	2,000 0 0	17 11 8
	Brewarrina .....	.....	.....	1	1	1,200 0 0	18 13 4
	Brewarrina East .....	.....	.....	.....	5	6,235 0 0	46 10 0
	Willyama .....	.....	.....	.....	6	11,520 0 0	16 4 0
	Total	2	960 0 0	1	16	20,955 0 0	98 19 0
Cooma	Bega	8	4,790 0 0	1	13	4,355 2 0	40 8 4
	Bombala	24	12,631 2 0	4	10	5,096 1 0	44 15 4
	Braidwood	42	26,330 1 0	3	28	14,692 3 0	89 19 10
	Cooma	165	128,796 0 0	6	69	43,713 2 0	283 18 5
	Eden	10	2,345 0 0	4	7	2,352 2 22	15 1 8
	Milton	10	8,960 0 0	.....	.....	.....	.....
	Moruya	14	2,830 0 0	.....	15	3,875 1 28	58 2 1
	Quacanbeyan	51	28,951 0 0	3	19	9,245 2 0	52 19 10
	Total	324	215,633 3 0	21	161	83,331 2 10	585 5 6
Dubbo	Coonamble	10	9,456 0 0	11	6	4,511 0 0	57 0 0
	Dubbo	36	36,103 0 0	6	28	30,994 0 0	153 16 4
	Nyngan	5	7,010 0 0	.....	4	6,690 0 0	27 17 6
	Warren	1	320 0 0	1	9	5,577 3 0	86 5 1
	Total	52	52,889 0 0	18	47	47,772 3 0	324 18 11
Forbes	Barmedman	5	1,736 3 0	2	5	2,610 0 0	8 11 3
	Barmedman East .....	.....	.....	1	.....	.....	.....
	Condobolin	1	640 0 0	1	.....	.....	.....
	Forbes	5	805 0 0	1	6	1,742 0 0	38 5 0
	Grenfell	12	4,058 0 0	5	6	1,336 3 5	38 1 0
	Parkes	1	1,600 0 0	1	1	350 0 0	3 0 0
Total	24	8,839 3 0	11	18	6,068 3 5	87 17 3	
Goulburn	Booroowa	36	12,805 2 0	4	22	7,912 2 0	29 15 3
	Goulburn	60	25,607 0 0	6	54	26,036 3 0	167 15 3
	Gunning	42	21,177 0 0	2	29	15,360 2 0	101 11 4
	Moss Vale	10	7,500 0 0	1	9	6,760 0 0	39 1 5
	Yass	43	22,167 2 0	2	17	10,508 3 0	77 8 0
	Young	41	8,213 3 0	7	35	6,323 1 0	107 13 11
	Total	232	97,470 3 0	22	166	72,901 3 0	523 5 2
Grafton	Bellingen	11	6,600 0 0	.....	3	1,780 0 0	9 2 6
	Casino	62	38,460 1 0	2	66	45,228 0 0	227 15 7
	Grafton	88	43,035 0 0	4	46	21,887 3 0	90 9 1
	Kempsey	13	8,458 0 0	1	13	7,995 0 0	39 2 4
	Lismore	2	270 0 0	.....	.....	.....	.....
	Port Macquarie	18	9,665 0 0	6	14	9,784 0 0	39 13 4
	Total	194	106,548 1 0	13	142	86,674 3 0	406 2 10
Hay	Demliquin	3	1,593 0 0	.....	3	2,261 2 0	25 10 7
	Hillston and Hillston North	13	7,896 0 0	.....	9	4,863 0 0	33 12 0
	Hay and Hay North	9	4,661 0 0	6	2	1,010 0 0	23 2 4
	Total	25	14,150 0 0	6	14	8,134 2 0	82 4 11
Maitland	Cassilis	48	21,050 2 0	5	44	24,017 1 0	156 12 10
	Dungog	6	1,663 3 0	.....	.....	.....	.....
	Gosford	6	3,840 0 0	6	1	1,000 0 0	6 5 0
	Muswellbrook	13	5,074 0 0	3	8	1,682 0 0	13 1 11
	Maitland	1	16 2 0	1	.....	.....	.....
	Newcastle	2	90 0 0	.....	.....	.....	.....
	Paterson	1	640 0 0	.....	13	1,600 0 0	8 13 4
	Scone	29	17,873 0 0	3	18	7,690 0 0	52 5 4
	Singleton	8	5,078 0 0	1	5	4,608 0 0	35 18 11
	Stroud	25	22,635 3 0	8	5	2,082 0 0	11 15 0
	Taree	18	9,502 0 0	2	8	5,137 1 0	28 2 0
	Wollombi	3	952 0 0	1	9	3,860 0 0	20 3 4
	Total	160	88,415 2 0	30	111	51,676 2 0	332 17 8

SCHEDULE LXII—continued.

Land Board District.	Land District.	Number of Applications received during 1895.	Area applied for during 1895		No. of Applications disallowed and withdrawn during 1895, including applications made during previous years.	No. of Applications approved, and in virtue of which Leases have been granted during 1895, including applications made during previous years.	Area of Leases granted.		Rent. £ s. d.
			a.	r. p.			a.	r. p.	
Moree	Bingara	10	3,250	0 0	6	11	2,497	1 0	25 11 11
	Moree	17	12,133	0 0	3	10	7,011	2 0	45 6 4
	Walgett	5	2,293	0 0	4	3	399	0 0	24 9 6
	Warialda	31	21,961	2 0	8	22	13,349	0 0	128 9 7
	Total	63	39,637	2 0	21	46	23,256	3 0	223 17 4
Orange	Bathurst	46	23,164	1 0	4	48	27,000	0 0	161 2 5
	Carcoar	52	28,665	1 0	2	43	20,135	3 0	112 6 11
	Cowra	14	1,985	0 0	2	6	2,956	0 0	31 19 9
	Lithgow	28	14,686	2 0	1	28	12,175	0 0	65 0 5
	Molong	28	12,136	3 0	5	34	12,928	3 0	179 14 1
	Mudgee	78	30,709	0 0	4	82	34,136	2 23	162 7 1
	Orange	30	6,578	2 0	6	21	5,731	2 0	72 5 1
	Rylstone	48	15,772	0 0	6	33	10,385	0 0	58 15 9
	Wellington	13	5,743	0 0	1	16	8,573	1 0	55 3 9
	Total	337	139,440	1 0	31	311	133,951	3 23	898 15 3
Sydney	Campbelltown	4	2,581	0 0	1	1	150	0 0	1 10 0
	Nowra	18	7,512	0 0	3	7	1,495	0 0	10 0 0
	Penrith	2	1,880	0 0	.....	1	100	0 0	2 10 0
	Picton	22	15,998	0 0	4	21	19,485	0 0	60 6 6
	Windsor	2	690	0 0	1	.....	.....	.....	.....
Total	48	28,661	0 0	9	30	21,230	0 0	74 6 6	
Tamworth	Coonabarabran	31	21,102	0 0	6	17	15,662	1 0	84 17 1
	Gunnedah	27	18,858	0 0	6	21	18,570	0 0	135 2 6
	Murrurundi	5	2,425	0 0	2	5	1,925	0 0	30 13 4
	Narrabri	71	56,644	0 0	8	63	51,748	2 0	224 19 10
	Tamworth	72	54,166	2 0	4	84	68,858	1 0	328 13 3
Total	206	153,195	2 0	26	190	156,764	0 0	804 6 0	
Wagga Wagga	Albury	28	13,631	1 0	4	11	5,895	0 0	45 12 4
	Cootamundra	16	8,418	3 0	2	7	2,635	2 0	66 2 2
	Corowa	5	454	0 0	2	2	831	3 0	31 2 3
	Gundagai	105	21,850	0 0	32	6	1,417	3 0	18 16 4
	Narrandera	15	14,952	0 0	2	5	5,750	0 0	122 6 8
	Tamut	62	28,209	1 0	26	10	3,636	2 0	22 6 4
	Tumbarumba	65	71,860	0 0	2	13	15,950	0 0	76 17 6
	Tumbarumba North	9	10,540	0 0	.....	9	9,905	0 0	69 14 7
	Urana	1	354	3 0	.....	1	280	0 0	7 0 0
	Wagga Wagga	17	6,903	2 0	.....	4	168	2 0	16 4 6
Total	323	177,203	2 0	70	68	46,470	0 0	476 3 1	
Grand Total	2,444	1,458,027	2 0	346	1,725	1,030,941	0 38	6,459 14 5	

SCHEDULE LXIII.

RETURN showing Areas offered by Auction as Annual Leases under 85th Section of the Crown Lands Act of 1884, and Area and Rent of such Leases granted.

Land Board District and Land District.	No. of Lots offered.	Area offered.	Area of Leases granted.	Rent	Land Board District and Land District.	No. of Lots offered.	Area offered.	Area of Leases granted.	Rent.
Armidale—		acres.	acres.	£ s. d.	Hay—		acres.	acres.	£ s. d.
Glen Innes	5	1,183	1,039	5 10 0	Balnainald	4	1,300	820	3 13 0
Tenterfield	1	330	330	2 15 0	Deniliquin	2	846	1,017	58 0 0
Bourke—					Hay	3	867½	170	15 0 0
Brewarrina	1	1,200	1,200	18 13 4	Maitland—				
Brewarrina East	2	1,100	.....	.....	Cassilis	1	1,130	1,130	12 15 0
Cooma—					Orange—				
Bombala	1	260	260	3 5 0	Bathurst .....	.....	.....	138	9 15 0
Milton	2	68	.....	.....	Tamworth—				
Moruya	1	210	.....	.....	Narrabri	1	335½	335½	10 10 0
Dubbo—					Tamworth	2	3,200	.....	.....
Coonamble	2	670	490	6 2 6	Totals	30	13,184½	6,929½	95 18 10
Warren	2	484	.....	.....			

SCHEDULE LXVI.

RETURN showing the Number, Area, and Rental of Permissive Occupancies current on 31st December, 1895.

Land Board District.	No.	Area.	Annual Rental.	Land Board District.	No.	Area.	Annual Rental.
		a. r. p.	£ s. d.			a. r. p.	£ s. d.
Armidale	10	15 2 0	9 10 0	Moree	2	2 3 0	20 0 0
Bourke	7	214 3 0	23 0 0	Orange	4	15 1 0	2 0 0
Cooma	19	32 1 5	15 5 0	Sydney	176	192 2 35½	1,161 8 0
Dubbo	6	182 0 0	11 9 6	Tamworth	8	64 0 0	13 0 0
Goulburn	7	8 0 3	4 18 0	Wagga Wagga	15	13 0 0	26 10 0
Grafton	86	42 0 13½	81 15 0				
Hay	14	47 1 11	16 5 0				
Maitland	153	55 3 12½	153 1 0	Total	507	885 2 0½	1,538 1 6

SCHEDULE LXVII.

NEWCASTLE PASTURAGE RESERVE.

RETURN showing, up to 31st December, 1895, the state of Applications to Purchase under the Newcastle Pasturage Reserve Act.

Total number of Applications received.	Number of Applications in which sale has been gazetted or disallowed.		Total area of Applications gazetted for sale.	Total amount of purchase money.	Applications declared forfeited for non-receipt of instalment money.		Applications to purchase in which purchase money has been paid in full.		Applications now current.		Number of applications now current under Original and Amendment Acts.	
	Sale gazetted.	Disallowed.			No.	Purchase money.	No.	Purchase money.	No.	Purchase money.	Original Act.	Amendment Act.
1,160	964	213	a. r. p. 226 1 17½	£ 61,314	64	£ s. 3,891 17	240	£ s. 16,041 8	660	£ 41,381	126	534

SCHEDULE LXVIII.

RETURN of Lands resumed during 1895 under the 105th section of the Crown Lands Act of 1894 and the 41st section of the Crown Lands Act of 1889.

Originally dedicated or reserved for—	Place.	Area.	How disposed of.
Permanent Common	Orange	a. r. p. 508 0 0	278 acres rededicated, the remainder reserved for hospital for the Insane, recreation, &c.
Permanent Common and Public Recreation	Bathurst	762 0 0	} 595 acres dedicated for an experimental farm, the remainder reserved for recreation, rifle range, &c.
Racecourse	Bathurst	193 2 0	
Public Recreation	Young	30 0 0	Dedicated for show ground.
"	Narramin	3 3 35	To be included in temporary common.
"	Tempe	1 2 14	Included in new dedication.
"	Moruya	97 3 0	Dedicated for permanent common.
"	North Willoughly	140 0 0	Parts to be rededicated, the remainder to be sold or otherwise appropriated under the Crown Lands Acts.
"	Randwick	1 2 24	} To be sold or otherwise appropriated under the Crown Lands Acts.
"	Randwick	1 0 12	
Show Ground	Robertson	5 1 6	
"	Young	22 3 30	To be sold by auction.
Cricket Ground	Orange	8 0 0	Dedicated for athletic sports.
General Cemetery	Bega	14 1 23	Reserved for extension to temporary common.
"	Badjerribong	6 1 24	To be included in a travelling stock reserve.
"	Pitt Town	13 1 17	} Rededicated in an amended form.
"	East Kempsey	7 2 39	
"	Orange	8 0 0	
"	Orange (extension)	14 2 25	} Dedicated for addition to public school site.
Burial Ground	Armidale	0 2 0	
Public School site	Jingellie East	2 0 0	To be sold by way of exchange.
"	La Perouse	2 0 0	Reserved for public recreation.
"	Bull Plain	2 0 0	} To be sold by auction.
"	Craigie	2 0 0	
"	Bournda North	2 0 0	} To be sold or otherwise appropriated under the Crown Lands Acts.
"	Enngonia	2 0 19	
"	Severn	2 0 0	
"	Native Dog	2 0 0	} To be sold by auction.
Access to Water	Brogo River (Bega)	53 0 0	
Gnol site	Willyama	16 2 22	Rededicated, exclusive of 1 acre and 6 perches and 1 acre 2 roods 30 perches set apart for recreation and roadway.
Police Paddock	Tenterfield	34 2 0	Reserved for police purposes.
	Total	1,961 0 11	

SUMMARY.

Year.	Number of Resumptions.	Area resumed.
1894	59	a. r. p. 3,545, 2 14½
1895	31	1,961 0 11

SCHEDULE LXIX.

RETURN of Reserves from Sale notified during 1895.

Land Board District.	Access.		C P Gold-field.		Conditional Sale.		Mining.		Pending Subdivision.		Preservation and growth of Timber.		Public Buildings.		Recreation.		Railway.		School.		Temporary Common.		Travelling Stock and Camping.		Village and Suburban Settlement.		Water Supply.		Other Public Purposes.		Other than Auction Sale only.		Totals.		
	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	
Armidale.....	5	449	7	185,045	1	84,500	4	5,035	8	109,710	9	95,475	...	...	5	135	1	11	1	8	2	5,840	45	32,015	...	...	5	3,531	17	304	3	270	113	522,388
Bourke .....	...	...	...	...	...	...	...	...	11	87,218	2	29,440	...	...	...	...	...	...	...	...	1	6,700	17	33,592	...	...	...	2	5	523	...	...	37	156,505
Cooma	2	14	11	21,780	...	...	1	190	...	...	3	2,580	...	...	4	18	...	...	2	12	2	528	18	10,096	...	...	4	502	28	990	3	175	78	36,883
Dubbo	23	5,683	...	...	1	200	...	...	37	164,841	9	80,230	1	2	2	21	6	9,325	...	...	3	2,900	38	33,957	2	1,648	24	7,953	5	110	1	800	154	307,670
Forbes	6	1,785	6	47,750	...	...	1	26	2	7,611	16	37,097	4	18	1	8	3	224	4	17	...	...	20	50,930	...	...	6	1,622	13	570	5	504	87	148,172
Goulburn	18	1,705
Grafton	3	84	...	...	...	...	1	1,560	1	1,016	1	27,500	...	...	...	...	...	...	2	10	...	...	...	...	...	...	14	3,853	...	...	...	...	22	34,023
Hay	1	148	...	...	3	5,319	...	...	7	163,140	3	2,909	...	...	...	...	...	...	...	3	2,208	14	12,380	...	...	...	6	581	4	1,933	41	138,618		
Maitland	4	273	1	5,000	...	...	...	...	2	17,700	3	7,710	...	...	1	6	...	...	...	...	3	4,030	11	828	1	25	13	2,045	12	296	1	91	52	38,004
Moree	5	2,336	1	9,600	1	2,800	...	...	10	61,832	1	862	...	...	4	18	...	...	...	1	1,000	23	26,998	...	...	1	14	20	77,445	1	423	63	133,328	
Orange	1	140	5	91,000	...	...	3	142	...	...	3	21,460	1	2	8	670	1	40	1	2	1	130	11	1,957	...	...	17	1,530	8	562	...	...	60	117,635
Sydney	3	33	4	592	1	8	9	1,317	1	4	3	1,025	1	600	17	846	23	914	2	441	64	5,785
Tamworth	20	4,570	...	...	6	5,292	...	...	19	103,522	8	31,200	...	...	...	...	...	...	1	1	1	43	30	41,907	1	263	13	4,612	14	785	11	2,599	124	194,894
Wagga Wagga	4	1,299	2	6,200	9	10,703	1	190	8	2,689	6	8,460	...	...	3	55	...	...	...	1	2	1	640	20	7,191	2	685	3	69	23	2,148	93	42,716	
Totals	77	16,819	33	366,375	21	108,814	11	7,143	109	719,901	64	344,923	8	36	37	2,248	15	9,606	14	74	21	24,042	251	253,216	7	2,821	112	25,047	174	87,351	57	9,910	1,011	1,978,326	

SCHEDULE LXX.

RETURN of Reserves from Sale revoked during 1895.

Land Board District.	Access.		C.P. Gold-field.		Mining.		Conditional Sale, Conditional Lease, and Annual Lease.		Pending Subdivision.		Preservation and growth of Timber.		Public Buildings.		Recreation.		Railway.		School.		Temporary Common.		Travelling Stock and Camping.		Village and Suburban Settlement.		Water Supply.		Other Public Purposes.		Totals.	
	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.
Armidale	7	679	5	713	2	2,725	6	188,628	...	...	10	23,725	...	...	1	100	9	2,329	...	...	8	11,981	68	49,941	1	360	62	29,152	36	5,550	215	316,083
Bourke	2	1,280	...	...	...	...	50	21,162	5	33,250	2	11,120	1	2	...	...	2	400	...	...	8	8,936	40	172,559	...	...	15	34,435	4	24,901	129	308,045
Cooma .....	...	...	3	2,364	...	...	2	10,975	...	...	1	5,495	...	...	2	153	4	2,946	1	110	5	681	23	9,894	...	...	45	10,279	48	51,032	139	93,979
Dubbo .....	...	...	...	...	...	...	135	69,352	4	280	1	50	...	...	2	14	12	23,260	...	...	2	1,576	55	80,114	2	13,400	51	96,182	10	6,120	274	290,348
Forbes	1	513	5	20,666	3	1,681	50	25,039	27	28,014	10	19,273	2	7	1	5	871	1	38	4	78	30	59,009	...	...	41	51,026	14	3,705	194	209,922	
Goulburn .....	...	...	...	...	...	...	1	317	...	...	...	...	...	...	1	12	2	506	2	26	15	2,260	3	426	3	896	7	917	1	242	39	5,612
Grafton .....	...	...	...	...	1	10,880	...	...	2	5,558	5	4,466	1	3	3	57	2	994	...	...	1	150	3	497	2	32	10	1,614	8	1,253	38	25,482
Hay .....	...	...	...	...	...	...	71	43,365	1	5,810	8	10,646	...	...	1	110	...	...	...	3	1,408	15	15,032	2	294	31	25,885	12	12,027	144	114,577	
Maitland	3	167	1	340	...	...	...	...	2	8,876	9	9,757	...	...	1	112	5	21,060	...	...	5	4,976	10	1,858	2	540	11	1,336	12	7,445	61	56,997
Moree	3	310	1	10,880	...	...	78	54,020	16	16,661	...	...	1	6	1	?	...	...	...	...	...	...	23	29,443	...	...	62	59,303	25	11,445	210	182,071
Orange	1	140	34	67,782	3	1,002	7	2,306	2	100	6	21,924	...	...	1	4	5	570	1	5	17	4,097	8	1,348	2	5	19	6,226	4	1,276	110	106,785
Sydney	1	2,000	...	...	...	...	1	7,970	2	2,850	1	2,300	...	...	6	1,768	4	26,565	...	...	3	2,682	3	855	2	745	2	61	23	1,795	48	49,591
Tamworth	21	4,164	...	...	3	2,375	67	33,749	17	14,919	4	38,020	2	6	...	...	13	13,485	...	...	3	452	86	90,513	1	2,000	118	105,116	28	8,954	363	213,753
Wagga Wagga	9	2,952	4	8,035	2	400	38	24,286	50	13,000	15	27,607	1	1	2	26	15	8,856	...	...	3	915	19	3,475	3	1,135	117	72,128	30	8,369	368	171,185
Totals	48	12,205	53	110,780	14	19,063	565	480,852	129	129,565	77	174,383	8	23	22	2,341	78	101,042	5	189	77	40,192	386	514,964	20	19,407	591	494,260	259	144,164	2,332	2,243,430

SCHEDULE LXXI.

RETURN of Reserves from Lease and License, Annual Lease, &c., notified during 1895.

Land Board District.	Access.		Cemetery		Roads.		Schools.		Travelling Stock and Camping.		Water Supply.		Annual and Homestead Lease.		Annual Lease for Temporary Common.		Village and Suburban Settlement.		Other than Annual Lease.		Other Public Purposes.		Total.	
	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.
Armidale.....	...	acres	3	11	4	363	1	10	1	40	1	16	2	2,748	2	5,840	1	380	...	...	...	...	15	9,408
Bourke.....	...	...	...	...	6	1,499	...	...	24	13,022	1	10,240	7	79,639	3	17,440	2	182	13	41,162	2	10,265	68	173,449
Cooma.....	...	...	...	...	...	...	...	1	8	...	...	...	2	66,650	2	526	...	...	1	2,385	...	...	6	69,569
Dubbo.....	...	...	...	...	3	307	1	20	...	...	2	725	2	48,921	2	2,700	1	570	...	...	...	...	11	53,213
Forbes.....	...	...	...	...	2	17	2	16	2	4,200	1	9	3	14,817	...	...	1	285	...	...	2	146	13	19,490
Goulburn.....	...	...	...	...	...	...	...	3	543	1	17	...	...	...	...	...	...	...	...	...	1	40	5	600
Grafton.....	...	...	2	7	...	...	1	10	...	...	...	...	...	...	...	1	610	...	...	...	...	...	4	627
Hay.....	...	...	...	...	2	201	...	...	9	9,522	...	51	30,114	3	2,208	...	...	1	204	2	35	22	62,284	
Maitland.....	1	60	...	...	...	...	...	13	1,513	...	...	1	250	2	3,280	...	...	...	...	...	1	160	18	5,263
Morée.....	3	68	...	...	1	52	...	...	4	1,228	...	...	1	18,349	2	1,030	...	...	...	2	16,102	13	36,824	
Orange.....	1	102	...	...	...	...	1	2	12	3,120	7	381	4	1,315	1	130	...	...	...	...	...	26	5,050	
Sydney.....	...	...	...	...	...	...	...	...	6	2,034	1	26	...	2	475	...	...	...	...	...	1	7	10	2,542
Tamworth.....	...	...	...	...	...	...	...	...	1	5	...	...	6	77,492	1	4,965	...	...	...	...	1	150	9	82,612
Wagga Wagga.....	...	...	...	...	1	11	...	...	2	958	1	65	6	31,521	1	640	...	...	...	...	1	199	12	33,334
Total.....	5	225	5	18	19	2,450	7	66	77	36,185	15	11,479	39	391,816	21	39,234	6	2,027	15	43,751	13	27,104	222	554,355

SCHEDULE LXXII.

RETURN of Reserves from Lease and License revoked during 1895.

Land Board District.	Access.		Lease.		Mining.		Roads and Cross- ing.		Suburban Settlement.		Travelling Stock and Camping.		Village.		Water Supply.		Annual Lease or Occupation License for Temporary Common.		Conditional Lease and Annual Lease.		Other Public Purposes.		Total.	
	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.
Armidale.....	...	acres.	...	...	...	...	...	...	1	10	6	2,722	2	3,805	1	36	5	9,752	...	...	7	4,585	26	27,798
Bourke.....	1	1	7	39,297	...	...	2	24	6	24,481	4	1,962	...	...	6	2,268	8	7,321	51	32,423	3	10,330	88	118,107
Cooma.....	...	...	1	2	...	...	...	...	...	...	2	549	...	...	1	9	1	9	13	15	29,365	20	29,938	
Dubbo.....	...	...	1	1,570	...	...	2	197	1	11,800	1	140	1	1,485	...	...	1	1,570	135	69,352	3	392	145	86,506
Forbes.....	2	1,289	2	52	...	...	1	25	...	...	...	...	...	...	1	42	47	18,319	5	1,311	58	21,038		
Goulburn.....	...	...	...	...	...	...	...	...	...	...	...	...	...	1	40	...	...	...	...	7	31,551	8	31,591	
Grafton.....	...	...	...	...	...	...	...	...	...	...	...	...	...	1	265	...	...	...	...	2	23	3	288	
Hay.....	1	870	5	670	...	...	...	...	5	5,745	4	2,240	1	200	3	360	...	...	71	43,363	10	6,374	100	59,824
Maitland.....	1	40	5	6,190	...	...	...	...	...	...	1	73	...	...	1	1,180	...	...	...	...	...	8	7,453	
Morée.....	2	22	1	16,000	...	...	...	...	1	450	...	...	...	...	...	...	78	54,020	1	800	83	71,292		
Orange.....	...	...	2	22	...	...	...	...	...	...	...	...	1	200	3	1,200	1	1	3	2,120	1	3	11	3,546
Sydney.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2,000	1	7,970	...	...	...	2	9,970	
Tamworth.....	...	...	1	160	...	...	...	1	87	10	5,881	...	7	9,085	...	...	67	33,749	6	4,404	92	53,366		
Wagga Wagga.....	...	...	1	60	4	6,256	...	...	...	11	2,475	1	580	3	383	1	210	92	24,286	8	1,023	121	35,263	
Total.....	7	2,222	30	70,901	4	6,256	5	246	15	42,573	39	16,042	6	6,270	25	13,637	20	22,035	546	285,617	68	90,161	765	556,010

SCHEDULE LXXIII.

RETURN of Dedications for Public Purposes during the year 1895.

Purpose of Dedication.	No. of Dedications.	Area dedicated.			Purpose of Dedication.	No. of Dedications.	Area dedicated.		
		a.	r.	p.			a.	r.	p.
Permanent Commons.....	5	4,566	1	0	Gaol Site.....	1	13	3	26
Public Recreation.....	41	978	0	25½	Public Schools.....	3	10	3	31½
Experimental Farm.....	1	595	0	0	Mechanics' Institute Sites.....	18	7	0	18
Racecourses.....	5	537	0	0	Defence.....	1	3	0	24
General Cemeteries.....	29	318	0	21½	Town Hall Sites.....	4	2	1	5
Hospital for Insane.....	1	192	3	0	Benevolent Asylum Site.....	1	2	0	0
Refuge in Time of Flood.....	1	121	0	0	Roadway.....	1	1	2	30
Show Grounds.....	6	87	3	36	Preservation of Graves.....	1	0	2	24
Quarantine Ground and Contagious Diseases Hospital Site.....	1	80	0	0	Railway Purposes.....	1	0	2	0
Water Supply.....	1	26	0	9	Storage.....	1	0	0	23½
Athletic Sports.....	3	23	3	0	Fire Brigade Station Site.....	1	0	0	8
Hospital Sites.....	4	21	3	29	Total.....	136	7,590	1	30½

SCHEDULE LXXIV.
RETURN of Special Areas proclaimed during 1895.

Land Board.	Land District	Within Population or Suburban Area.		Country Lands.		Land Board.	Land District.	Within Population or Suburban Area.		Country Lands.	
		Number.	Area.	Number.	Area.			Number.	Area in Acres.	Number.	Area.
Armidale	Armidale.....	1	300	3	953	Maitland	Taree	2	261	.....	.....
	Glen Innes ...	1	150	3	554	Moree	Moree	2	.....	2	1,820
	Iauverell ...	1	94	6	1,492	Orange	Warialda	7	1,761	1	176
	Tenterfield ...	1	10	.....	.....	Orange	Cowra	3	189	2	772
Cooma	Bega.....	.....	.....	1	52	Orange	Lithgow .....	.....	.....	2	445
	Bombala .....	.....	.....	4	905	Orange	Molong	2	114	3	718
	Bradwood .....	.....	.....	1	100	Sydney.....	Mudgec .....	.....	.....	1	802
	Cooma	2	321	4	883	Sydney.....	Rylstone .....	.....	.....	2	131
Dubbo	Moruya .....	.....	.....	4	190	Sydney.....	Nowra .....	.....	.....	2	269
	Dubbo	2	70	1	258	Tamworth ...	Windsor	7	1,429	.....	.....
Forbes	Nyngan .....	.....	.....	1	640	Tamworth ...	Gunnedah ...	.....	.....	4	428
	Barnedman ..	.....	.....	13	8,290	Tamworth ...	Murrurundi ..	.....	.....	1	658
	Forbes	1	42	10	2,618	Wagga Wagga	Narrabri .....	.....	.....	3	2,460
	Grenfell .....	.....	.....	1	242	Wagga Wagga	Tamworth	5	197	14	1,628
Goulburn	Parkes .....	.....	.....	4	1,442	Wagga Wagga	Corowa .....	.....	.....	18	7,664
	Gunning .....	.....	.....	1	91	Wagga Wagga	Cootamundra ..	1	10	3	431
Grafton	Young	5	683	1	319	Wagga Wagga	Gundagai	1	210	2	1,165
	Bellingen.....	2	84	.....	.....	Wagga Wagga	Narrandera ...	.....	.....	8	5,881
Hay	Casino	7	346	.....	.....	Wagga Wagga	Tumberumba ..	3	704	.....	.....
	Lismore	2	368	4	1,082	Wagga Wagga	Urana .....	.....	.....	6	2,442
Hay	Deniliquin ..	.....	.....	5	2,036	Wagga Wagga	Wagga Wagga ..	.....	.....	13	3,495
	Hay .....	.....	.....	2	1,418	Total .....	.....	56	7,343	166	54,951

Grand Total..... Number. 212 Acres. 62,294

SCHEDULE LXXV.
HOMESTEAD Selection Areas notified in 1895.

Land Board.	Land District.	No. of Blocks	Area.	Land Board.	Land District.	No. of Blocks.	Area.
Armidale	Armidale	15	a. r. p. 592 2 0	Maitland	Cassilis	20	a. r. p. 1,553 3 10
	Tenterfield	26	1,161 3 10		Dungog	6	498 3 10
Bourke	Bourke	20	408 1 0	Gosford	35	4,350 0 33	
	Cobar	36	5,204 2 0	Maitland	12	1,248 0 0	
Cooma.....	Bombala	13	625 0 0	Newcastle.....	53	4,808 0 0	
	Cooma	31	1,991 3 0	Singleton	14	1,215 3 0	
	Eden	15	1,255 1 20	Taree	55	9,438 1 20	
Dubbo	Queanbeyan ..	5	267 1 20	Warialda	5	6,400 0 0	
	Coonamble	11*	5,875 1 11	Sydney	Campbelltown ..	117	2,536 0 8
	Dubbo	10	4,294 0 24	Nowra	3	100 3 20	
Forbes.....	Warren	11	655 0 17	Penrith	46	1,311 2 30	
	Barnedman	9	3,740 3 0	Pictou	5	697 1 0	
Goulburn	Forbes	7	6,654 0 0	Tamworth	Windsor	88	4,330 3 20
	Goulburn	10	1,659 1 0	Gunnedah	43	12,424 2 0	
Grafton	Young	15	2,675 3 9	Murrurundi ..	15	642 2 0	
	Bellingen	46	6,670 0 0	Narrabri	1	977 1 0	
Hay	Casino	14	3,125 2 0	Tamworth	6	2,312 3 0	
	Grafton	9	5,330 2 0	Cootamundra ..	74	20,514 0 0	
	Kempsey	19	3,437 0 0	Corowa	15	4,406 1 0	
	Lismore	123	35,044 2 0	Narrandera ..	33	14,116 1 30	
	Murwillumbah ..	27	6,282 0 0	Urana	71	12,180 0 0	
	Port Macquarie ..	16	4,993 0 0	Wagga Wagga ..	56	16,176 1 0	
Hay	Deniliquin.....	65†	30,358 0 0	Total	1,357	267,159 0 12	
	Hay	16	9,242 0 0				
Hay	Hillston	6	3,346 0 0				

* The notification of five blocks of 5,678½ acres has been cancelled. † The notification of 1,144 acres has been withdrawn.

SCHEDULE LXXVI.
SETTLEMENT Lease Areas notified in 1895.

Land Board.	Land District.	No. of Farms.	Area.	Land Board.	Land District.	No. of Farms.	Area.
Bourke	Brewarrina	20	a. r. p. 79,122 0 0	Hay.....	Deniliquin.....	3	a. r. p. 4,028 2 0
	Cobar	8	35,329 0 0		Hay	2	9,412 1 0
	Wilcannia	1	10,240 0 0	Hillston	7	17,230 3 0	
Dubbo.....	Coonamble	17	52,215 0 0	Moree	Warialda	4	5,377 3 0
	Dubbo	1	3,103 0 0		Walgett	6	15,680 0 0
	Nyngan	7	25,945 0 0	Tamworth	Coonabarabran ..	22	60,609 1 0
Forbes	Warren	5	14,937 0 0	Gunnedah	12	22,770 2 0	
	Barnedman	3	13,509 3 0	Murrurundi	2	1,944 2 0	
	Condobolin	22	79,161 2 0	Narrabri	15	56,636 0 0	
	Forbes	3	5,883 1 0	Tamworth	3	1,976 2 0	
	Grenfell	4	9,519 1 0	Wagga Wagga ...	Urana	2	1,153 0 0
	Parkes	3	20,825 0 0	Total	172	526,621 3 0	

* The notification of one farm of 1,304½ acres has been cancelled.

SCHEDULE LXXVII.

RETURN showing number of Trespasses on Crown Lands reported during 1895, and action taken thereon under the provisions of the Crown Lands Acts.

Number of cases not disposed of at end of 1894	375
Number of cases of trespass reported by the Crown Lands Bailiffs during 1895	737
	— 1,112
Number of prosecutions on which convictions were obtained	19
Trespasses abated after notice, without legal proceedings by the Department	451
Cases of reported trespass in which, after investigation, it was found that no proceedings were necessary	42
Number of cases referred to other Departments for action	139
Cases in which action was suspended by the Department pending investigation of application to be placed in legal occupation	20
Cases not disposed of at end of year	441
	— 1,112

SCHEDULE LXXVIII.

RETURN showing number of Meetings, duration of Sittings, and Cases dealt with by Local Land Boards during 1895.

Land Board District.	Land District.	Place of Meeting.	Number of Courts held.	Duration of Sittings.	Number of Cases dealt with.	Number of Cases adjourned.	
Armidale.....	Armidale.....	Armidale	11	25	497	39	
		Bendemeer	2	2	36	3	
		Bundarra	4	4	97	5	
		Ilfigrove	2	1	31	1	
		Uralla	2	2	41	3	
		Walcha Road	3	2	73	1	
		Wandsworth.....	3	2½	64	5	
		Wollomombi.....	3	3	99	7	
		Emmaville	1	1	31	
		Glen Innes	10	15	283	23	
		Inverell	Ashford	4	4	126	5
			Bundarra	4	5	98	16
			Inverell	8	18	348	32
			Tingha	1	1	17
		Tenterfield	Wandsworth.....	4	4	128	6
			Emmaville	1	½	9
			Tenterfield	8	19½	596	7
			Wilson's Downfall	2	2	63
		Bourke	Walcha	7	16	267	35
			Bourke	8	71½	326	37
Brewarrina and Brewarrina East.	Brewarrina	6	33½	178	34		
	Cobar	Cobar.....	4	15½	61	16	
Wilcannia	Wilcannia	3	16½	80	13		
	Broken Hill	1	7½	56	2		
Willyama	Bega	4	6½	75	2		
	Cobargo.....	1	½	11	.....	
Cooma	Bombala	Bombala	4	4½	115	2	
		Delegete	3	2	52	1	
		Braidwood	4	5½	155	3	
		Cooma.....	Adaminaby	5	6	132	10
			Buckley's Crossing	6	7½	188	6
		Cooma	11	18	392	17	
		Eden	Eden	3	2	31	4
		Wyndham	4	2½	66	2	
		Milton.....	Milton	3	2½	36	1
		Moruya	Bodalla	4	3½	71	10
			Moruya	4	3	86	1
		Queanbeyan	Queanbeyan	9	16½	357	15
Coonamble	6		17	584	171		
Dubbo.....	Gilgandra	3	1½	36	26		
	Dubbo	10	21	530	99		
	Nyngan	5	5½	128	55		
	Warren	5	6½	300	45		
Forbes	Barmedman and Barmedman East.	5	12	282	22		
	Condobolin	6	17	262	29		
Forbes	Forbes	5	5½	140	11		
	Grenfell	6	6½	124	11		
Parkes	Parkes	5	8	216	13		
	Boorowa	11	11	175	21		
Goulburn	Boorowa	11	16½	252	89		
	Goulburn	4	4	30	12		
Goulburn	Goulburn	13	15	304	52		
	Taralga	4	6½	87	16		
Gunning	Crookwell	4	6	52	12		
	Gunning	11	13½	223	38		
Moss Vale	Moss Vale.....	10	7	114	9		
	Yass.....	12	11	237	44		
Young	Murrumburrah	1	2	36	.....	
	Young	12	22½	336	30		

SCHEDULE LXXVIII—*continued.*

Land Board District.	Land District.	Place of Meeting.	Number of Courts held.	Duration of Sittings.	Number of Cases dealt with.	Number of Cases adjourned.	
Grafton	Bellingen	Bellingen	4	9½	174	22	
	Casino	Casino	3	10	264	12	
	Grafton	Grafton	5	10½	250	12	
	Kempsey	Kempsey	4	10	178	18	
	Lismore	Lismore	3	6½	123	1	
	Murwillumbah	Murwillumbah	3	3	58	3	
	Port Macquarie	Port Macquarie	4	6	122	17	
	Hay	Balranald	Balranald	3	8	105	6
		Deniliquin	Deniliquin	4	21	339	30
		Hay	Hay	6	32½	470	33
Hillston		Hillston	3	8	96	17	
Lake Cudgellico		Lake Cudgellico	3	5	112	16	
Maitland.....	Wentworth.....	Wentworth.....	3	5½	73	5	
	Cassilis	Cassilis	4	7	176	2	
	Leadville	Leadville	4	4	107	6	
	Merriwa	Merriwa	4	3½	77	3	
	Dungog	Dungog	3	3½	55	1	
	Gosford	Gosford	3	3	67	.....
	Maitland	Maitland	5	4½	52	.....
	Muswellbrook.....	Denman	2	2	32	2	
	Muswellbrook.....	Muswellbrook.....	4	6½	108	3	
	Newcastle	Newcastle	3	2½	34	.....
	Paterson	Gresford	1	1	19	1	
	Paterson	Paterson	2	1	20	1	
	Raymond Terrace	Raymond Terrace	3	1½	22	.....
	Scone	Scone	4	10½	263	12	
	Singleton.....	Singleton	4	5½	97	2	
	Stroud.....	Gloucester	3	3½	87	10	
	Stroud.....	Stroud	2	1½	35	5	
	Taree	Coopernook	Coopernook	2	1½	20
		Forster	Forster	2	1½	34
		Taree	Taree	3	3	51	3
Wingham		Wingham	3	2½	36	.....
Woolombi		Woolombi	3	x	45	3	
Moree		Bungara	Bungara.....	3	6½	188	26
		Moree	Moree	6	19½	412	54
		Warialda.....	Warialda	4	9½	255	34
		Walgett and Walgett North	Walgett	3	9	255	53
		Walgett	Collarenebri	3	4	103	13
Orange	Bathurst.....	Bathurst	4	10	208	.....
	Oberon	Oberon	3	2	36	.....
	Carcoar	Carcoar	Carcoar	4	5½	91	1
		Trunkay	Trunkay	4	7	111	6
		Tuena	Tuena	3	6½	119	3
	Cowra	Cowra	Cowra	4	11	161	4
		Lithgow	Lithgow	4	8½	139	4
	Molong	Oberon	Oberon	3	3½	65
		Katoomba.....	Katoomba.....	1	1	13
		Molong	Molong	5	6	111	4
		Cummoek	Cummoek	4	11½	222	2
		Cudal	Cudal	2	4	50
		Canowindra	Canowindra	3	5½	100	2
		Forbes	Forbes	1	4	8
		Mudgee	Mudgee.....	4	14	371	2
		Orange	Orange	6	5	76	4
		Rylstone	Rylstone	4	8	205	3
	Wellington.....	Wellington	4	11½	221	3	
	Sydney	Campbelltown	Campbelltown	5	3	48
		Kiama	Kiama	2	1½	5
Liverpool		Liverpool	2	1½	4	.....
Metropolitan		Sydney	7	12	74	6	
Nowra		Nowra	5	3½	74	9	
Parramatta.....		Parramatta	6	4	38	3	
Penrith		Penrith	5	2½	21	2	
Pieton		Pieton	7	7½	234	12	
Windsor		Windsor	7	8	138	20	
Tamworth		Coonabarabran	Coonabarabran.....	5	10	244	3
	Gunnedah	Boggabri	4	4	63	2	
	Gunnedah	Gunnedah.....	6	9½	141	11	
	Tambar Springs	Tambar Springs	1	1	24	.....
	Murrurundi	Murrurundi	3	3	37	2	
	Quirindi	Quirindi	4	4	125	2	
	Narrabri	Narrabri	7	14	348	24	
	Pilliga	Pilliga	3	2½	93	.....
	Wee Wee.....	Wee Wee.....	3	2	55	3	
	Tamworth	Barraba.....	5	5	125	3	
Tamworth	Manilla	5	5	137	8		
Wagga Wagga	Tamworth.....	Tamworth.....	16	29½	693	18	
	Albury	Albury	4	7	64	11	
	Germanton	Germanton	4	5	83	4	
	Cootamundra and Coota- muntra Central.....	Cootamundra	4	12	139	17	
	Corowa	Temora	4	12	138	15	
	Corowa	Corowa	4	5	23	3	
	Gundagai	Mulwala	4	7	53	5	
Gundagai	Gundagai	4	19	267	49		

SCHEDULE LXXVIII—continued.

Land Board District.	Land District.	Place of Meeting.	Number of Courts held.	Duration of Sittings.	Number of Cases dealt with.	Number of Cases adjourned.
Wagga Wagga—continued	Narrandera.....	Narrandera	5	days. 17½	135	27
	Tumbarumba and Tumbarumba North } Tumut.....	Tumbarumba	4	18	196	8
	Urana.....	Urana	4	17	183	30
	Wagga Wagga	Wagga Wagga	4	14	117	15
			5	21	196	25
		Total.....		668	1,236½	21,436	1,970
SUMMARY.						
	Armidale Land Board District		80	127½	2,899	188
	Bourke		22	144½	701	102
	Cooma		65	80½	1,767	74
	Dubbo		29	51½	1,578	396
	Forbes		27	49	1,024	86
	Goulburn		93	115	1,816	323
	Grafton		26	55½	1,169	85
	Hay		22	80	1,195	107
	Maitland		64	72½	1,437	54
	Moree		19	48½	1,208	180
	Orange		63	124½	2,297	38
	Sydney		46	43½	686	52
	Tamworth		62	89½	2,085	76
	Wagga Wagga		50	154½	1,594	209
			668	1,236½	21,436	1,970

SCHEDULE LXXIX.

RETURN showing the Number of Instructions issued to, and Reports received from, Inspectors regarding Conditional Purchases, Conditional Leases, Homestead Leases, or Miscellaneous Leases during the year 1895.

Land Board District.	Land District.	Name of Inspector.	No. of instructions issued to Inspectors to report on C.P's., C.L's., H.L's., or Misc. L's.				No. of C.P's., C.L's., H.L's., or Misc. L's visited and reported on by Inspector.					
			Under Re-pealed Acts. C.P's.	Under Existing Acts.				Under Re-pealed Acts. C.P's.	Under Existing Acts.			
				C.P's.	C.L's.	H.L's.	Misc. L's.		C.P's.	C.L's.	H.L's.	Misc. L's.
Armidale ...	Armidale	G. Silcock .....	..	379	290	..	27	..	379	292	..	29
	Do .....		..	1	..	..	..	..	1	..	..	..
	Glen Innes	J. B. Wisdom ...	25	97	54	..	19	25	101	57	..	18
	Inverell		9	183	123	..	35	7	176	128	..	35
	Tenterfield		5	72	23	..	77	..	7	4	..	51
	Do	Bishop Lyne.....	..	58	31	..	16	..	107	49	..	37
	Walcha	G. Silcock .....	..	169	124	..	3	..	175	123	..	2
	Port Macquarie (Grafton L.B.D.)	do .....	..	4	2	..	3	..	2	1	..	3
	Total		39	962	647	..	180	32	948	654	..	175
Bourke	Bourke	E. B. Barton	2	3	12	143	5	..	5	18	157	7
	Do	W. Webster .....	..	..	..	7	..	..	..	6	..	..
	Brewarrina	E. B. Barton .....	..	2	9	32	5	..	2	20	36	8
	Do East	do .....	..	27	22	..	..	..	24	24	..	..
	Cobar	do	1	1	1	18	4	1	..	..	21	4
	Wilcannia	W. Webster .....	..	..	12	60	11	..	..	6	38	15
	Willyama	do .....	..	..	1	55	18	..	..	8	34	14
	Total		3	33	57	315	43	1	31	76	292	48
Cooma	Bega	W. G. Evans	1	36	6	..	..	1	57	7	..	1
	Bombala	do	2	108	33	..	..	2	189	67	..	..
	Braidwood	W. A. Manton .....	..	58	33	..	3	..	85	46	..	4
	Cooma	W. Spicer	6	233	128	..	..	5	290	206	..	..
	Do	W. A. Manton	1	43	31	..	..	1	57	37	..	..
	Do	J. C. Martin .....	..	64	46	..	..	..	67	50	..	..
	Rden	W. G. Evans	1	42	15	..	..	1	61	18	..	..
	Milton	W. A. Manton .....	..	23	4	..	..	..	31	5	..	..
	Moruya	do .....	..	89	17	..	3	..	107	16	..	4
	Queanbeyan	J. C. Martin	1	128	79	..	..	1	152	103	..	..
Do	W. A. Manton	1	43	18	..	..	..	..	..	..	..
	Total		13	867	410	..	6	11	1,046	555	..	9

SCHEDULE LXXIX—continued.

Land Board District.	Land District.	Name of Inspector.	No. of instructions issued to Inspectors to report on C.P's, C.L's, H.L's, or Misc. L's.				No. of C.P's, C.L's, H.L's, or Misc. L's visited and reported on by Inspector.					
			Under Re-pealed Acts. C.P's.	Under Existing Acts.			Under Re-pealed Acts. C.P's.	Under Existing Acts.				
				C.P's.	C.L's.	H.L's.		Misc. L's.	C.P's.	C.L's.	H.L's.	Misc. L's.
Dubbo	Coonamble	E. H. Taylor .....	...	139	137	...	3	...	111	98	...	3
	Dubbo	R. Sim, junr. ....	...	151	116	...	15	...	92	69	...	12
	Nyngan .....		...	77	73	...	2	...	65	65	...	3
	Warren	E. H. Taylor .....	...	78	39	...	...	...	61	31	...	...
	Do .....		...	14	13	...	...	...	3	6	...	...
	Total .....		...	459	378	...	20	...	332	269	...	18
Forbes	Barmedman, Bar-medman East.	H. E. Vindin .....	...	207	96	...	14	...	172	111	...	11
	Condobolin .....		...	82	63	...	14	...	106	96	...	...
	Do	R. W. Gaden .....	...	146	104	...	19	...	108	59	...	5
	Forbes .....		...	217	17	...	19	...	179	16	...	10
	Grenfell	H. E. Vindin .....	...	64	19	...	10	...	73	31	...	8
	Do .....		...	15	6	...	3	...	8	4	...	...
	Parkes	R. W. Gaden .....	...	129	46	...	14	...	133	58	...	10
	Total .....		...	860	350	...	93	...	779	370	...	44
Goulburn ...	Boorowa	J. C. Page .....	...	162	61	...	...	...	213	107	...	...
	Goulburn	C. Cropper .....	...	164	89	...	...	...	111	55	...	...
	Do	G. Harrison .....	...	42	22	...	...	...	38	15	...	...
	Gunning .....		...	80	49	...	...	...	126	69	...	...
	Moss Vale	C. Cropper .....	...	59	17	...	...	...	61	12	...	...
	Yass	G. Harrison .....	...	64	37	...	...	...	91	61	...	...
	Young	J. C. Page .....	...	211	23	...	18	...	239	32	...	18
	Total .....		...	782	293	...	18	...	879	351	...	18
Grafton ...	Bellingen	T. H. Wilshire	11	122	16	...	2	11	116	18	...	2
	Casino	G. W. West .....	...	158	22	...	25	...	188	39	...	27
	Grafton	T. H. Wilshire	11	103	13	...	27	7	110	14	...	22
	Kempsey .....		...	115	14	...	1	...	131	25	...	1
	Lienore	G. W. West	48	97	...	...	...	59	109	1	...	...
	Murwillumbah		24	75	6	...	...	18	75	7	...	...
	Port Macquarie ...	T. H. Wilshire	2	67	6	...	7	1	56	3	...	6
	Total		96	737	77	...	62	96	785	107	...	58
Hay	Balranald	E. S. Russom .....	...	...	...	32	1	...	...	...	36	...
	Do South .....		...	12	2	...	...	...	11	4	...	...
	Deniliquin	M. T. Day .....	...	181	19	...	3	...	228	18	...	1
	Hay .....		...	87	44	...	6	...	100	52	...	6
	Do	E. S. Russom .....	...	34	19	...	...	...	36	35	...	...
	Do North .....		...	...	...	3	9	...	...	...	11	...
	Hillston	D. A. Morgan .....	...	40	19	...	12	...	39	28	...	1
	Do North .....		...	...	...	15	16	...	...	...	29	...
Wentworth .....	...	5	5	26	2	...	...	6	25	...	6	
	Total .....		...	359	108	76	49	...	414	143	101	13
Maitland ...	Cassilis	J. B. Combes	4	5	4	...	...	7	6	3	...	...
	Do	S. C. V. North	3	107	67	...	3	...	177	105	...	1
	Dungog	T. Miller .....	...	17	4	...	...	...	19	8	...	...
	Gosford	J. B. Combes	1	40	1	...	...	1	49	1	...	...
	Maitland .....		...	8	1	...	...	...	7	1	...	...
	Muswellbrook	T. Miller .....	...	39	12	...	2	14	58	10	...	2
	Newcastle		2	10	...	...	1	11	...	...	...	...
	Paterson	J. B. Combes .....	...	9	10	...	...	...	5	6	...	...
	Do .....		...	29	19	...	...	...	23	13	...	...
	Raymond Terrace ..	J. B. Combes .....	...	11	1	...	...	...	...	...	...	...
	Do	T. Miller .....	...	24	...	...	...	...	17	...	...	...
	Seone	S. C. V. North .....	...	117	59	...	2	...	144	72	...	2
	Singleton	J. B. Combes .....	...	37	14	...	1	17	81	44	...	1
	Stroud	T. Miller	4	65	35	...	...	...	64	37	...	...
	Taree		4	148	40	...	1	8	170	49	...	1
Wollombi	J. B. Combes	1	17	4	...	...	5	39	8	...	...
	Total		19	683	271	...	9	53	870	366	...	7

SCHEDULE LXXIX—continued.

Land Board District.	Land District.	Name of Inspector.	No. of Instructions issued to Inspectors to report on C.P's, C.L's, H L's, or Misc. L's.				No. of C.P's, C.L's, H L's, or Misc. L's. visited and reported on by Inspector.					
			Under Re-pealed Acts, C.P's.	Under Existing Acts.				Under Re-pealed Acts, C.P's.	Under Existing Acts.			
				C.P's.	C.L's.	H.L's.	Misc. L's.		C.P's.	C.L's.	H L's.	Misc. L's.
Moree	Bingara	E. C. M'Pherson	47	32	...	5	59	37	...	4		
	Moree	"	133	83	...	2	151	90	...	3		
	Walgett	G. W. Walker	64	41	...	...	66	63	...	...
	" North	"	105	94	...	2	82	68	...	1		
	"	C. J. M'Farland	...	...	38	32	...	...	40	43		
	Warialda	R. C. M'Pherson	76	43	...	2	93	70	...	1		
	Total		425	293	38	124	451	328	40	52		
Orange	Bathurst	J. S. O'Hara	2	103	38	...	8	1	95	36	...	8
	Carcoar	R. Deighton	2	133	72	...	12	...	148	74	...	9
	Cowra	"	...	139	13	...	...	...	133	13	...	...
	Lithgow	J. S. O'Hara	2	141	52	...	...	1	122	44	...	...
	Molong	C. H. Battye	...	228	66	...	6	...	222	80	...	8
	"	R. Deighton	2	88	27	...	2	2	29	7	...	1
	"	G. H. Langley	2	91	30	...	...	...	30	8	...	...
	Mudgee	"	...	153	42	...	33	...	134	41	...	35
	Orange	C. H. Battye	...	17	15	...	1	...	4	2	...	...
	"	R. Deighton	...	1	1	...	...	...	1	1	...	...
	"	J. S. O'Hara	...	4	1	...	...	...	4	1	...	...
	Rylstone	G. H. Langley	...	89	32	...	5	...	96	30	...	6
	Wellington	"	...	74	44	...	2	...	95	48	...	3
	Total		10	1,231	433	...	69	4	1,118	394	...	70
Sydney	Campbelltown	James B. Brown	...	19	...	...	...	...	28	...	...	...
	Metropolitan	"	...	2	...	...	...	...	1	...	...	...
	Nowra	"	...	10	1	...	...	...	...	...	...	...
	"	S. F. von Arnheim	...	36	4	...	...	...	36	4	...	...
	Parramatta	James B. Brown	...	19	...	...	...	...	25	...	...	...
	Penrith	"	...	16	...	...	...	...	19	...	...	...
	Picton	"	...	88	20	...	...	...	138	30	...	...
	Windsor	"	...	105	1	...	...	...	137	1	...	...
	Total		...	295	26	...	...	...	384	35	...	...
Tamworth	Coonabarrabran	J. W. G. Cox	...	26	25	...	1	...	23	23	...	7
	"	H. Lyne	1	53	28	...	6	...	...	...	...	...
	Gunnedah	J. W. G. Cox	...	25	26	...	...	...	56	39	...	...
	"	B. Lyne	...	20	15	...	...	...	3	4	...	...
	Murrurundi	Sir Wm. Broun, Bart.	1	66	29	...	1	...	37	27	...	...
	"	W. H. Tietkens	...	36	29	...	...	...	...	...	...	...
	Narrabri	J. W. G. Cox	...	126	76	...	1	...	107	70	...	1
	"	B. Lyne	1	81	69	...	4	...	19	22	...	1
	"	Sir Wm. Broun, Bart.	...	146	93	...	6	1	98	67	...	4
	Scone	W. H. Tietkens	...	3	3	...	...	...	3	3	...	...
	"	Sir Wm. Broun, Bart.	...	1	...	...	...	...	1	...	...	...
Tamworth	"	3	415	239	...	16	...	380	229	...	11	
"	W. H. Tietkens	2	132	77	...	4	1	79	47	...	2	
Walgett	Sir Wm. Broun, Bart.	...	11	10	...	...	...	11	10	...	...
	Total		8	1,142	719	...	39	2	917	541	...	26
Wagga Wagga	Albury	J. S. M'Phillamy	9	102	56	...	1	...	91	60	...	1
	Corowa	"	4	24	...	...	19	...	25	1	...	...
	Cootamundra	W. J. Barnes	6	222	38	...	...	...	276	69	...	...
	" Central	"	...	4	4	...	4	...	8	3	...	...
	Gundagai	"	...	1	1	...	...	...	1	1	...	...
	"	F. B. Mulligan	3	118	55	...	14	...	122	66	...	4
	Narrandera	W. H. Tietkens	...	5	...	...	1	...	9	...	...	1
	"	W. J. Barnes	3	62	13	...	9	...	42	10	...	...
	Tumbarumba	J. S. M'Phillamy	6	92	63	...	7	...	76	89	...	5
	" North	"	...	8	4	...	5	...	8	7	...	...
	Tumut	"	1	92	73	...	8	...	57	49	...	4
	"	A. K. Mackenzie	...	...	...	...	...	...	20	27	...	...
Urana	W. H. Tietkens	...	3	...	...	...	...	14	...	...	...
"	W. J. Barnes	...	73	3	...	14	...	54	1	...	...
Wagga Wagga	F. B. Mulligan	20	157	11	...	15	3	145	14	...	15	
	Total		52	953	321	...	97	3	951	397	...	30
	Grand Total		240	9,838	4,388	429	869	202	9,905	4,586	433	568

SCHEDULE LXXX.

RETURN of Applications for Permission to Ringbark for the Year 1895.

Land Board District.	Land District.	Applications made during 1895.						Applications made prior to 1895.			No. outstanding on 31 Dec., 1895.
		No. received.	Area applied for.	Fees lodged.	No. allowed.	Area allowed.	No. disallowed.	No. allowed.	Area allowed.	No. disallowed.	
Armidale	Armidale.....	2	Acres. 3,840	£ s. d. 4 0 0	2	Acres. 3,840	.....	.....	.....	.....	.....
	Glen Innes	1	1,920	2 0 0	.....	.....	.....	.....	.....	.....	1
	Tenterfield	1	1,920	2 0 0	1	1,920	.....	.....	.....	.....	.....
	Walcha	1	1,920	2 0 0	.....	.....	.....	.....	.....	.....	1
Bourke	Bourke	2	12,800	7 0 0	2	12,800	.....	4	168,720	.....	.....
	Brewarrina	5	46,080	19 0 0	5	46,080	.....	1	1,380	.....	.....
	" East.....	1	1,920	2 0 0	.....	.....	1	.....	.....	.....	.....
	Cobar	6	88,310	19 0 0	3	75,280	.....	3	52,480	2	3
Cooma	Wileannia	1	3,840	3 0 0	1	2,560	.....	.....	.....	.....	.....
	Braidwood	1	354½	2 0 0	.....	.....	.....	.....	.....	.....	1
Dubbo	Cooma .....	.....	.....	.....	.....	.....	.....	2	580	.....	.....
	Queanbeyan	1	300	2 0 0	.....	.....	1	.....	.....	.....	.....
	Coonamble	2	7,040	5 0 0	1	1,920	.....	1	1,920	.....	1
	Dubbo	10	53,045	33 0 0	3	18,160	.....	2	5,560	.....	7
Forbes	Nyngan	3	72,823	15 0 0	2	38,823	.....	.....	.....	.....	1
	Warren	3	9,920	8 0 0	.....	.....	.....	.....	.....	.....	3
	Barmedman	4	22,992	13 0 0	1	1,920	.....	.....	.....	.....	3
	Condobolin	5	74,692	19 0 0	1	14,000	.....	.....	.....	.....	4
Goulburn	Forbes	6	8,924	13 0 0	4	5,124	.....	.....	.....	.....	2
	Grenfell .....	.....	.....	.....	.....	.....	.....	3	2,112	.....	.....
	Parkes	3	15,360	10 0 0	1	5,000	.....	.....	.....	.....	2
	Boorowa	1	116	2 0 0	.....	.....	1	.....	.....	.....	.....
Grafton	Goulburn	2	1,540	4 0 0	2	1,540	.....	.....	.....	.....	.....
	Gunning	1	780	2 0 0	1	780	.....	.....	.....	.....	.....
	Young	1	440	2 0 0	1	440	.....	.....	.....	.....	.....
	Port Macquarie	2	2,560	5 0 0	2	2,240	.....	.....	.....	.....	.....
Hay	Balranald	2	30,240	9 0 0	1	20,000	.....	1	2,680	.....	1
	Hillston North	4	59,140	16 0 0	2	15,100	.....	1	10,000	.....	2
Maitland	Wentworth	1	20,000	5 0 0	.....	.....	1	.....	.....	.....	.....
	Cassilis	4	6,464½	9 0 0	1	1,750	.....	1	8,320	.....	3
	Muswellbrook	2	2,650	4 0 0	1	1,920	.....	.....	.....	.....	1
	Seone .....	.....	.....	.....	.....	.....	1	640	.....	.....	.....
Moree	Taree	1	640	2 0 0	1	640	.....	.....	.....	.....	.....
	Bingara .....	.....	.....	.....	.....	.....	1	1,920	.....	.....	2
	Walgett	2	33,000	9 0 0	.....	.....	1	40,000	.....	.....	2
	Walgett North	13	107,820	45 0 0	9	92,640	1	11	71,079	.....	3
Orange	Warialda	2	16,713	8 0 0	1	3,593	.....	.....	.....	.....	1
	Bathurst	2	7,340	6 0 0	1	640	.....	.....	.....	.....	1
	Carcoar	4	12,470	10 0 0	2	10,240	.....	4	3,490	1	2
	Cowra .....	.....	.....	.....	.....	.....	1	800	.....	.....	.....
Tamworth	Lithgow	1	1,920	2 0 0	.....	.....	.....	.....	.....	.....	1
	Molong	2	1,900	4 0 0	.....	.....	.....	2	394	.....	2
	Mudgee	2	972	4 0 0	2	972	.....	2	2,712	.....	.....
	Rylstone	3	1,613	6 0 0	3	1,618	.....	3	1,320	.....	.....
	Wellington	1	2,970	3 0 0	.....	.....	.....	.....	.....	.....	1
	Coonabarrabran	6	26,312	16 0 0	.....	.....	.....	6	15,600	.....	6
Wagga Wagga	Narrabri	4	5,558	8 0 0	1	1,320	.....	1	1,856	.....	3
	Tamworth	1	5,000	3 0 0	.....	.....	.....	1	1,000	.....	1
	Albury .....	.....	.....	.....	.....	.....	1	320	.....	.....	1
	Gundagai	1	352	2 0 0	.....	.....	1	.....	.....	.....	.....
Urana	Narrandera	1	3,020	3 0 0	.....	.....	.....	.....	.....	.....	1
	Urana	1	682½	2 0 0	.....	.....	.....	.....	.....	.....	1
Total		125	780,248½	371 0 0	58	382,890	6	54	394,883	3	64

SCHEDULE LXXXI.

COMPARATIVE Statement of Letters Registered at Head Office during the Years 1894 and 1895.

Branch.	Documents Registered.		Increase.	Decrease.	
	1894.	1895.			
Alienation	12,439	11,270	.....	1,169
Conditional sales	35,888	36,672	784	.....
Conditional leases	12,767	9,724	.....	3,043
Ministerial	12,384	15,192	2,808	.....
Miscellaneous	14,853	16,090	1,237	.....
Miscellaneous leases	9,757	11,854	2,097	.....
Occupation	10,767	14,616	3,849	.....
Rabbit and Labour Settlement	2,222	2,808	586	.....
		111,077	118,226	11,361	4,212
Net Increase, 7,149.					

SCHEDULE LXXXII.

COMPARATIVE Statement of Manuscript Letters, Formal Documents, and Parcels despatched from Head Office during Years 1894 and 1895.

Year.	Manuscript Letters.	Formal Documents, including Printed Letters, Schedules, Executive Council Minutes, Gazette Notices, Books of Reference, and Plans of Roads to Benches of Magistrates.		Parcels.	Totals.
		Printed Letters, Executive Council Minutes, &c.	Schedules.		
1894	20,643	108,318	831	15,271	145,063
1895	21,185	107,064	793	18,775	147,817
Increase	542	.....	.....	3,504	2,754
Decrease .....	.....	1,254	38	.....	.....
Telegrams sent during 1894					1,360
Telegrams sent during 1895					2,006
Increase					646
Circulars sent during 1894					126
Circulars sent during 1895					145
Increase					19

SCHEDULE LXXXIII.

SHOWING number of Letters and Documents received at and despatched from the Head Offices of the Local Land Boards during the year ending 31st December, 1895.

Land Board District.	Received	Despatched.			Total No. Despatched.
	No of Letters and Circulars.	Manuscript Letters.	Formal Documents (Partly printed and partly manuscript)	Parcels (Including Maps, &c.)	
Armidale	13,073	900	6,535	160	7,645
Bourke	4,691	360	2,255	146	2,761
Cooma	8,765	1,932	7,543	284	9,759
Dubbo	8,551	976	5,089	128	6,193
Forbes	7,384	813	6,025	631	7,469
Goulburn	6,874	556	6,173	509	7,238
Grafton	7,552	1,230	4,950	576	6,756
Hay	6,347	867	3,572	275	4,714
Maitland	10,351	974	9,918	567	11,459
Moree	5,989	771	4,535	296	5,602
Orange	13,538	1,384	15,967	251	17,602
Sydney	3,018	339	2,086	.....	2,425
Tamworth	11,345	2,369	11,239	554	14,162
Wagga Wagga	12,884	1,408	8,602	688	10,698
Totals	120,362	14,379	94,539	5,065	114,483

SCHEDULE LXXXIV.

APPROXIMATE Statement of Area of Land Alienated and Unalienated in the Colony on 31st December, 1895.

	acres.
1. Area alienated in all forms prior to 1862	7,146,579
2. Area alienated by auction and after auction selection from 1st January, 1862, to 31st December, 1895	11,011,438
3. Area alienated by improvement and special purchase during the same period	2,797,683
4. Area alienated by conditional purchase during same period for which deeds have issued	2,648,330
5. Area alienated by all other forms during same period, including lands dedicated	955,388
Area alienated up to 31st December, 1895	24,559,418
6. Estimated area of unalienated land in the Colony on 31st December, 1895	171,322,733
Estimated area of Colony	195,882,151
Area under incomplete conditional purchase up to 31st December, 1895, exclusive of forfeitures, lapsings, cancellations, disallowances, and voidances	20,266,062
Area comprised in homestead selections confirmed prior to 31st December, 1895	24,625

RETURN showing Areas under Several Classifications measured by Licensed

Land Board District.	CLASS OF													
	Con- ditional Purchases.	Con- ditional Leases.	Anticipa- tion.	Special Areas.	Country Auction.	Suburban Auction.	Town Auction.	Home- stead Leases.	Special Leases.	Resi- dential Leases.	Special Purchases, &c.	Reserves.	School Sites.	
Armidale	No. 128 Area ... 11,397ac. Cost ... £839 Average.. 1s. 5½d.	No. 126 Area ... 32,636ac. Cost ... £1,279 10s. Average.. 9½d.	No. 110 Area ... 7,700ac. Cost ... £481 15s. Average.. 1s. 3d.	.....	No. 11 Area ... 1,061ac. Cost ... £77 Average.. 1s. 5½d.	.....	No. 3 Area ... 8ac. Cost ... £20 10s. Average.. 51s. 8d.	.....	No. 1 Area ... 320ac. Cost ... £15 15s. Average.. 11½d.	No. 10 Area ... 100ac. Cost ... £35 5s. Average.. 7s. 0½d.	.....	No. 2 Area ... 16ac. Cost ... £6 Average.. 7s. 6d.	No. 5 Area ... 16ac. Cost ... £13 5s. Average.. 10s. 7d.
Bourke	No. 7 Area ... 3,360ac. Cost ... £60 5s. Average.. 4½d.	No. 8 Area ... 12,436ac. Cost ... £101 10s. Average.. 1½d.	No. 40 Area ... 114,869ac. Cost ... £593 Average.. 1½d.	.....	No. 32 Area ... 70ac. Cost ... £16 5s. Average.. 32s. 6d.	.....	.....	No. 31 Area ... 197,791ac. Cost ... £515 15s. Average.. ½d.	No. 9 Area ... 1,003ac. Cost ... £37 Average.. 3½d.	No. 3 Area ... 21ac. Cost ... £3 10s. Average.. 7s. 1d.	.....	No. 4 Area ... 20,782ac. Cost ... £79 10s. Average.. ½d.	No. 1 Area ... 2ac. Cost ... £2 Average.. 20s.
Cooma	No. 39 Area ... 2,513ac. Cost ... £248 15s. Average.. 1s. 11½d.	No. 25 Area ... 4,033ac. Cost ... £268 15s. Average.. 1s. 3½d.	No. 1 Area ... 21ac. Cost ... £11 10s. Average.. 1s. 0½d.	.....	No. 9 Area ... 1,310ac. Cost ... £103 5s. Average.. 1s. 8½d.	.....	No. 37 Area ... 10ac. Cost ... £29 5s. Average.. 58s. 6d.	.....	.....	.....	.....	.....	No. 4 Area ... 21ac. Cost ... £23 Average.. 21s. 10½d.
Dubbo	No. 54 Area ... 6,818ac. Cost ... £283 Average.. 10½d.	No. 31 Area ... 10,401ac. Cost ... £232 Average.. 6½d.	No. 176 Area ... 443,343ac. Cost ... £3,786 10s. Average.. 2d.	No. 61 Area ... 3,123ac. Cost ... £223 15s. Average.. 10½d.	No. 40 Area ... 2,676ac. Cost ... £157 5s. Average.. 1s. 2d.	No. 2 Area ... 217ac. Cost ... £56 Average.. 4s. 8½d.	.....	.....	No. 2 Area ... 15ac. Cost ... £6 5s. Average.. 8s. 4d.	.....	.....	No. 1 Area ... 6ac. Cost ... £1 5s. Average.. 4s. 2d.	No. 2 Area ... 10ac. Cost ... £1 5s. Average.. 9s. 6d.
Forbes	No. 11 Area ... 1,643ac. Cost ... £262 15s. Average.. 8½d.	No. 22 Area ... 9,937ac. Cost ... £184 10s. Average.. 4½d.	No. 90 Area ... 295,730ac. Cost ... £1,918 10s. Average.. 2½d.	No. 21 Area ... 34,653ac. Cost ... £419 5s. Average.. 2½d.	No. 15 Area ... 3,239ac. Cost ... £90 Average.. 9½d.	No. 32 Area ... 71ac. Cost ... £45 Average.. 12s. 8d.	No. 87 Area ... 29ac. Cost ... £56 Average.. 38s. 7½d.	.....	No. 2 Area ... 517ac. Cost ... £18 5s. Average.. 8½d.	No. 1 Area ... 10ac. Cost ... £5 5s. Average.. 10s. 6d.	.....	No. 7 Area ... 792ac. Cost ... £33 5s. Average.. 10d.	No. 8 Area ... 20ac. Cost ... £25 5s. Average.. 33s. 1½d.
Goulburn	No. 51 Area ... 3,597ac. Cost ... £362 15s. Average.. 2s. 0½d.	No. 20 Area ... 3,060ac. Cost ... £221 10s. Average.. 1s 1½d.	No. 13 Area ... 5,472ac. Cost ... £72 5s. Average.. 3½d.	No. 1 Area ... 752ac. Cost ... £73 10s. Average.. 1s. 11½d.	No. 15 Area ... 163ac. Cost ... £48 Average.. 5s. 8½d.	No. 5 Area ... 13ac. Cost ... £10 10s. Average.. 16s. 1½d.	No. 10 Area ... 4ac. Cost ... £12 Average.. 60s.	No. 1 Area ... 10ac. Cost ... £4 5s. Average.. 8s. 6d.	No. 1 Area ... 24ac. Cost ... £3 10s. Average.. 23s.	No. 2 Area ... 36ac. Cost ... £6 15s. Average.. 3s. 9d.	No. 6 Area ... 26ac. Cost ... £21 5s. Average.. 16s. 4½d.
Grafton	No. 56 Area ... 2,531ac. Cost ... £323 10s. Average.. 2s. 7½d.	No. 8 Area ... 1,201ac. Cost ... £97 Average.. 1s. 7½d.	.....	No. 53 Area ... 7,601ac. Cost ... £507 Average.. 1s. 3½d.	No. 7 Area ... 670ac. Cost ... £80 15s. Average.. 2s 4½d.	No. 16 Area ... 16ac. Cost ... £35 10s. Average.. 48s. 1½d.	No. 2 Area ... 3ac. Cost ... £4 15s. Average.. 190s.	.....	No. 5 Area ... 232ac. Cost ... £19 10s. Average.. 2s. 10d.	No. 1 Area ... 10ac. Cost ... £4 Average.. 8s.	.....	No. 1 Area ... 8ac. Cost ... £6 15s. Average.. 16s. 10½d.	No. 7 Area ... 39ac. Cost ... £43 5s. Average.. 22s 2½d.
Hay	No. 17 Area ... 3,738ac. Cost ... £39 15s. Average.. 5½d.	No. 13 Area ... 9,321ac. Cost ... £138 10s. Average.. 2½d.	No. 38,854ac. Cost ... £429 10s. Average.. 2½d.	.....	No. 76 Area ... 8,421ac. Cost ... £153 Average.. 4½d.	.....	.....	No. 1 Area ... 5,795ac. Cost ... £57 15s. Average.. 2½d.	.....	.....	.....	.....	No. 3 Area ... 10ac. Cost ... £6 15s. Average.. 13s. 6d.
Maitland	No. 72 Area ... 5,372ac. Cost ... £521 15s. Average.. 1s. 11½d.	No. 55 Area ... 9,619ac. Cost ... £448 15s. Average.. 11½d.	No. 200 Area ... 25,274ac. Cost ... £1,286 10s. Average.. 1s 0½d.	.....	No. 2 Area ... 415ac. Cost ... £12 15s. Average.. 7½d.	No. 1 Area ... 13ac. Cost ... £2 Average.. 26s. 8d.	.....	.....	No. 4 Area ... 1ac. Cost ... £6 15s. Average.. 135s.	.....	.....	No. 19 Area ... 615ac. Cost ... £32 15s. Average.. 2s. 8½d.	No. 4 Area ... 4ac. Cost ... £6 Average.. 30s.
Moree	No. 97 Area ... 26,827ac. Cost ... £370 10s. Average.. 7½d.	No. 92 Area ... 66,197ac. Cost ... £1,214 10s. Average.. 4½d.	No. 160 Area ... 271,310ac. Cost ... £2,711 10s. Average.. 2½d.	No. 1 Area ... 427ac. Cost ... £10 10s. Average.. 5½d.	No. 5 Area ... 1,935ac. Cost ... £41 Average.. 6d.	.....	No. 176 Area ... 73ac. Cost ... £125 Average.. 32s. 0½d.	No. 3 Area ... 3,653ac. Cost ... £35 Average.. 2½d.	No. 5 Area ... 527ac. Cost ... £33 10s. Average.. 1s. 3½d.	No. 1 Area ... 10ac. Cost ... £4 Average.. 8s.	.....	No. 6 Area ... 3,341ac. Cost ... £82 15s. Average.. 5½d.	No. 4 Area ... 14ac. Cost ... £10 Average.. 14s. 3½d.
Orange	No. 190 Area ... 14,118ac. Cost ... £950 15s. Average.. 1s. 4½d.	No. 111 Area ... 33,296ac. Cost ... £1,236 15s. Average.. 8½d.	No. 53 Area ... 6,781ac. Cost ... £382 15s. Average.. 1s. 1½d.	No. 7 Area ... 3,851ac. Cost ... £95 10s. Average.. 1s. 0½d.	No. 88 Area ... 1,003ac. Cost ... £185 10s. Average.. 3s. 10½d.	No. 6 Area ... 13ac. Cost ... £14 10s. Average.. 22s. 3½d.	No. 5 Area ... 13ac. Cost ... £5 5s. Average.. 70s.	.....	No. 1 Area ... 3½ac. Cost ... £3 5s. Average.. 20s.	No. 3 Area ... 71ac. Cost ... £39 10s. Average.. 11s. 1½d.	.....	No. 3 Area ... 63ac. Cost ... £11 10s. Average.. 3s. 7½d.	No. 6 Area ... 21ac. Cost ... £18 10s. Average.. 17s. 7½d.
Sydney	No. 30 Area ... 2,285ac. Cost ... £306 10s. Average.. 2s. 8½d.	No. 15 Area ... 5,178ac. Cost ... £272 Average.. 1s 0½d.	No. 118 Area ... 3,177ac. Cost ... £353 Average.. 1s. 5d.	No. 41 Area ... 4,613ac. Cost ... £354 Average.. 1s 6½d.	No. 143 Area ... 2,643ac. Cost ... £154 15s. Average.. 3s. 4½d.	No. 43 Area ... 483ac. Cost ... £114 Average.. 4s. 8½d.	No. 22 Area ... 34ac. Cost ... £29 5s. Average.. 167s. 1½d.	No. 1 Area ... 23ac. Cost ... £9 Average.. 6s. 5d.	No. 4 Area ... 74ac. Cost ... £21 5s. Average.. 5s. 8½d.	No. 1 Area ... 2ac. Cost ... £3 10s. Average.. 35s.
Tamworth	No. 168 Area ... 35,667ac. Cost ... £1,291 10s. Average.. 8½d.	No. 134 Area ... 70,660ac. Cost ... £1,706 15s. Average.. 5½d.	No. 182 Area ... 249,501ac. Cost ... £2,829 10s. Average.. 2½d.	No. 10 Area ... 478ac. Cost ... £48 Average.. 2s.	No. 13 Area ... 1,587ac. Cost ... £95 15s. Average.. 1s. 2½d.	No. 2 Area ... 22ac. Cost ... £7 5s. Average.. 6s. 7½d.	No. 37 Area ... 13ac. Cost ... £24 5s. Average.. 26s. 11½d.	No. 6 Area ... 1,070ac. Cost ... £57 5s. Average.. 1s 0½d.	No. 1 Area ... 14ac. Cost ... £3 10s. Average.. 33s 4d.	No. 9 Area ... 599ac. Cost ... £36 5s. Average.. 1s. 3d.	No. 2 Area ... 4ac. Cost ... £4 10s. Average.. 21s. 6d.
Wagga Wagga	No. 37 Area ... 5,077ac. Cost ... £257 15s. Average.. 8½d.	No. 9 Area ... 3,423ac. Cost ... £75 5s. Average.. 5½d.	No. 256 Area ... 77,549ac. Cost ... £1,835 15s. Average.. 5½d.	.....	No. 8 Area ... 654ac. Cost ... £49 Average.. 1s. 5½d.	No. 10 Area ... 39ac. Cost ... £21 Average.. 10s 9½d.	No. 80 Area ... 31ac. Cost ... £47 5s. Average.. 30s. 5½d.	.....	No. 2 Area ... 68ac. Cost ... £10 Average.. 2s. 11½d.	No. 6 Area ... 53ac. Cost ... £17 5s. Average.. 6s. 6d.	.....	No. 2 Area ... 111ac. Cost ... £7 10s. Average.. 1s. 4½d.	No. 8 Area ... 3ac. Cost ... £33 10s. Average.. 13s. 9½d.
Total No.....	567	687	1,429	195	494	117	415	35	37	31	3	60	61	
Total Area	127,875ac.	272,436ac.	1,454,897	54,490ac.	25,463ac.	910ac.	181ac.	190,149ac.	3,753ac.	288ac.	32ac.	26,417ac.	223ac.	
Total Cost	£6,682 10s.	£7,517 5s.	£16,922	£1,701 10s.	£1,574 5s.	£310 15s.	£333 10s.	£803 10s.	£207 10s.	£118	£15	£375 10s.	£206 10s.	
Average per Acre	10½d.	6½d.	2½d.	7½d.	1s. 2½d.	6s. 9½d.	£1 18s. 5d.	½d.	1s. 1½d.	8s. 2½d.	9s. 4½d.	3½d.	18s. 5½d.	

LXXXV.

Surveyors on Fees during the year 1895 in New South Wales.

MEASUREMENT.

Ceme- teries.	Miscel- laneous.	Exchange Areas.	*Home- stead Selection.	*Settle- ment Lease.	Total for 1895.	Total for 1894.		Roads, Wm. IV, No. 11.	Align- ments.	Feature, Geo- graphical.	Ben- daries, Pastoral Holdings.	Miscel- laneous.	Total for 1895.	Total for 1894.
1 13ac. £16 25s. 7½d.	2 32ac. £13 8s. 1½d.	1 7ac. £2 5s. 6s. 5d.	69 2,693ac. £2543/5 1s. 10½d.	.....	400 51,366ac. £2,799 5s. 1s. 0½d.	398 57,516ac. £2,908 1s. 0½d.	No. Length Cost Average	9 1,796chs. £110 10s. 1s. 2½d.	.....	6 8,688chs. £274 10s. 7½d.	.....	2 437chs. £13 5s. 7½d.	17 10,925chs. £338 5s. 8½d.	23 6,563chs. £278 15s. 10½d.
.....	7 4,185ac. £94 5½d.	1 4,830ac. £238 10s. 1½d.	22 15,883ac. £3203 4s. 3d.	28 100,371ac. £382/11/5 ¼d.	152 342,242ac. £1,556 5s. 1d.	231 378,316ac. £1,823 5s. 1½d.	No. Length Cost Average	8 8,700chs. £362 15s. 10d.	.....	.....	2 2,898chs. £102 8½d.	8 5,427chs. £251 10s. 7½d.	15 17,025chs. £551 10s. 7½d.	13 8,851chs. £288 15s. 8d.
.....	4 2ac. £9 15s. 97s. 6d.	.....	.....	.....	110 8,007ac. £694 5s. 1s. 8½d.	417 45,510ac. £3,219 10s. 1s. 5d.	No. Length Cost Average	1 93chs. £7 10s. 1s. 7½d.	.....	.....	2 353chs. £15 5s. 10½d.	3 446chs. £25 10s. 1s. 0½d.	6 403chs. £21 5s. 1s. 0½d.	.....
.....	2 11ac. £8 10s. 15s. 5½d.	24 8,162ac. £239 32s.	24 8,533ac. £270/13/11 7½d.	158 425,224ac. £3,659/8/6 2d.	396 476,213ac. £5,057 5s. 2½d.	514 62,432ac. £2,010 10s. 7½d.	No. Length Cost Average	2 910chs. £61 1s. 4d.	.....	.....	.....	2 2,405chs. £17 5s. 1½d.	10 3,215chs. £80 5s. 5½d.	10 3,941chs. £251 10s. 1s. 3½d.
.....	6 44ac. £9 15s. 45s. 10½d.	4 933ac. £35 1s. 2½d.	39 22,950ac. £332/10/4 4d.	127 206,690ac. £1,671/2/8 1½d.	256 237,629ac. £3,125 15s. 2½d.	317 88,180ac. £2,108 5s. 6d.	No. Length Cost Average	6 3,166chs. £178 1s. 1d.	.....	.....	.....	.....	6 3,166chs. £178 1s. 1d.	12 9,644chs. £474 15s. 11½d.
.....	1 1ac. £4 15s. 95s.	.....	13 752ac. £73/8/8 1s. 10½d.	5 5,229ac. £36 7/10 1½d.	172 14,041ac. £844 1s. 2½d.	204 22,862ac. £1,577 10s. 1s. 4½d.	No. Length Cost Average .....	.....	.....	1 127chs. £5 10s. 10½d.	.....	.....	1 127chs. £5 10s. 10½d.	1 162chs. £11 10s. 1s. 6d.
.....	1 21ac. £16 15s. 15s. 11½d.	3 679ac. £20 7d.	29 5,507ac. £46/8/4 10½d.	.....	139 12,987ac. £1,150 1s. 9½d.	292 10,195ac. £1,365 2s. 8½d.	No. Length Cost Average	29 1,216chs. £476 10s. 2s. 8½d.	.....	.....	.....	2 97chs. £4 5s. 10½d.	31 4,313chs. £480 15s. 2s. 2½d.	17 3,951chs. £485 5s. 2s. 2½d.
.....	.....	5 23,058ac. £74 5s. ¼d.	38 45,433ac. £217 15s. ¼d.	.....	114 131,290ac. £1,425 5s. 2½d.	109 73,108ac. £951 5s. 3½d.	No. Length Cost Average .....	.....	.....	1 1,215chs. £40 7½d.	.....	.....	1 1,215chs. £40 7½d.	3 1,128chs. £51 5s. 11½d.
.....	2 10ac. £21 10s. 25s. 10½d.	3 173ac. £8 10s. 11½d.	178 20,908ac. £1,022/8/2 11½d.	.....	360 41,519ac. £2,397 5s. 1s. 1½d.	619 59,206ac. £3,738 5s. 1s. 3½d.	No. Length Cost Average	16 6,584chs. £430 15s. 1s. 8½d.	.....	9 3,915chs. £149 15s. 9½d.	1 67chs. £6 10s. 1s. 11½d.	3 178chs. £8 15s. 11½d.	29 10,744chs. £593 15s. 1s. 1½d.	28 5,613chs. £500 10s. 1s. 3½d.
.....	2 21ac. £17 10s. 16s. 8d.	4 25,070ac. £161 10s. 1½d.	43 27,653ac. £422/11/8 3½d.	106 251,573ac. £3,320/19/2 2½d.	600 416,924ac. £5,729 4½d.	325 188,299ac. £3,466 15s. 4½d.	No. Length Cost Average	3 573chs. £47 5s. 1s. 4½d.	.....	1 200chs. £4 10s. 5½d.	.....	2 537chs. £28 10s. 1s. 0½d.	6 1,270chs. £76 5s. 1s. 1½d.	11 2,970chs. £319 15s. 1s.
.....	1 1ac. £2 5s. 45s.	5 1½ac. £7 5s. 96s. 8d.	61 4,397ac. £256/18/11 1s. 2d.	.....	424 56,221ac. £2,960 5s. 1s. 0½d.	527 76,257ac. £3,529 15s. 11d.	No. Length Cost Average .....	.....	.....	3 407chs. £16 10s. 8½d.	.....	4 354chs. £16 5s. 11d.	7 821chs. £32 15s. 9½d.	46 8,969chs. £45 15s. 1s.
.....	.....	1 10ac. £7 14s.	44 1,551ac. £139/17/2 2s. 8½d.	.....	419 23,482ac. £2,154 5s. 1s. 10d.	252 17,074ac. £2,238 2s. 5½d.	No. Length Cost Average	12 955chs. £87 15s. 1s. 10d.	5 1,000chs. £165 10s. 3s. 2½d.	2 152chs. £13 1s. 8d.	.....	1 91chs. £7 10s. 1s. 7½d.	21 2,168chs. £273 15s. 2s. 5½d.	12 862chs. £69 15s. 1s. 7½d.
.....	1 1ac. £4 10s. 17s. 6d.	6 93ac. £16 10s. 3s. 4d.	65 22,754ac. £562 15s. 5½d.	46 14,071ac. £356 10s. 5½d.	07 217,796ac. £2,015 2½d.	593 382,449ac. £4,966 10s. 6½d.	No. Length Cost Average	5 1,043chs. £66 5s. 1s. 3½d.	.....	.....	2 768chs. £27 10s. 8½d.	5 1,231chs. £40 15s. 7½d.	12 3,092chs. £113 10s. 10½d.	18 3,983chs. £186 5s. 1s. 1½d.
.....	1 1ac. £17 240s.	4 3½ac. £7 15s. 47s. 8½d.	62 28,413ac. £655 15s. 5½d.	125 20,374ac. £747-11/8 6d.	2 9,536ac. £46 11/7 1d.	772 116,256ac. £3,924 15s. 6½d.	No. Length Cost Average	8 1,159chs. £84 1s. 5½d.	.....	.....	.....	1 54chs. £3 1s. 1½d.	9 1,213chs. £87 1s. 5½d.	15 1,655chs. £122 1s. 5½d.
.....	11 88ac. £103 £1 3s. 6½d.	53 53,313ac. £2,409 15s. 1½d.	239 126,163ac. £4,417/11/6 6½d.	653 154,738ac. £10,142/1/2 4d.	523 2,386,186ac. £39,549 10s. 4d.	5,754 1,391,170ac. £37,549 6½d.	Total No. Total Length Total Cost Average ½ chain	99 20,185chs. £1,899 5s. 1s. 3½d.	5 1,000chs. £165 10s. 3s. 2½d.	23 14,764chs. £508 15s. 8½d.	5 3,733chs. £436 8½d.	38 11,214chs. £241 10s. 5½d.	170 59,896chs. £2,946 11½d.	215 57,395chs. £3,138 1s. 1½d.

* Included in anticipation.

Report of The Chief Surveyor to The Under Secretary for Lands.

Sir, Department of Lands, Survey Branch, Sydney, 15 January, 1896.

I have the honor to submit the Annual Report of the services performed in this branch of the Department of Lands during the year 1895.

Permanent Field Staff.

The permanent field staff numbered 63 officers, who were classified as follows, viz., 14 district surveyors, 12 first-class surveyors, 3 second-class surveyors, 15 third-class surveyors, 11 fourth-class surveyors, and 8 assistant surveyors. Of this staff, 3 surveyors and 8 assistant surveyors who had previously been temporarily employed, were appointed to the permanent staff during the year.

Surveyors temporarily on salary.

Four licensed surveyors have been employed temporarily on salary, 2 of whom were appointed for specific periods only.

Assistant Surveyors.

Twelve junior licensed surveyors have been employed as assistant surveyors, 4 of them on temporary service.

Contract Surveyors.

Ninety-one licensed surveyors have been employed on fees in carrying out surveys under contract; to many this employment was not of continuous character, a small number only having been fully engaged. The number of qualified surveyors for New South Wales is 633.

Inspection of contract surveys.

There have been 66 examinations of surveys performed under contract; and it is gratifying to report that in 4 cases only were surveys found to be not up to the standard of accuracy insisted upon.

Investigations for Registrar-General.

Thirteen applications for certificates of title under the Real Property Act were referred to this office by the Registrar-General; in 3 cases field inspection was found necessary. After the requisite investigations had been made in each case, the results were communicated to the Registrar-General.

Licenses under the Real Property Act.

The Board appointed for license to survey under the 100th section of the Real Property Act held 4 meetings, and 103 licenses were granted. Three first licenses were issued by myself, acting as Surveyor-General; making a total of 106 issued for the year. The fee of £1 1s. was received in each case, excepting one where a license was asked for by the Public Works Department for a surveyor duly qualified, who was employed on railway surveys.

BOARD OF EXAMINERS FOR LICENSE TO SURVEY CROWN LANDS.

During the year a system of concurrent and identical examination for qualification to survey has been initiated in several of the Australasian Colonies. This is one of the steps towards reciprocity in the professional status of surveyors which was recommended by the Conference of Surveyors (Melbourne, 1892). A system of identical examination, so as to ensure uniformity in the standard of qualification, has been given effect to by collaboration of the representatives of each Board, the Secretary of the Board of this Department, Mr. T. F. Furber, acting as correspondent with the other delegates. The co-operation of those concerned enabled satisfactory arrangements to be made, and on 3rd September examinations, precisely the same in respect to the papers set, the mode of awarding marks, &c., were held at Perth (Western Australia), Adelaide (South Australia), Melbourne (Victoria), Sydney (New South Wales), and Brisbane (Queensland).

Two meetings of this Board were held in July for consideration of certain questions arising in the matter of concurrent examinations.

At the Board meeting held in September 12 candidates presented themselves for examination, of whom 4 passed, viz.:—

Mr. George Laurence Wilkins,
Mr. Robert Derrinall Speed,

Mr. Octavius Lloyd,
Mr. Edmund Woodhouse Hedgeland.

TRIGONOMETRICAL SURVEY.

Mr. Brooks, F.R.A.S., F.R.G.S., the surveyor in charge of field operations, reports that the weather has been much less favourable for observing than during any previous year; bush-fires were very numerous during first and last quarters, and the consequent haze and smoke hung about the mountains for weeks at a time, and then it was only by patient watching and waiting up to sunset that, by slow degrees, any progress was made. Mr. Surveyor Gregson appears to have experienced even worse weather than Mr. Brooks, for, using the same-sized instrument, he obtained during the last quarter less than half the number of observations recorded by the latter.

The 18-inch altazimuth was used at 3 primary stations, viz., Warden Head, Durras, and Newstead, and 1,190 horizontal observations were made. Astronomical observations were made at those stations, and 215 stars were observed for azimuth, 31 stars for time, and 348 stars for latitude.

The 10-inch theodolite was used at 5 stations, viz., Currowan, Burrewarra, Moruya astronomical station, Wandera, and Comerong, the number of horizontal observations being 938. Vertical angles were also measured at these stations, 404 observations being noted. The magnetic declination, as indicated by compass of 6-inch theodolite No. 143, was also determined at these stations. Surveys connecting with neighbouring portions were made at 9 stations, and trigonometrical reserves were measured at 5 of them.

Moruya longitude station having been incorporated with the trigonometrical survey, there are now means for a comparison between the position as determined by astronomical observations and the position resulting from the trigonometrical operations. During the year 1896 a trigonometrical, as well as an astronomical, connection will also be established between Tathra longitude station and Sydney Observatory.

Mr. Surveyor F. J. Gregson has been employed with a 10-inch theodolite observing at 5 stations, viz., Ettrema, Coolumburra, Meangora, Tomboye, and Jillamatong. He measured 2,068 horizontal, 450 vertical, and 802 magnetic observations. He surveyed 14 reserves to include trigonometrical stations, and made 15 surveys connecting stations with adjoining portions, *i.e.*, alienation survey.

The piling overseers, Messrs. J. Healy and R. C. Gordon, formed 20 and 14 new stations respectively in the counties of Auckland and Dampier. Connection surveys were made at each of them; and in addition Mr. Gordon measured 19 reserves, together with 6 connection surveys at stations formed previously to the year 1895.

MISCELLANEOUS MATTERS.

By request of the Government of Queensland, and with approval of the Minister of this Department, careful comparisons have been made between the standard 10-ft. bar used for triangulation in Queensland and the 10-ft. bars which have been provided for like purposes in New South Wales. The matter was the subject of special report, which with full particulars of comparisons was duly communicated through the proper official channel to the Colonial Secretary. Mr. D. M. Maitland, with the assistance of Mr. H. Shute, carried out this duty in a satisfactory manner; and inasmuch as this is a matter of some public interest I have attached in brief form a statement of the results. [Appendix A.] It may be mentioned that advantage was taken of the opportunity to measure and mark on a steel band lengths of 60 feet and 100 feet, which will be used for defining a convenient standard for ready reference in this building, for the adjustment of surveyors' measuring apparatus. Queensland standard bar.

During the year I attended the meetings of the Commission appointed by His Excellency the Governor to divide the unincorporated area of the Colony into municipal districts and shires, with a view to legislation for District Government; and the Commission duly made their report. Local Government Commission.

In the month of August a Board, comprising seven district surveyors, assembled, by direction of the Minister, to consider and report upon the more expedient course of procedure to be taken in respect of certain provisions in the Crown Lands Act of 1895.

TRIGONOMETRICAL COMPUTING BRANCH.

Field-books of angle observations at the following stations have been received, viz., Warden Head, Durras, and Newstead, taken with 18-inch theodolite; and at Ettrema, Coolumburra, Mcangora, Pigeon House, Currowan, Burrewarra, Moruya, Wandera, and Tomboye, taken with 10-inch theodolite. The details of these observations have been reduced and entered in the record books, and the computations generally have been carried as far forward as the progress of the field work would permit.

The rigorous computation of the meridian series of triangles extending southerly from the Lake George base to the border of Victoria, which in the last report was mentioned as having been entered on, has been completed; and examination has been made of the data afforded by the whole triangulation in determining the form of the surface of the area which the triangulation covers. Computation of the spheroid of revolution best conforming to the observed data has been made by the chief computer, and a detailed report on the subject has been prepared.

Field-books of observations of the astronomical latitudes of stations Bherwerre (part), Tianjara, Warden Head, Durras, and Newstead, have been received, as well as of astronomical observations for azimuth at the last four-mentioned stations. The observations of latitude and azimuth at Sutton Forest and Bherwerre, notes of which were received in the preceding year, were reduced, and the calculations of the astronomical work at the other stations are in a forward state.

Proofs of the register of stations of the country triangulation have been revised in this branch in respect to the reference bearings, co-ordinates, and geographical positions of stations.

The usual diagram is attached which shows the scheme of the main triangulation to date.

The large stock of surveying and scientific instruments belonging to the Department was, during the year, removed to a suitable room in the dome, owing to the space in which it had been stored being required for occupation by the Department of Mines, and all repairs necessary to maintaining the instruments in good and serviceable condition have been from time to time effected. Survey instruments.

DETAIL SURVEY FOR SEWERAGE OF SYDNEY AND ENVIRONS AND COUNTRY TOWNS.

Seven surveyors have been engaged on the work throughout the year.

The greater portion of the new work carried out was at Newcastle and neighbourhood; the surveys of that city and suburban municipalities, viz., Hamilton, Wickham, and Carrington, also of the town of Liverpool, and the suburban municipalities of North Sydney and Mosman, have been completed; and the surveys of the town of West Maitland and the municipalities of Merewether and Waratah (Newcastle environs) have been commenced.

The rate of progress of past years has been maintained, a larger number of tenements having been fixed than in the preceding year; but in consequence of the population being more scattered, involving longer traverse surveys, the cost per tenement is somewhat higher.

There have been about 12 miles of standard traverse through Waratah and Lambton, at a lower cost than any preceding survey of similar character.

The area covered by new work has been 2,633 acres, against 1,341 acres in 1894 and 1,975 acres in 1893, while the revision work has embraced 903 acres, against 703 acres in 1894 and 649 acres in 1893.

Estimated on an area basis, the cost of the new work was 14s. 10½d. per acre, against £1 5s. 2d. per acre for 1894 and £1 1s. 8d. in 1893.

In those parts of Sydney and neighbourhood where such extensive building operations have been effected that the published sheets have become obsolete, re-surveys for second editions of the lithographs have been effected. In addition to the new tenements fixed in these revisional surveys, alterations and additions numbering 4,176 have been fixed.

The surveys of 146 sheets of new work have been carried out, in addition to the revision for second edition of 69 sheets, and of 50 sheets prior to the publication of first editions.

The number of separate tenements fixed are: New work, 3,170; in surveys for second editions, 1,166; and in revisions prior to first editions, 305; making a total of 4,641, against 4,290 in 1894, 4,364 in 1893, 3,946 in 1892, &c.

The average number of tenements to each sheet surveyed during the year was: In new work, 21.71; in second edition revision surveys, 16.90; and in revision surveys prior to first publication, 6.10; the averages for 1894 in the same classes of survey being respectively 39.56, 21.67, and 3.62.

Incidental to the surveys during the year, about 64 miles of streets, 17 miles of railways, 3½ miles of tramways, 4½ miles of watercourses, 6½ miles of shore line, &c., have been accurately determined.

Numerous details which cannot be included as tenements have also been fixed; amongst them may be enumerated 7 railway stations, several bridges, a railway viaduct, 3 coal-pits, gas-works at Liverpool and West Maitland, as well as numerous public buildings at both those towns, show-ground with pavilions, General Post Office, &c.

Standard

Standard levels have been taken at Waratah, Lambton, and Liverpool, the latter series being also connected with the Parramatta levels, and consequently with the "plug" at the Lands Office and sea-level in Port Jackson.

Levels have been taken over 71 sheets; they show all important changes in the contour of the surface, the heights of the ground-floor and basement of all tenements, and the altitudes of bench-marks, relatively to mean high-tide; the average cost has been 1s. 7d. per acre, as against 4s. 4d. per acre for similar service in 1894.

By direction of the Under Secretary, assistance has been rendered to the officials employed in the preliminary arrangements for assessment under the Land Tax Act.

With regard to the duties carried out in the office, 2 plans of standard and 104 sheets or plans of detail surveys have been drawn and completed; 54 plans have been revised preparatory to the publication of second editions, and 24 plans have had extra particulars placed upon them prior to first publication.

Tracings of 44 sheets of Sydney and suburbs, and 34 sheets of Newcastle, have been made for lithography; 59 have been brought up to date, and 129 examined.

The plans drawn in 1894 showed 3,548 tenements, with an average of 29.3 per sheet; the work for 1895 showed 3,237, with an average of 31 per sheet. The majority of the Sydney suburban plans show a very considerable proportion of large detached residences, with extensive grounds, the plotting of which occupies much longer time per tenement than in more densely populated localities.

The public, especially surveyors in private practice, have largely availed themselves of the information in the branch, reference having been made by them to 1,600 plans and 318 field-books during the year.

Herewith is a tabular statement [*Appendix B*] showing the comparative cost of detail surveys from 1886 to 1895 inclusive, and 4 maps showing its progress during the year.

MISCELLANEOUS CHARTING BRANCH.

Business incidental to the new forms of tenure under the Crown Lands Act of 1895, viz., homestead selection, settlement lease, and improvement lease, has demanded much attention.

Proposed subdivision in anticipation of demand of the leaseholds in the Central Division have formed an important item in the work done; all leases with extensions up to two years have been reviewed at different stages, and 90 of them have been finally dealt with by notification for various classes of settlement. Action on the remainder is in an advanced stage.

The provision for consolidation of holdings has been applied, under the direction of the Minister, to several of the expiring Central Division leaseholds, and proposals have been formulated in 75 cases; formal applications for surrender and exchange of lands have been lodged in 25 cases.

Applications for surrender and exchange under the Crown Lands Acts of 1889 and 1895 show an increase. Altogether 755 registered papers passed through the branch relating to this class of work.

There has been a slight decrease in the new surveys charted, viz., 3,410 against 3,772 in 1894. The cost to the Department amounted to £200.

Auction work shows a further falling off during 1895. The area scheduled in 1893 being 411,221 acres; 1894, 86,922 acres; and 1895, 51,105 acres.

Progress in connection with the new register of reserves to replace the old books has been somewhat retarded, owing to other more urgent business; however, several of the books have been put into use.

COMPILING BRANCH.

Miscellaneous Division.—This Division is charged with the compilation and drawing of town, county, Colony, and miscellaneous maps; and the charting of feature surveys, connection surveys, new railways, &c.

The preparation of maps for starting the Information Bureau has needed a large amount of service in this branch, and has consequently diminished the usual production of new maps.

The new map of the Colony is nearly completed; the revision of the sheets is now proceeding. A map illustrating progress of the work is herewith.

There are ten new county maps in hand; of most of these the compilation was begun in 1894, viz., Ashburnham, Bathurst, Narromine, Roxburgh, Forbes, Harden, Finch, Leichhardt, Gregory, Dampier. It is expected that several of these maps may be ready for publication in the course of a few months.

There has been but little done in the way of new town maps.

Five Land Board District maps have been completed during the year, viz., Goulburn, Forbes, Wagga Wagga, Hay, and Bourke; and new editions of three other maps, viz., Grafton, Cooma, and Armidale, have been issued; these maps facilitate business in the way of promoting settlement.

Sixty-six plans, comprising 536 miles of feature and connection surveys, and 36 plans of connections to trigonometrical stations, have been charted upon parish and county maps.

There has been a considerable quantity of miscellaneous work done, the list of which is too lengthy to introduce here.

Parish Map Division.—This Division is engaged in compiling new maps of parishes for publication; and in adding to maps already compiled the recent information for new editions. The work for the year comprises 245 new compilations, and standard maps charted for new editions 66.

It may here be mentioned that the whole strength of the Compiling Branches and the Occupation Drafting Branch was applied simultaneously to the colouring of parish maps in office use, in a certain manner, to illustrate lands alienated and Crown lands available for settlement, for the better information of the public; the number of parish maps thus coloured was 4,800.

LITHOGRAPHIC BRANCH.

The publication of plans of areas for settlement under the new forms of tenure authorised by the Crown Lands Act of 1895 has been promptly effected; 177 separate lithographs have been prepared and printed for simultaneous issue with the proclamations.

The bi-chromate gelatine process of lithography has been utilised to advantage; the process dispenses both with the drawing of a special plan on the stone and with a photo-lithographic copy for transfer, thereby saving time and expense.

The following returns show the details of lithographic operations for the year:—

1. *Counties.*

County maps show measured areas, roads, reserves, features, and all other information which is capable of delineation on a scale of 2 miles to an inch; they are published at 5s. per copy.

Sixteen county maps were lithographed during the year, comprising 2,800 printed copies:—

Bourke	Gipps	Hawes*
Bourke*	Gipps*	Macquarie
Camden	Gloucester	Macquarie*
Camden*	Gloucester*	Narromino
Cumberland*	Hawes	St. Vincent.
Cumberland† (1 mile to an inch)		

† Published at 10s. per copy.

Of these maps, those indicated by the asterisk are on the scale of 8 miles to an inch, which are printed for use in this office.

2. *Towns.*

Town maps show the general design, measured lands and names of purchasers thereof, reserves and dedications within town and suburban limits. They are usually photo-lithographed from compilations prepared at this office to the scales of 4 or 8 chains to an inch, and sold at 1s. per copy.

Twenty-eight town maps were lithographed during the year, comprising 2,625 printed copies:—

Armidale	Cudal	Inverell	Tenterfield
Barnedman	Dandaloo	Moree	Tomingley
Bombala	Delegete	Mount Drysdale	Urunga
Boonoo Boonoo	Drysdale West	Murrurundi	Waleba
Byerook	Enngonia	Narrabri	Wariadda
Condoublin	Galargambone	Niangala	Wyalong
Coreen	Grong Grong	Peak Hill	Yalgogrin.

3. *Parishes.*

Parish maps are compiled to a scale of 20 chains to an inch for office use, and then with few exceptions reduced to 40 chains scale for publication and sale at 1s. per copy.

Three hundred and fourteen parishes were lithographed during the year, comprising 25,508 printed copies.

4. *Auction Sale Plans.*

Lithographs of all lands measured for auction are printed for use at auction sales.

Two hundred and sixty-two plans were lithographed during the year, comprising 25,305 printed copies.

5. *Miscellaneous.*

This class of work principally comprised the following items, viz., 124 sheets of detail survey for sewerage purposes, including the Parramatta survey (68 sheets); maps of the Land Board Districts of Bourke, Hay, Maitland, Moree, and Orange; travelling stock routes (8 maps); map of New South Wales railways, showing coach routes, &c.; map of New South Wales, showing stock routes, wells, trucking stations, &c.; map of New South Wales, showing Land Districts, &c., for new edition of Crown Lands Acts; map of the country between Hornsby and George's River, for military purposes; maps (8) to illustrate Annual Report of Department of Lands for 1894; Woronora Cemetery subdivision, 11 maps; 3 sketch maps, showing trigonometrical stations; 2 sketch maps in connection with scrub lands; 76 homestead selection areas; 22 settlement lease areas; 5 improvement lease areas; and 74 leasehold areas in Central Division.

Three hundred and fifty miscellaneous maps were lithographed during the year, comprising 50,095 printed copies.

6. *Other Departments.*

Maps, plans, and diagrams have been printed for the Departments of Chief Secretary, Public Instruction, Public Works, and Treasury, principally comprising maps of New South Wales and Port Jackson for Imperial Institute Year Book, and for the American Consul's report on the wood-blocking of the streets of Sydney; chart of circumpolar stars; 219 Local Government sketch maps; maps showing New South Wales railways and railway systems of Australia; sheet of level-bridge drawings; and map of the City of Sydney on 12-chains scale.

Two hundred and thirty-one maps, plans, and diagrams for other Departments were lithographed during the year, comprising 54,702 printed copies.

7. *Official Forms.*

These forms comprise circulars, decisions, forms, and memoranda required for use at head-quarters and at country offices.

One hundred and twelve official forms were lithographed during the year, comprising 62,850 printed copies.

Comparative

Comparative Summary for 1894 and 1895.

Map, Plan, or Document.	1894.		1895.	
	No. of Separate Maps.	No. of Copies printed.	No. of Separate Maps.	No. of Copies printed.
Counties	12	1,903	16	2,800
Towns	39	3,290	28	2,625
Parishes.....	348	29,387	314	25,508
Auction sale plans	261	19,797	262	23,305
Miscellaneous	106	48,796	350	50,095
Other Departments.....	40	64,641	231	54,702
Official forms	122	67,492	112	62,850
Totals.....	928	235,306	1,313	223,885

The employment of contract draftsmen, on the drawing of sheets of the detail survey for sewerage, is found to be economical, the printing being done in this office.

Lithographic contracts have been completed during the year to the amount of £1,097 0s. 1d.

ROADS BRANCH.

The Roads Branch investigates all applications for survey and opening of roads through alienated land and Crown land held under lease, and considers and advises upon all correspondence relating to roads and streets matters in general, including complaints of obstruction of roads, objections to roads projected, and claims to compensation advanced in consequence of their establishment. When survey has been effected the plans of roads are examined, and all necessary action taken to establish them under the Roads Act, 4th William IV No. 11, or the 42nd section of the Crown Lands Act, 53 Victoria No. 21, and thereafter to chart them upon office plans and maps, and to forward fully noted copies of the plans of survey to the Department of Public Works and to the Registrar-General.

Land Boards' appraisements of compensation consequent on the opening of roads are dealt with, and action taken to grant Crown land or unnecessary roads in lieu of land resumed.

Plans of streets surveyed for alignment in response to the applications of Municipal Councils are examined, and the cases prepared to conform with the requirements of the 128th section of the Municipalities Act. Applications for permission to erect public gates under Act 39 Victoria No. 10 are considered and dealt with; also applications under section 67 of the Crown Lands Act, 48 Victoria No. 18, for purchase of unnecessary roads, receive preliminary consideration, and when purchase has been completed all maps and office plans are noted.

During the year 315 applications for survey of roads and streets were received and dealt with; also 363 surveyors' reports (exclusive of reports transmitting plans of survey); 274 road plans, showing 648 miles of road surveyed; 12 alignment plans, showing 67 streets as marked for alignment of carriage-ways and footways; 32 applications for permission to erect 72 public gates; 53 applications for purchase of 94 unnecessary roads; and 398 objections and claims with regard to road and street surveys.

Three thousand one hundred and fifty-three letters, based upon information afforded by the branch, were written and forwarded in reply to communications and inquiries from members of the public, with regard to roads and street matters. In 128 cases action has been taken to grant Crown land or unnecessary roads in compensation for land resumed under 42nd section of the Crown Lands Act of 1889. There were 6,954 papers registered during the year, which, together with 567 papers relating to roads registered in other branches, make a total of 7,521 papers received and dealt with.

OCCUPATION DRAFTING BRANCH.

The work of this branch has been similar to that of previous years, to which may be added extra miscellaneous work in connection with the Land Bill of 1895. Such work consisted principally in dealing with applications under section 3 for withdrawal of land within leasehold areas for settlement purposes, and in preparing tracings and heliographs of occupation licenses, pastoral leases, and homestead leases for re-appraisal. Applications were received for re-appraisal of fully 90 per cent. of the homestead leases in force in the Colony.

The branch assisted in colouring the parish and county maps in office use in order to more clearly show intending purchasers the land available for settlement.

A map has been prepared for the Public Works Committee showing the tenure of lands within 20 miles on each side of the proposed railway from Parkes to Condobolin. Particulars were also supplied with regard to any conditional purchases or conditional leases within 20 miles on each side of the proposed railway from Temora to Wyalong which have been transferred to the pastoral tenant.

In 1,095 cases the areas of occupation licenses and pastoral leases have been affected by withdrawals or reversions, and the necessary adjustments have been made; in 252 cases it was found expedient to carry out a thorough investigation of the areas under review.

Surveys of pastoral holding boundaries show a considerable falling off, 5 cases only having been dealt with during the year. Thirty-nine miles were surveyed at a cost of £126, of which £39 was collected from the pastoral lessees; and 11 miles common to homestead lease boundaries were surveyed, on account of which the pastoral lessee contributed £11.

Plans of 80 abandoned resumed areas were charted up and forwarded to the respective District Surveyors for report as to the best means of disposal of the vacant lands.

MISCELLANEOUS CONTRACT BRANCH.

The year has been one of active service in this branch. The drawings issued exceed by 1,340 the number issued in the preceding year.

The work of drawing maps for lithographic printing, viz., maps to show lands set apart for settlement under the new forms of tenure of the Crown Lands Act of 1895, was assigned to this branch. To prepare these maps with the requisite expedition, in addition to the ordinary current work, demanded unremitting attention.

A considerable amount of business was involved in receiving, checking, and recording 6,510 maps, forwarded to this office by direction of the Minister from the several district survey offices, for use in preliminary arrangements for assessment for land taxation.

The work of the branch has at all times been well up to date, and at the close of the year all applications that had been received more than a week had been disposed of.

The total number of drawings prepared is 4,106, and the total number of applications dealt with is 1,161.

CORRESPONDENCE AND RECORD BRANCH.

The work performed in this branch is shown hereunder:—

Papers received from other branches and dealt with	...	...	14,522
Papers, plans, tracings, &c., received by post	...	...	2,606
Instructions issued to surveyors	...	...	1,346
Letters written and despatched	...	...	860
Memoranda, tracings, plans, &c., sent to surveyors	...	...	9,554
Minutes written to the Under Secretary	...	...	850
Ministerial decisions noted	...	...	530
Telegrams written and despatched	...	...	103

Registers, in which is recorded all leave taken by the survey staff (field and office), are kept in this branch.

The number of clerks employed is three, one having been transferred to a country office during the year.

PLAN RECORD BRANCH.

Approximate number of plans entered in books at end of year	...	...	271,168
Approximate number issued to and returned from officers in Head Office, Metropolitan District Office, and Mines Department	...	...	163,000
Cancelled maps received	...	...	742
Sent to plan-mounter	...	...	4,985
Issued to Inquiry Branch	...	...	600
Exhibited at counter	...	...	6,000
Surveyors' field-books in custody	...	...	6,600
Auction sale plans received	...	...	111
Plans despatched to District Survey Offices	...	...	15,012
Returned from District Survey Offices	...	...	15,292
Applications from District Survey Offices (registered)	...	...	3,790
Memoranda returning plans from District Survey Offices (registered)	...	...	1,240
Draftsmen's memoranda to District Survey Offices for plans...	...	...	1,056
Certified copies received from District Survey Offices	...	...	3,448

MAP SALES BRANCH.

Maps received.

Description.	Number.	Copies.	Value.
Counties	9	1,397	£ 419 2 0
Cities, towns, and villages	34	3,063	191 8 9
Parishes	297	23,329	1,106 9 0
Colony maps (small)	2	305	19 1 3
Photo-lithographs of surveyors' plans	165	14,607	730 7 0
Detail surveys	151	9,083	1,362 9 0
Land Board districts	8	1,162	145 5 0
Miscellaneous	8	2,015	277 1 3
Totals	674	54,961	4,311 3 3

Maps, &c., issued.

Description.	Copies.	Value.	Description.	Copies.	Value.
Counties	1,606	£ 481 16 0	Photo-lithographs of surveyors' plans	6,684	£ 334 4 0
Cities, towns, and villages	2,307	144 3 9	Detail surveys	3,960	594 0 0
City of Sydney and environs (coloured)	153	133 17 6	Calculation books	55	5 0 10
City of Sydney and environs (uncoloured)	77	57 15 0	Land Board districts	815	101 17 6
Parishes	20,822	1,041 2 0	Miscellaneous	2,094	287 18 6
Colony maps (large)	156	117 0 0	Totals	38,906	3,309 16 4
„ (small)	177	11 1 3			

Auction sale, special area, homestead selection, improvement lease, settlement lease, and other plans, altogether numbering 268, and consisting of 30,568 copies, were received to be issued gratis; the number of copies so disposed of was 19,230.

Lithographs sold, 3,327; value, £244 18s. 3d. Letters dealt with, 968; maps cancelled, 2,355.

PLAN-MOUNTING

PLAN-MOUNTING BRANCH.

The work performed comprises the following:—Plan-mounting, 15,471 pieces; rollers, varnishing, corners, lists, and miscellaneous, 915 pieces; binding, 530 pieces; parcels post, 1,061 pieces. The binding included twelve large atlases of the counties for use in the Information Bureau, the covers half-bound in morocco 46 inches x 33 inches. This branch has been removed from the second floor to the dome, and the transport of the apparatus and rearrangement of the same occupied nearly three weeks, thus causing delay and consequent accumulation of work.

E. TWYNAM,
Chief Surveyor.

APPENDIX A.

BRIEF statement by Mr. D. M. Maitland of the result of comparison of the Queensland 10-ft. Standard Bar with the New South Wales Standard Bars.

The Queensland bar, which is composed of steel, is octagonal in section, and when in use is kept floating in a trough of mercury. It was compared separately with the two standard bars of this Colony, known respectively as O 1 No. 4 and A².

O 1 No. 4, which was prepared under the direction of Sir Henry James, of the Ordnance Survey of Great Britain, and imported in 1859, is composed of cast-iron, and is supported on double rockers. Its length at a temperature of 62° Fahrenheit is authenticated as 9.999921 feet, or 119.999054 inches.

A² is also composed of cast-iron, and is supported in a manner similar to O 1 No. 4. It was prepared by Messrs. Troughton and Simms', and sent to this Colony in 1881. Its length in the year 1885, according to a careful comparison with O 1 No. 4, was 120.000907 inches at 62° Fahrenheit.

In the comparisons of the Queensland bar with O 1 No. 4, there were 1,680 separate micrometrical readings, divided for convenience sake into 42 sets, taken under varying conditions of temperature and position, and they indicate that the Queensland bar is .000963 inch shorter, making its length 119.998091 inches.

Thirty-nine sets comprising 1,560 micrometrical readings, also under varying conditions, were made with bar A², the result being that the Queensland bar was found to be .002793 inch the shorter, making its length by this comparison 119.998114 inches.

As the difference between the two results was so small, .000023 inch, which in 100 miles would only amount to rather less than 1½ inches, a mean of the two values obtained, viz., 119.998102 inches, may be regarded as the true length between the terminals of the Queensland bar at a temperature of 62° Fahrenheit.

A comparison of these tests with those made in 1879 and 1883 is of interest as indicating that the Queensland bar has been slowly shortening. During the four years 1879 to 1884 its contraction was .000178 inch, and in the eleven years following .000206 inch. The total difference, .000384, since it was first sent to Queensland would amount to 10.887 inches in 100 miles.

Standard lengths for the use of Surveyors.

The opportunity was taken to define on a steel band 66-ft. and 100-ft. lengths for laying down fixed standards in this office for reference in adjusting surveyors' measuring apparatus; these lengths were marked by very fine lines inscribed on silver bosses inserted in a steel band. The lengths were marked off by means of the "Comparator" from bar O 1 No. 4, the test comparisons being also made with that bar. Three sets of comparisons were made of the 100-ft. and five of the 66-ft. length.

The mean of the readings of the 100-ft. length make it 1199.99824 inches, or 99.9998 feet, the range being from .00166 inch above to .00261 inch below the mean. The 100 feet as marked is therefore about $\frac{1}{3600}$ of a foot too short.

The mean of the 66-ft. length comparisons places it as 792.00051 inches, or 66.00004 feet, that is about $\frac{1}{2500}$ of a foot too long.

APPENDIX B.

TABLE showing Comparative Amount and Cost of Detail Surveys from 1886 to 1895.

	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.
Number of sheets surveyed and transmitted.....	49	91	104	178	311	172	113	104	75	146
Number of original sheets revised for second edition of lithographs.....				19	3	48	32	47	46	69
Number of sheets revised and brought up to date prior to first publication.....					44	87	160	96	90	60
Area surveyed (ex. surveys for second editions).....	649 ac.	1,003 ac.	1,593 ac.	3,924 ac.	6,674 ac.	3,772 ac.	2,401 ac.	1,975 ac.	1,341 ac.	2,683 ac.
Area covered by surveys for second editions.....				256 ac.	39 ac.	777 ac.	453 ac.	649 ac.	708 ac.	903 ac.
Length of streets fixed.....	25 m.	47 m.	57 m. 41 ch.	111 m. 30 ch.	176 m. 22 ch.	77 m. 40 ch.	57 m. 70 ch.	47 m.	41 m.	64 m.
Number of tenements fixed (ex. second edition and revision surveys).....	5,004	8,309	8,125	8,464	9,929	3,454	2,477	2,068	2,067	3,170
Number of tenements fixed in surveys for second editions.....				511	84	1,930	732	1,722	975	1,166
Number of tenements fixed in revision surveys prior to first publication.....					380	310	737	574	348	305
Number of alterations and additions to original surveys, exclusive of new tenements.....						3,294	6,203	6,300	4,010	4,176
Average cost per tenement in the suburbs.....	£1 3s. 3d.	17s.	11s. 6d.	15s. 3d.	15s. 11d.	15s. 6½d.	10s. 9d.	16s. 7d.	10s. 7d.	12s. 7d.
Average cost per tenement of revision and second edition surveys.....				11s. 11d.	7s. 11d.	13s.	£1 6s. 10d.	16s. 1d.	£1 1s. 0d.	19s. 6d.
Average cost per acre throughout.....	£3 12s. 8d.	£3 4s. 7d.	£3 1s. 6d.	£1 18s. 11d.	£1 4s. 1d.	14s. 3d.	12s. 9d.	£1 1s. 8d.	£1 6s. 2d.	14s. 10½d.



ANNUAL REPORT 1895

MAP
OF
NEW SOUTH WALES

SHOWING ALL DIVISIONS FOR THE PURPOSES OF THE
CROWN LANDS ACTS.

Scale 32 Miles to 1 Inch

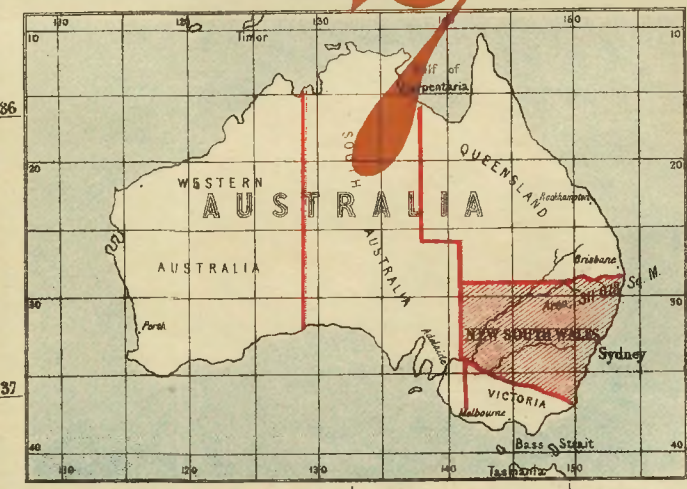
NOTES

- Land District Boundaries shown in green thus
- Land Board District Boundaries shown in blue thus
- Head Offices of Local Land Boards shown in blue thus **BOURKE**
- Other places where local Land Boards hold Sittings shown by blue circle thus
- Territorial Divisions are shown in red thus
- County Names and Boundaries shown in red thus **ROUS**
- Railways shown thus

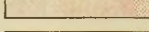
LIST OF LAND DISTRICTS AND HEAD OFFICES OF LOCAL LAND BOARDS
Within each Division of the Colony

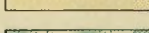
Head Office of Land Board	Land Districts comprised in Land Board District	Head Office of Land Board	Land Districts comprised in Land Board District	Head Office of Land Board	Land Districts comprised in Land Board District
1 Armidale	2 Armidale 34 Glen Innes 46 Inverell 80 Innespelt 84 Walla	7 Grafton	96 Bullinger 18 Casino 31 Grafton 47 Kempsey 49 Lismore 60 Murrumbidgee 71 Parc Macquarie	11 Orange	5 Bathurst 17 Carcoar 28 Coma 50 Lithgow 51 Liverpool 58 Mudgee 66 Orange 74 Wyllie 85 Wallingbarrow
2 Bourke	11 Bourke 13 Brewarrina 14 Brewarrina E. 20 Lobar 90 Wilcannia 97 Willyama	8 Hay	3 Balranald 4 Balranald Sth 29 Deniliquin 42 Hay 43 Hay North 44 Millston 45 Hillston North 89 Wentworth	12 Sydney	16 Campbelltown 46 Flinders 51 Liverpool 53 Murrumbidgee 68 Parramatta 70 Penrith 18 Picton 91 Windsor 93 Wollangong 93 Wollangong 93 Wollangong 93 Wollangong 93 Wollangong 93 Wollangong 93 Wollangong 93 Wollangong
3 Cooma	6 Bega 9 Bega 12 Bega 23 Dymally 32 Eden 54 Milton 57 Murrumbidgee 72 Murrumbidgee	9 Macleay	19 Cassilis 31 Dungay 35 Gungahlin 52 Macleay 61 Murrumbidgee 64 Newcastle 69 Paterson 73 Raymond Terrace 75 Seaton 76 Singleton 77 Stroud 78 Taree 92 Wollombi	13 Tamworth	1 Albury 26 Castamoney 27 Carcoar 39 Cundago 63 Narrandera 81 Tumut 82 Urana 83 Waga Waga 86 Wollumbi 89 Tumbarumba 100 Castamoney Central
4 Dubbo	25 Coonamble 30 Dubbo 103 Marree	9 Macleay	69 Paterson 73 Raymond Terrace 75 Seaton 76 Singleton 77 Stroud 78 Taree 92 Wollombi	14 Waga Waga	1 Albury 26 Castamoney 27 Carcoar 39 Cundago 63 Narrandera 81 Tumut 82 Urana 83 Waga Waga 86 Wollumbi 89 Tumbarumba 100 Castamoney Central
5 Forbes	102 Barmah 101 Barmah East 22 Condon 38 Condon 67 Parkes	10 Macleay	8 Bega 9 Bega 12 Bega 23 Dymally 32 Eden 54 Milton 57 Murrumbidgee 72 Murrumbidgee		
6 Cootamundra	7 Moss Vale 10 Bega 36 Bega 41 Bega 94 Yass 95 Yass				


QUEENSLAND




NOTE

Work completed prior to 1895 tinted thus 

Do. do. during 1895 do. do. 

Do compiled and ready for drawing do. do. 

Astronomical Stations shown thus 

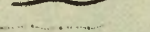
Sections numbered 1 to 9 represent sheets of map when completed.

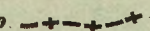
ANNUAL REPORT 1895

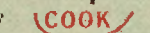



MAP OF
NEW SOUTH WALES

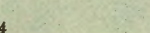
Illustrating progress of the New Colony Map Compilation

NOTE Existing Railways and those in course of construction shown thus 

Chief Postal Roads do do 

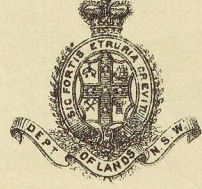
Telegraphs do 

Territorial Division Boundaries under Land Law of 1884 do 

County Boundaries and Names shown thus 

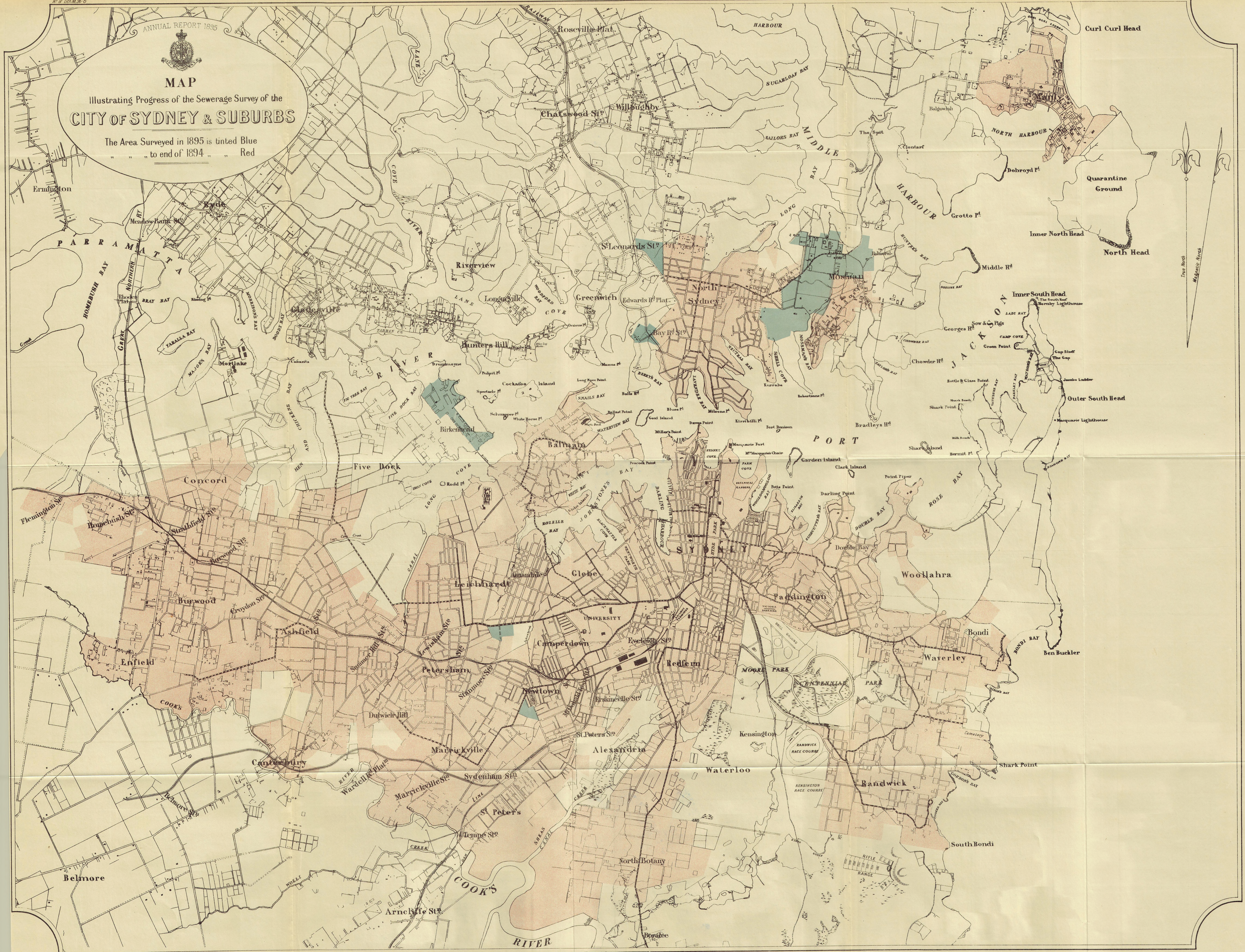
SCALE OF MILES

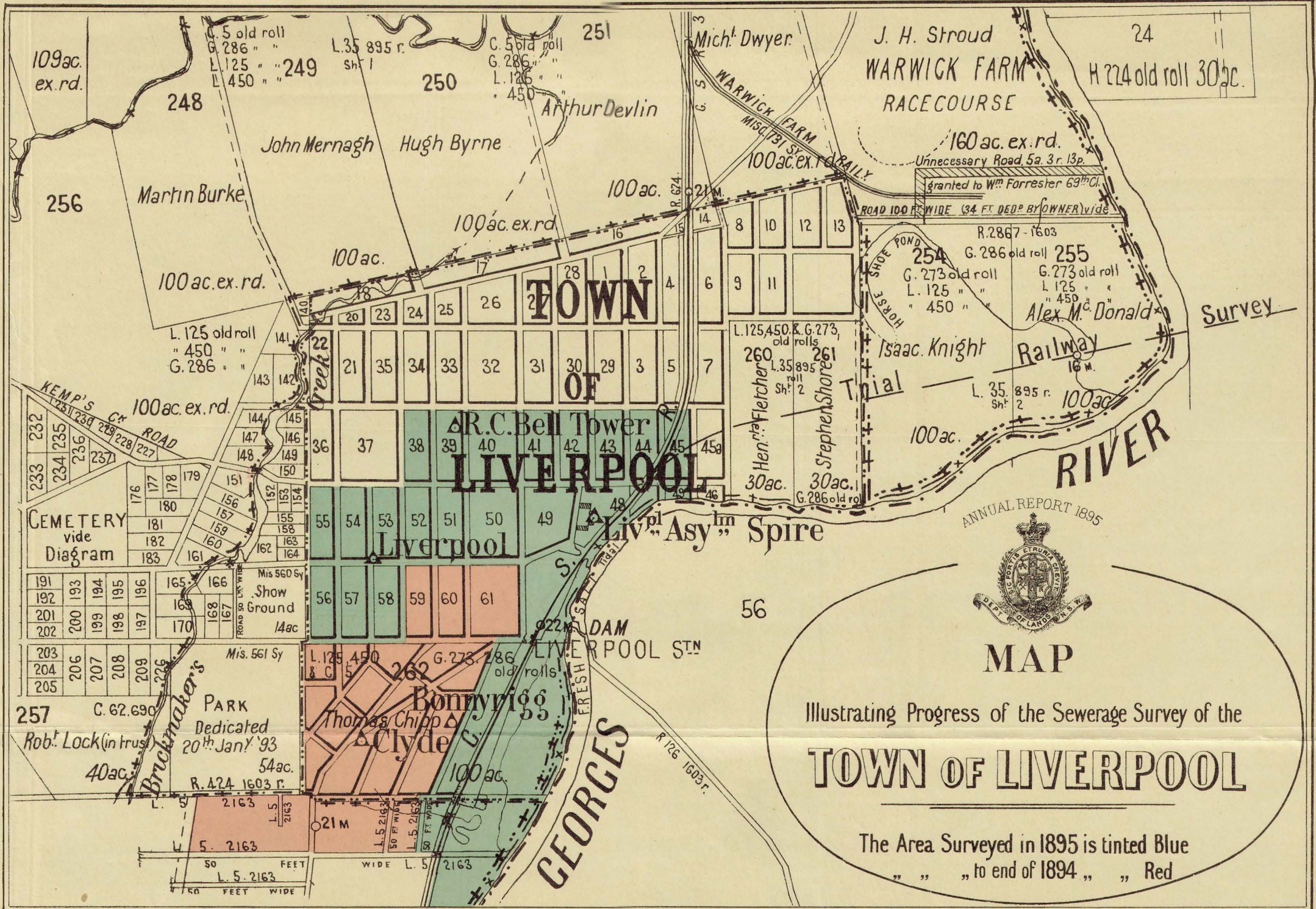
0 10 20 30 40 50 60 70 80 90 100



MAP Illustrating Progress of the Sewerage Survey of the CITY OF SYDNEY & SUBURBS

The Area Surveyed in 1895 is tinted Blue
" " " " to end of 1894 " " Red





ANNUAL REPORT 1895



MAP

Illustrating Progress of the Sewerage Survey of the

TOWN OF LIVERPOOL

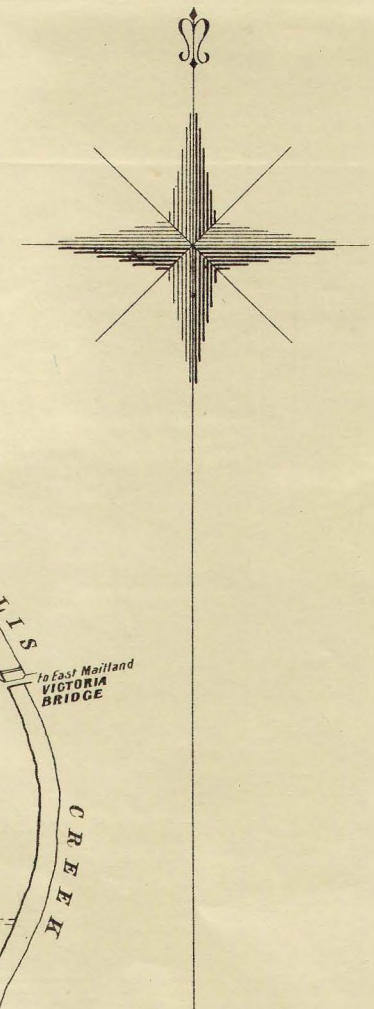
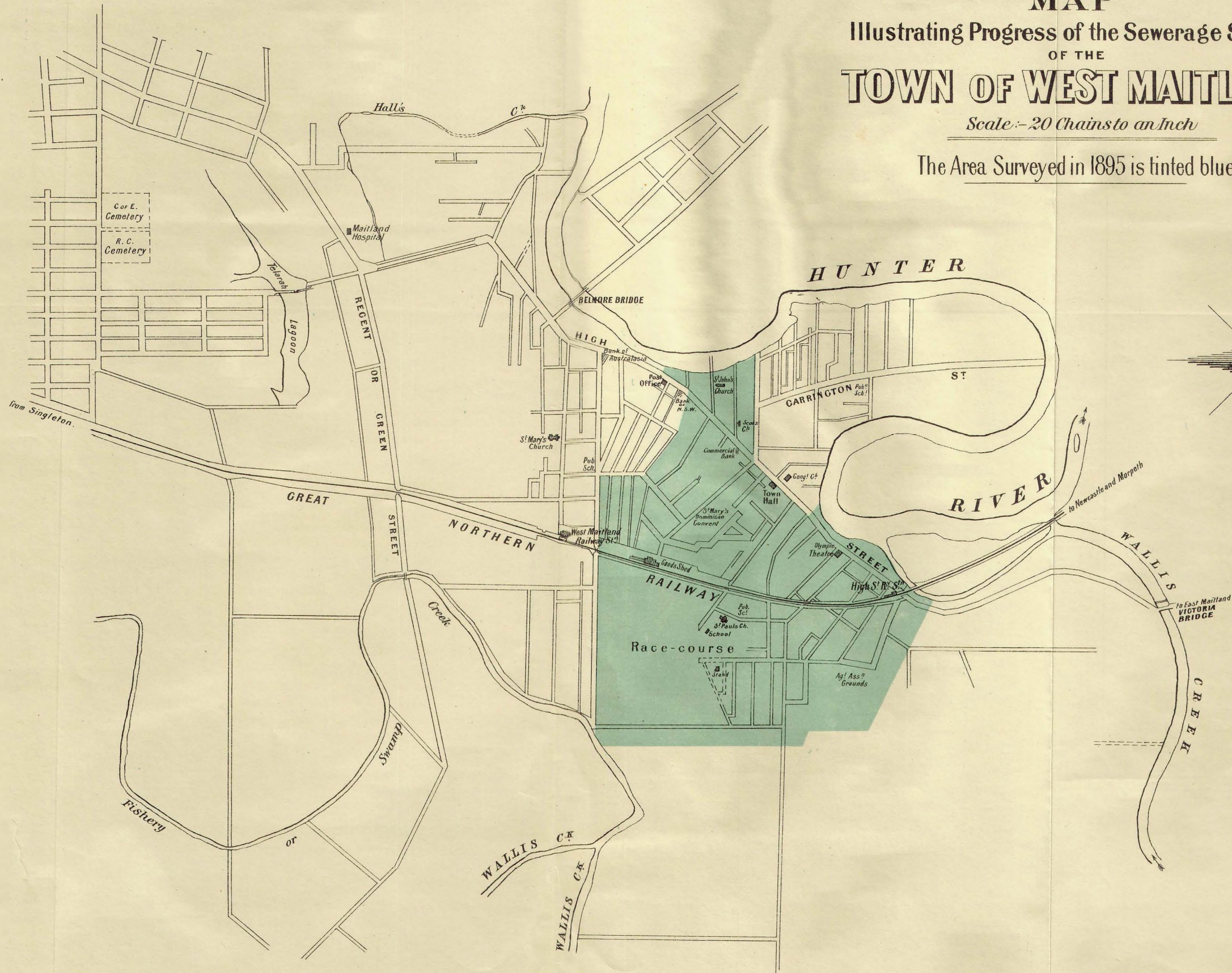
The Area Surveyed in 1895 is tinted Blue
 " " " to end of 1894 " " Red

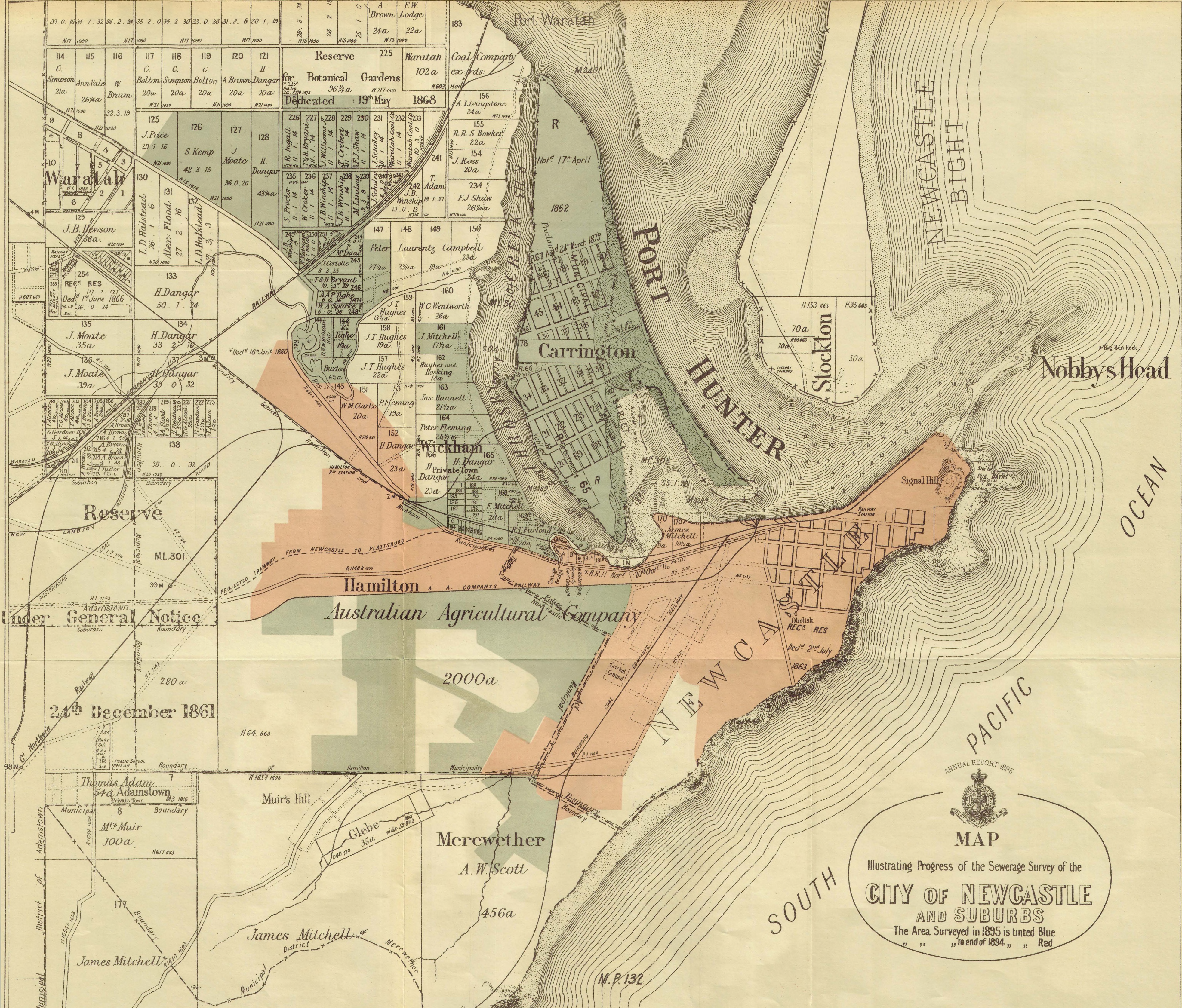


MAP Illustrating Progress of the Sewerage Survey OF THE **TOWN OF WEST MAITLAND**


Scale: - 20 Chains to an Inch

The Area Surveyed in 1895 is tinted blue.



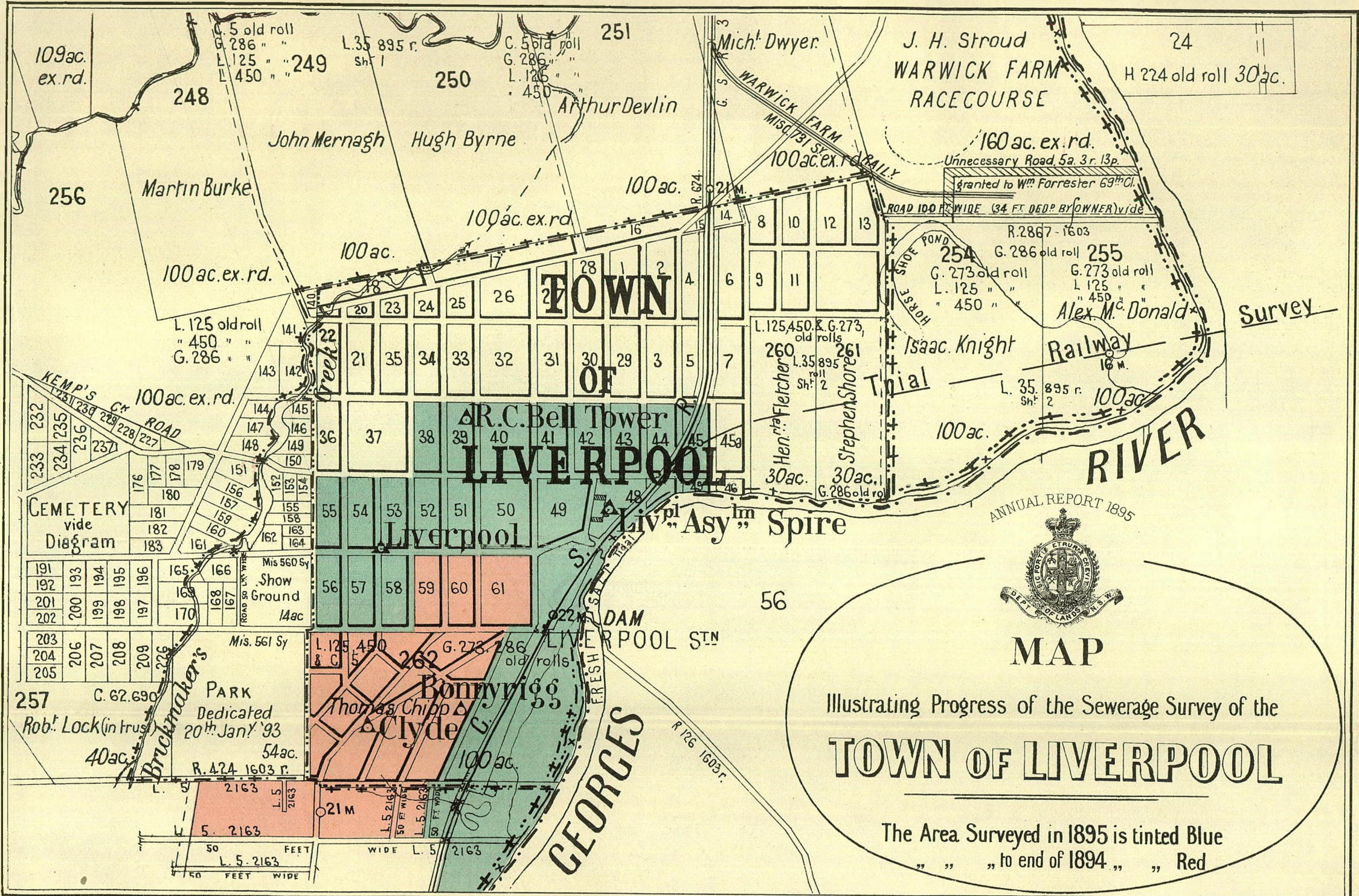


ANNUAL REPORT 1895



MAP

Illustrating Progress of the Sewerage Survey of the
CITY OF NEWCASTLE
AND SUBURBS
 The Area Surveyed in 1895 is tinted Blue
 " " "to end of 1894" " Red



1896.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

CROWN LANDS CONSOLIDATION BILL.
(DRAFT OF.)

Printed under No. 27 Report from Printing Committee, 13 November, 1896, A.M.

60^o VICTORIÆ, 1896.

A BILL

To Consolidate the Laws relating to Crown Lands.

BE it enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Legislative Council and Legislative Assembly of New South Wales in Parliament assembled, and by the authority of the same, as follows:—

1. This Act may be cited as the "Crown Lands Consolidation Act, 1896." Short title.

2. On and after the day when this Act takes effect, the following Acts are hereby repealed to the extent to which the same are expressed to be repealed: Repeal.

Year and Number of the Act.	Title of Act.	Extent of Repeal.
48 Vic. No. 18 ...	The Crown Lands Act of 1884 ...	The whole.
50 Vic. No. 39 ...	The Crown Lands (Auction Sales Balances) Act of 1887.	The whole.
51 Vic. No. 11 ...	The Crown Lands Act Amendment Act of 1887	Section 4.
51 Vic. No. 29 ...	The Conversion into Mining Conditional Purchases Validation Act of 1888.	The whole.
52 Vic. No. 7 ...	The Crown Lands Act Further Amendment Act	The whole.
53 Vic. No. 21 ...	The Crown Lands Act of 1889 ...	The whole.
54 Vic. No. 11 ...	The Crown Rents Act of 1890 ...	The whole.
55 Vic. No. 1 ...	The Crown Lands Act Amendment Act of 1891	The whole.
58 Vic. No. 16 ...	The Reserves Declaratory Act ...	Section 6.
58 Vic. No. 18 ...	The Crown Lands Act of 1895 ...	The whole.
59 Vic. No. 26 ...	The Crown Lands (Homestead Selections and Settlement Leases) Act, 1895.	So far as it would apply to applications made after the commencement of this Act.
60 Vic. No. 2 ...	The Conditional Purchaser's Relief Act	The whole.

Provided that such repeal shall not—

- (a) revive anything not in force or existing at the time at which the repeal takes effect; or
- (b) affect the previous operation of any enactment so repealed or anything duly done, suffered, or commenced to be done under any enactment so repealed; or
- (c) affect any right, privilege, obligation, liability or disability acquired, accrued, or incurred under any enactment so repealed; or
- (d) affect any penalty, forfeiture, or punishment incurred in respect of any offence committed against an enactment so repealed; or
- (e) affect any investigation, legal proceeding, or remedy in respect of any such right, privilege, obligation, liability, penalty, forfeiture, or punishment as aforesaid; or
- (f) affect any appointment, order, rule, application, affidavit, or award made, or any summons or writ issued, or any warrant granted, or any notice or certificate given under the said Acts or any of them before the commencement of this Act; and any such investigation, legal proceeding, or remedy may be instituted, continued, or enforced, and any such penalty, forfeiture, or punishment may be imposed and enforced, as if this repealing enactment had not been passed.

And all regulations made and forms prescribed under any Act in force on the day when this Act takes effect and hereby repealed shall be and continue in force and shall be deemed to have been made under this Act.

Interpretation of terms.

3. In this Act, unless the context necessarily requires a different meaning, the expression—

- “Board” or “Land Board” means the Local Land Board of the District in question, and includes Land Appeal Court in any case where an appeal or reference to that Court shall have been made.
- “Conditional purchase” excludes special purchase, or purchase by auction, or purchase by virtue of improvements.
- “Crown Lands” means lands vested in Her Majesty and not permanently dedicated to any public purpose or granted or lawfully contracted to be granted in fee simple under this Act or the previous Acts or any repealed Act.
- “City, Town, or Village”—A city, town, or village shall be such as shall have been declared to be so by proclamation of the Governor in the *Gazette*.
- “Frontage” means abuttal on or frontage to the sea-coast or to any lake, inlet, river, creek, stream, watercourse, road or intended or designed road prescribed as a boundary.
- “Governor” means the Governor with the advice of the Executive Council.
- “Land Agent” means any person duly appointed to the office of Crown Land Agent or Acting Crown Land Agent.
- “Land Appeal Court” means the Land Appeal Court as constituted under the previous Acts or this Act.
- “Land office day” means any day notified as such in the *Gazette* upon which Land Agents are required to attend at their Land Offices for the purpose of receiving applications for sale or lease of Crown Lands.
- “Lease” includes any unexpired engagement, contract, or promise of a lease.
- “Local newspaper” means a newspaper published or circulating in the particular district or place in reference to which the expression is used.
- “Leasehold area” means that portion of a pastoral holding for which a pastoral lease may have been granted under the previous Acts or which may be granted under this Act.

“Minerals”

Crown Lands Consolidation.

3

- “Minerals” means and includes coal, kerosene shale, and any of the following metals, or any ore containing the same, namely:—Gold, silver, copper, tin, iron, antimony, cinnabar, galena, nickel, cobalt, platinum, bismuth and manganese, and any other substance which may from time to time be declared a mineral within the meaning of this Act by proclamation of the Governor published in the *Gazette*.
- “Minister” means the Minister for Lands or other Minister charged with the administration of this Act or any part thereof.
- “Oath” means affirmation, promise, and declaration in every case where an affirmation, promise, or declaration is by law allowed instead of an oath.
- “Population boundaries or area” includes lands within areas as defined by proclamation in the *Gazette*, with boundaries distant not more than ten miles from the nearest boundary of any city, town, or village.
- “Prescribed” means prescribed by this Act, or any regulation made thereunder.
- “Previous Acts” mean and include the Crown Lands Act of 1884, the Crown Lands Titles and Reservations Validation Act of 1886, the Conditional Purchases and Leases Validation Act of 1887, the Crown Lands [Auction Sales Balances] Act of 1887, the Crown Lands Act Amendment Act of 1887, the Crown Lands Act Further Amendment Act, the Crown Lands Act of 1889, the Crown Lands Act Amendment Act of 1891, the Crown Lands Act of 1895.
- “Public purpose” means and includes, in addition to any purpose specified in any section of this Act, any purpose declared by the Governor, by notification in the *Gazette*, to be a public purpose within the meaning of such section.
- “Regulations” means the Regulations made under the authority of this Act.
- “Repealed Acts” or any repealed Act includes the following Acts, or portions of Acts, which were repealed by the Crown Lands Act of 1884:—

Year and number of Act.	Title of Act.
22 Vic. No. 17 ...	An Act to impose an Assessment on Runs in the Unsettled and Intermediate Districts, and to increase the Rent of Lands leased for Pastoral purposes within the Settled Districts of New South Wales.
23 Vic. No. 4 ...	An Act to include the Intermediate with the Settled Districts.
25 Vic. No. 1 ..	An Act for regulating the Alienation of Crown Lands.
25 Vic. No. 2 ...	An Act for regulating the Occupation of Crown Lands.
39 Vic. No. 13 ...	An Act to declare and amend the Laws relating to Crown Lands.
42 Vic. No. 26 ...	An Act to declare the Law as to the effect of Transfers before grant of Lands conditionally purchased under the Acts regulating the Alienation of Crown Lands.
43 Vic. No. 29 ...	An Act further to amend the Lands Acts of 1861, and the Act of 1875.
43 Vic. No. 33 ...	An Act to declare the Law in respect to Lands forfeited or reverting to Her Majesty by reason of non-compliance with the conditions of purchase by the conditional purchaser.
45 Vic. No. 8 ...	An Act to regulate Ringbarking on Crown Lands, and to limit claims for compensation under the fifteenth section of the Lands Acts Further Amendment Act of 1880.
45 Vic. No. 9 ...	An Act to extend the power of correcting designs or plans of towns and villages, and the limits of Suburban Lands.

“Representatives”

“Representatives” means the executors or administrators of the person with reference to whom the word is used, and includes all persons in whom the estate or interest of such person is vested.

“Resumed area” means that portion of a pastoral holding for which a pastoral lease may not have been granted under the previous Acts.

“Scrub” means any tree, undergrowth, plant, which the Governor may, by notification in the *Gazette*, declare to be scrub within the meaning of this Act.

“Series” or “the same series,” when used in connection with conditional purchases, means an original conditional purchase (whether taken up before or after the commencement of this Act, under any repealed Act, or the previous Acts, or this Act), and any additional conditional purchases, which may have been or may be made by virtue thereof.

“Vacant land” means land not alienated by or held under any lease or promise of lease or license from the Crown.

No dealing with Crown lands except under this Act.

Sec. 5, Act 1884.

4. Crown lands shall not be sold, leased, dedicated, reserved, or dealt with except under and subject to the provisions of this Act, and nothing in this Act shall affect the provisions of any Act regulating mining on Crown lands, or shall affect the prerogative of the Crown in respect to any lands reverting by escheat or forfeiture to Her Majesty otherwise than under the provisions of this Act or any repealed Act.

Provisions as to grants, leases, &c.

Sec. 6, Act 1884.

5. The Governor on behalf of Her Majesty may grant, dedicate, reserve, lease, or make any other disposition of Crown lands but only for some estate, interest, or purpose authorised by this Act and subject in every case to its provisions.

No Crown grant issued after the commencement of this Act shall be expressed or purport to be in trust for private persons or purposes.

Minerals reserved in all grants.

Sec. 7, Act 1884.

6. All grants of land issued under the authority of this Act shall contain a reservation of all minerals in such land and shall contain such other reservations and exceptions as may by the Governor be deemed expedient in the public interest: Provided that whenever it shall be found that land alienated under this or under the previous Acts or under any repealed Act contains any mineral, and such land has been alienated subject to the minerals being reserved to the Crown, the Governor may permit the owner of such land to remove such mineral upon payment of such royalty and upon such conditions as may be prescribed.

Proceeding by way of *scire facias*.

Sec. 137, Act 1884.

7. Every grant and registration copy of such grant issued under this Act or under the previous Acts or under any repealed Act shall, for the purpose of enabling the Crown to proceed by way of *scire facias* for the repeal of any such grant issued improvidently or inadvertently or in violation of the provisions of any such Act as aforesaid, be deemed to be a record of the Supreme Court notwithstanding anything in the Real Property Act or any Act amending the same to the contrary.

Divisions.

Establishment of Divisions.

Sec. 8, Act 1884.

8. For the purposes of this Act and the previous Acts New South Wales shall consist of Three Divisions, namely:—The Eastern Division—the Central Division—and the Western Division—and the boundaries of each Division shall, subject to the provisions of this Act, be as set forth in the First Schedule hereto.

Schedule.

Sec. 8, Act 1884.

9. The Governor may from time to time, by proclamation in the *Gazette*, alter the boundary of any division—

(a) so as to avoid the severance of any existing conditional purchase or lease or other lawful holding whatsoever;

(b)

- (b) by declaring lands held under lease or license, cities, towns, villages, and suburban lands attached thereto, or measured portions, which may be situated within any division or partly within two divisions, to be wholly within any one division.

And upon the publication of such proclamation the boundary as altered thereby shall be deemed to be the true boundary of the division referred to in such proclamation.

Land Districts.

10. The Governor may, within each division, by proclamation in the *Gazette*—

- (a) establish, and define the boundaries of, land districts; Sec. 9, Act 1884.
 (b) disestablish, or alter the boundaries of, land districts; Sec. 9, Act 1884.
 (c) declare lands held under lease or license, cities, towns, villages, and suburban lands attached thereto, or measured portions, which may be situated within any land district, or partly within two or more land districts, to be wholly within any one land district; and upon such proclamation the boundaries of such land districts shall be deemed to be sufficiently altered and defined for the purposes of this Act. Sec. 40, Act 1889.

Land Agents.

11. The Governor may appoint a land agent either for each land district or for several adjoining land districts, who shall perform the duties imposed on him by this Act or the regulations. Land agent. Sec. 10, Act 1884.

The Minister may at any time in the absence of any such agent appoint a person to act for him.

All things done by an acting land agent within the scope of his authority shall be of the same efficacy as if done by the land agent.

It shall be the duty of every land agent to forward to the Colonial Treasurer all moneys received by him by virtue of this Act, or the previous Acts, or any repealed Act, or the regulations in the prescribed manner, and in all other respects to conform to the regulations, and to carry out the instructions given by or by direction of the Minister. Duties of land agents.

Any land agent shall, by virtue, and during his tenure of office be deemed for the purposes of this Act, or the "Registration of Deeds Act" to be a Commissioner of the Supreme Court for taking affidavits; but any declarations required by this Act or by the regulations may be made before the land agent or any justice of the peace or commissioner for taking affidavits for the Colony of New South Wales. Sec. 22, Act 1889.

District surveyors.

12. For every land district the Governor may appoint a district surveyor and such other officers as he may think necessary for the purposes of this Act: Provided always that whenever required by the Minister such officers shall perform the duties connected with their respective offices in and for any land district, in addition to that for which they have been appointed. Appointment, &c., of district staff of officers. Sec. 16, Act 1884.

Local Land Boards.

13. There shall be a local land board for every land district or for several land districts, provided that it shall be lawful for the Minister from time to time to direct any local land board to deal with any matter, question, or inquiry that has arisen, or shall arise, without regard to the land board district or land district in which the land forming Local land boards. Sec. 11, Act 1884. Land boards may be authorised to deal with matters outside their own district. Sec. 5, Act 1889.

forming the subject of such matter, question, or inquiry may be situated. And the said land board shall have as full power and jurisdiction to deal with the matter as if the land aforesaid were situated within that board's proper land board district or land district.

14. The members of a local land board shall not exceed three in number, and shall be appointed by the Governor. One of such members shall be the chairman who shall be appointed in like manner, and shall be paid such salary as Parliament may sanction. Every other member of the board shall be paid such fee for each sitting as may be prescribed.

Suspension, removal,
&c., of chairman of
local land board.

Sec. 4,
51 Vic. No. 11.

Acting chairman.

The Governor may suspend or remove the chairman of any local land board and appoint some other person in his place, or in the event of any chairman being suspended or being unable to act from any cause whatever, the Governor may appoint some other person as acting chairman, who while so acting shall have and exercise all the powers and authority and be subject to all the obligations applicable to the office of chairman.

Any member of a local land board who sits or acts in any way as a member of such board in any case in which he is or has been directly or indirectly interested shall be liable to a penalty not exceeding five hundred pounds.

Quorum.

Chairman's votes.
Sec. 12, Act 1884.

15. A majority of the members of any local land board shall constitute a quorum, and the chairman shall, if present, preside at all meetings of the board, and have an original vote on any question brought before or referred to such board: Provided always that the chairman shall have a casting vote on any question on which the votes are equal.

Acting chairman
in absence of
chairman.

Vacancies.

In the absence of the chairman the members present at any meeting of the board shall appoint one of their number to act as chairman at such meeting, or any adjournment thereof, who shall, while so acting, have all the powers and authority of the chairman. The resignation, removal from office, insolvency, or absence from three consecutive meetings of the board of any member of the board without leave of the Minister shall cause a vacancy therein, and the Governor may appoint a person to supply such vacancy.

Duties and powers of
local land boards
under repealed
Acts.

Sec. 13, Act 1884.

16. In addition to the matters hereinafter required, or permitted to be made the subject of adjudication, appraisement, valuation, inquiry, or report by local land boards, it shall be the duty of every such board, and it shall have full power and authority to hear, examine, and report to the Minister or the land appeal court upon—

- (I) any matter referred for report to such board by the Minister or the land appeal court, which under the provisions of the repealed Acts 1861–1881 might have been the subject of any claim for compensation, or of arbitration, appraisement, inquiry, or complaint.
- (II) any complaint or question as to the non-fulfilment of any condition of residence or improvement by a conditional purchaser under any of the said repealed Acts.
- (III) any allegation or complaint that land conditionally purchased under any of the said repealed Acts has been so purchased by the applicant in violation of any of the provisions thereof: Provided that nothing herein contained shall refer to any land for which a certificate of completion of the conditions of residence and improvements or grant has already issued.

As to lapse,
voidance, and
forfeiture.

Sec. 20, Act 1884.

17. Any question of lapse, voidance, or forfeiture, whether arising under this Act or under the previous Acts, or under any repealed Act, may be by the Minister referred to the local land board, and the decision thereon of the said board after due investigation in open court shall, unless appealed from in the prescribed manner, be final.

Procedure

Procedure of Land Boards.

18. For the purpose of regulating the procedure of local land boards under this Act, or under the previous Acts, and of empowering such boards to give full effect to the meaning and intent thereof, the following provisions shall be applicable to and be carried out by such boards—

- (i) Every such board shall have power to hear and determine all complaints and other matters brought before it, and shall conduct all inquiries sitting as in open Court, and shall take evidence on oath, and its procedure while so sitting shall be the same as the procedure before a court of petty sessions. General powers and procedure of local land boards. Sec. 14, Act 1884. Local land board to sit as in open Court.
- (ii) The chairman of every such board shall be a justice of the peace by virtue of his office, and shall have and may exercise the like powers and authorities as are possessed by a court of petty sessions to summon and compel the attendance of witnesses to give evidence on any matter before the board, and to produce all deeds and documents in their possession or under their control relating to such matter. And all witnesses so summoned to attend shall be entitled to the like allowances for attendance and travelling expenses as witnesses attending a district court are by law entitled to. Power to compel attendance of witnesses. Expenses of witnesses.
- (iii) Every party to a proceeding before such board shall have the same right to be heard by counsel, attorney, or agent, and to enforce the attendance of witnesses before such board, and to examine such witnesses as upon summary proceedings before justices. Parties may be heard by counsel, attorney, or agent.
- (iv) The chairman shall give the decision of the board (when unanimous) in open court, but if not unanimous the Board shall decide by vote (retiring for that purpose if it thinks fit). The decision shall then be given by the chairman as aforesaid, and no member shall comment upon or question such decision. Upon an appeal to the land appeal court as hereinafter provided any member of the board may assign in writing such reasons for his opinion as he may deem necessary, which shall be transmitted through the chairman to such court. Decision of board, how given.
- (v) Any person not authorised in that behalf by the Minister desirous of prosecuting any complaint before such board shall do so by lodging with the land agent a notice in the prescribed form verified by a statutory declaration setting forth the grounds of such complaint, and shall at the same time deposit with such land agent the sum of ten pounds as security for any costs which may be awarded against him by such board: Provided that should the board be of opinion that the sum of ten pounds will be insufficient to meet the probable expenses in any case, it may demand such further sum as may be deemed necessary, and should such sum not be deposited with the land agent within such time as the board may specify such complaint shall not be proceeded with. When the board gives a decision in favour of the complainant, he shall be entitled to a refund of the sum so deposited, and it may award such expenses for witnesses and such costs to the successful party as to it may seem reasonable, and such expenses and costs shall be recoverable in the manner prescribed by the Acts regulating the procedure in courts of petty sessions. Complaint by other than authorised persons.
- (vi) The local land board, instead of giving any decision or adjudication in any case within the jurisdiction of such board, may after taking evidence refer such case with the evidence for Reference to land court.

for

for decision by the land appeal court, which shall have power to deal with the case so referred in all respects as if it had been brought before it in the first instance.

Signature of
summonses,
documents, &c.

- (VII) Any member of the board may sign summonses, and the chairman shall sign certificates and other documents given or issued by the board, and immediately after adjudication or decision upon any case shall (if required) forward all papers connected with the case, together with any report required thereon, to the Minister or the land appeal court.

Chairman may deal with certain matters not sitting in open court.

Attendance before
Board not required
for formal
application.
Sec. 37, Act 1895.

19. The chairman shall have power, on behalf of a local land board, to deal with applications (whether made under this Act or under the previous Acts) for—

- (a) permission to inclose a road or water-course wholly or in part;
- (b) suspension of the condition of fencing attaching to a conditional purchase, conditional lease, or homestead lease, or extension of the period within which the condition shall be fulfilled;
- (c) exemption from fencing any portion of the boundary of a conditional purchase, condition lease, or homestead lease;
- (d) exemption to the members of one family in pursuance of section seventeen of the Crown Lands Act of 1889 or section eighty of this Act, from any condition of fencing or improvement, other than the erection of a ring fence; and for prescribing the character of such fence and fixing or extending the term within which the fence shall be erected;
- (e) such other formal orders as may from time to time be prescribed.

The chairman may deal with any such application as aforesaid, not sitting in open court, and after having given notice to the parties concerned; and where he does not grant the application the same shall afterwards be dealt with in due course by the local land board; and he may in any case, instead of dealing with an application as aforesaid, bring the same before the local land board.

Enforcement of orders of board.

Orders of local
land board how
enforced.
Sec. 15, Act 1884.

20. In any case where a local land board, pursuant to the provisions of this Act or the previous Acts, and subject to the provision for appeal hereinafter provided for, shall make any adjudication or award, and to give effect to such adjudication or award shall make any order for the payment of money, whether as compensation, costs, appraised value, or otherwise howsoever, such order shall be under the hand of the chairman, and may be enforced by distress and sale of the goods and chattels of the person ordered to pay such money in manner prescribed by the regulations, or the same may be recovered in a summary way before any two justices of the peace by the person to whom such money is ordered to be paid.

Parties may appeal.

Procedure on appeal
to land court.
Sec. 17, Act 1884.
Sec. 7, Act 1889.
Sec. 39, Act 1895.

21. Either party to any proceeding, dispute, or claim before a local land board, and any caveator as hereinafter provided, may appeal from the adjudication, decision, recommendation, determination, or award of such board to the land appeal court at any time within twenty-eight days after the same has been given by giving written

written notice of such appeal to the chairman of the board, and to the other party to the proceeding (if any), and depositing with such chairman the sum of five pounds as security for the costs of the appeal. And every such notice shall state the grounds of appeal.

Land appeal court.

22. The land appeal court shall be as constituted by the previous Acts.

It shall be lawful for the Governor to remove any member of such land appeal court for inability or misbehaviour, provided that twenty-one days at least before the removal of such member of the land appeal court he shall have notice of the intention to remove him, and he shall thereafter and before removal have the opportunity of being heard before the Governor and the Executive Council in his defence.

Land appeal court to consist of three members.
Sec. 8, Act 1889.

The president and each member appointed after the commencement of this Act shall be appointed by the Governor.

- (I) The president shall preside at all meetings of the court, but in his absence, through illness or other sufficient reason, any member may be authorised by the Governor to temporarily act as president, who, while so acting, shall have and exercise all the powers and authorities, and be subject to all the obligations applicable to the office of president. In the absence, through illness or otherwise, of any member, the Governor may appoint any person to temporarily act as member.
- (II) Any member who sits or acts in any case in which he is or has been directly or indirectly interested shall be liable to a penalty not exceeding *five hundred* pounds.
- (III) The land appeal court shall have power to hear and determine all appeals, and all matters referred to such court by the Minister, or by a local land board under the provisions of subsection (vi) of section eighteen of this Act, and to make such orders for payment of costs incurred in such appeals or proceedings as such court may think fit; and such appeals and matters shall, after the prescribed notice has been given to the parties, and at such times and places as the land appeal court may appoint, be heard and determined in open court; and the Crown may without having lodged a caveat, appeared before the local land board, given notice of appeal, or taken any preliminary step other than may be prescribed by the regulations or by rules of the land appeal court appear as a party in all proceedings in which its rights, interests, or revenues may be concerned, and all parties may be heard by counsel, attorney, or agent, but no fresh evidence shall be adduced before such court, except with the sanction of such court. In all cases in which the said land appeal court makes any order or award for the payment of money, whether as costs or otherwise, the said order or award shall, save as hereinbefore provided, be conclusive upon the parties, and have the force of a judgment of the Supreme Court at common law; and the party in whose favour any such order or award may have been finally or ultimately made may obtain a certificate of the amount due thereunder, which certificate shall be conclusive evidence of the facts therein stated, and he shall, upon production thereof to the prothonotary, be entitled to have judgment entered up thereon, without any judge's order to that effect, and to have execution for such amount and costs issued and enforced in the same way as may

be done upon judgments at common law; provided that, in any case in which a deposit has been made by an appellant, the same shall be available in payment or part payment of any sum which he may be ordered to pay, and the surplus, if any, shall be returned.

- (iv) If in any case it appears to the land appeal court that any evidence tendered before such court, or that further evidence, ought to be taken before the local land board, or that the case is incomplete, it may be remitted to the board for such action as the land appeal court may direct; and the board shall take such action, and may uphold, reverse, alter, or amend its previous decision in any way that may be considered necessary. The land appeal court shall have power to remit to the board any case in which an order has been made by the land appeal court with directions to the board to enforce or carry out such order, and in any such case the board shall be empowered and bound to act accordingly.
- (v) The land appeal court may return to the local land board for revision, rehearing, or further consideration any case or matter which to such land appeal court may appear to have been improperly or insufficiently considered or determined by such board.
- (vi) A majority of the members of the land appeal court shall constitute a quorum. The decision of the land appeal court upon any appeal shall, subject to the provisions of section twenty-five of this Act, be final and conclusive.
- (vii) Whenever any question of law arises in a case before the land appeal court, the land appeal court shall, if required in writing by any of the parties within the prescribed time and upon the prescribed conditions, or may of its own motion, state and submit a case for decision by the Supreme Court thereon, which decision shall be conclusive. Every such case shall purport to be stated under this section, and shall state the names of the persons who are parties to the appeal, reference, or other proceeding, and shall be transmitted to the prothonotary of the Supreme Court to be dealt with as to the setting down of the case for argument, and the hearing of the same, and its return with the decision of the Supreme Court thereon, as the judges, or any two of them, may direct. The Supreme Court, for the purposes of this section, may consist of two judges only, and shall have power to deal with the costs of, and incidental to, any case stated under this section as it may think fit.
- (viii) Any subpoena, summons, or other process issuing out of the land appeal court shall have the same force and effect as if issued out of the Supreme Court in any matter pending therein; and the land appeal court shall have the same powers of dealing with witnesses who fail to appear when called, or refuse to answer questions, or otherwise misconduct themselves, and for repressing disorders, or punishing contempts committed in the face of the said court, as are possessed by the Supreme Court or any judge thereof upon the hearing of any cause or matter within the jurisdiction of the said court. Any warrant to apprehend and to detain and bring before the land appeal court, or to keep in any gaol, prison, lock-up, or other place of detention, any person liable upon the order of the land appeal court to be so dealt with, shall be valid and sufficient if it be in the form appropriate thereto contained in the Second Schedule to this Act or the effect thereof; and the sheriff, his deputy

Rehearing.
Subsec. vi, sec. 14,
Act 1884.

deputy and assistants, and all officers of the police force, and gaolers to whom the same is addressed shall obey the same: Provided that no such warrant shall be issued against a person who fails to appear as a witness when called, unless it be proved to the satisfaction of the land appeal court that he has been duly served with a summons or subpoena, and that payment or tender of his reasonable expenses have been made to him.

- (ix) It shall be lawful for the Governor to appoint a registrar of the land appeal court and other necessary officers, who shall be paid such salaries as may from time to time be approved. The registrar shall have the custody of the official seal of the court and of its records, and shall sit in the court, and keep and sign minutes of the court's proceedings, and make reports of the court's decision in each case to the Minister. The registrar shall have power to seal with the official seal, and to sign and issue in the name of the court, subpoenas, summonses, certificates, orders, notices, and other documents; and the registrar shall perform the various matters and things in respect of which powers are hereinbefore conferred upon him, or which by any regulation in that behalf made as hereinafter provided he may be ordered to do. Any duties imposed or powers conferred upon the registrar as aforesaid may, in his absence or inability to act, be discharged or exercised by any person provisionally appointed as deputy registrar by the president or acting president of the land appeal court.
- (x) All courts of law and equity shall take judicial notice of the seal of the land appeal court, and of the signature of the president, acting president, registrar, or deputy registrar, when attached to any document issuing out of the said court.

References, by Minister to land appeal court.

23. The Minister may refer to the land appeal court any decision or recommendation of a local land board (whether made before or after the commencement of this Act), whereby the rights, interests, or revenues of the Crown may have been, or may hereafter be injuriously affected, and may likewise refer any case where it may appear that a local land board has failed or neglected to duly discharge its duty according to law, or that a local land board has exceeded such duty.

References by the Crown to the land appeal court. Sec. 59, Act 1895.

Any such reference shall be duly made, if and when a notice in writing that the Minister has referred the case to the land appeal court is given to the registrar of the said court, and no provision of this Act in respect of the lodging of appeals shall apply to the giving of such notice; but the land appeal court shall deal with the matter of such reference in the same way, and the rights and liabilities of the Crown in respect of such reference shall be the same as if such reference were an appeal by the Crown.

Nothing in this section contained shall affect any remedy by writ of prohibition, or mandamus, or in the nature of a mandamus, which the law now allows to the Crown or any person against a local land board.

Summonses to witnesses.

24. In any case it shall be lawful for the president or in his absence any member of the land appeal court or the chairman of any land board to summon and compel the attendance of any person whose evidence

Witness may be summoned and examined on oath. Sec. 9, Act 1889.

evidence such court or board may desire to hear, and to examine him, or allow him to be examined, upon oath, and to cause his examination to be reduced to writing and signed by him, and require him to produce any document relating to the matter in question in his possession or control.

No question put to any witness before the land appeal court or any land board shall be deemed to be unlawful by reason only that the answer thereto may expose him to any forfeiture or penalty under this or any repealed Act: Provided that no examination, or any answer thereto, shall be admissible in evidence against the witness in any criminal proceeding other than a prosecution against him for perjury, or for giving false answers, or making false declarations.

If any person who has been summoned as aforesaid by the chairman of the local land board, or subpoenaed as a witness in any proceeding before such board, and who has had payment or tender of his reasonable expenses made to him neglects to appear; or if any person summoned, subpoenaed, or examined as a witness in any such proceeding refuses to be sworn, or to make affirmation, promise, or declaration in lieu of an oath, or prevaricates in his evidence, or refuses to answer any lawful question, or to produce any document in his possession or control relating to the matter in question, which he has been summoned or subpoenaed to produce, or which is then in his possession or control, or to sign his examination when reduced into writing, it shall be lawful for the chairman to commit such offender to gaol for any time not exceeding *three* months, or to impose on any such offender a fine not exceeding *one hundred* pounds; and in default of immediate payment thereof to commit the offender to gaol for any time not exceeding *three* months unless the fine be sooner paid.

In any of the cases aforesaid a warrant in the form contained in the Third Schedule (A) hereto shall and may be issued by such chairman, and shall be good and valid in law without any other warrant, order, or process whatsoever; and the sheriff, his deputy, and all officers of the police force, and gaolers, to whom the same shall be addressed, shall obey the same.

Where any person who has been duly summoned or subpoenaed to attend as a witness before the local land board, and who has had payment or tender of his reasonable expenses made to him, fails to appear in obedience to his summons or subpoena, the chairman, upon proof of such person having been duly served with such summons or subpoena, and upon proof also that such person's non-appearance was without just cause or reasonable excuse, may issue a warrant in the form or to the effect of the Third Schedule (B) hereto to bring such person before the local land board to give evidence.

Rents and values.

Determination of
rents, values, &c.
Sec. 6, Act 1889.

25. Whenever any rent or license fee, or the price of any Crown land (other than of land to be sold or leased by auction, by tender, or by conditional purchase) is to be determined, or whenever this section is expressly referred to in connection with the determination of any value, an appraisalment of the same shall be made by the local land board, and any such appraisalment may be appealed against in the prescribed manner.

On receipt of any appraisalment not so appealed against, the Minister shall either accept the same or, within one calendar month, refer it to the land appeal court with a statement of his reasons for so doing.

The land appeal court shall, both in cases of appeal and reference, determine the amount of such rent, fee, or price, and the amount

amount so determined shall be final and conclusive: Provided, however, that, if it appears to the Minister that further consideration or inquiry is necessary, he may return the case to such land appeal court for such purpose, and the determination of the land appeal court thereupon shall be final and conclusive.

In any appraisalment or reappraisalment under this Act or under the previous Acts, the rent or license fee of the holding in respect of which such appraisalment or reappraisalment is made shall be assessed, irrespective of the unexhausted value of improvements then existing on such holding, and effected or owned by the lessee.

Appraisalment or reappraisalment of rent or license fee of holding.
Sec. 53, Act 1895.

The unexhausted value means the fair cost of making the improvement, less depreciation in value from use or otherwise.

Classification and Survey of Crown Lands.

26. For the purpose of effecting a proper classification of Crown lands, the Governor shall have power, after such inquiry and report as may be deemed expedient, to declare by notification in the *Gazette* that the Crown lands comprised within any tract or area to be described in the notification shall be set apart for holdings (whether by way of purchase, lease, or otherwise) of the kinds which are specified in the notification; and thereupon the Crown lands comprised within the tract or area so described shall cease to be available, and any lands within the tract or area which may thereafter become Crown lands shall not become available for the purpose of any application for a holding of a kind not specified in the notification, except as hereinafter provided.

Power to classify Crown lands.
Sec. 10, Act 1895.

For the purpose of effecting a proper survey and subdivision of Crown lands, the Governor shall have power to declare by notification in the *Gazette* that the Crown lands comprised within any tract or area to be described in the notification shall not be available for the purposes of any application until a further notification has been published in the *Gazette*; and thereupon the Crown lands comprised within the tract or area so described shall cease to be available, and any lands within the tract or area which may thereafter become Crown lands shall not become available for the purposes of any application, until such further notification has been published, or, if such further notification specify a future date, then until such date.

Power to withhold Crown lands until survey effected.

Any notification under this section (or any notification under the previous Acts) may in the like manner be corrected, amended, modified, or revoked, whether as to the whole or any part thereof; and it shall be sufficient for the purposes of any such notification if the description of lands is in any form of general description:

Provided always that no such notification shall affect—

- (a) the reservation or dedication for public purposes of any Crown lands; or
- (b) the granting or renewing of occupation licenses and annual leases, unless the same be expressly excluded; or
- (c) any lease in existence at the date thereof.

What deemed Crown Lands under "Mining Act of 1874."

27. All Crown lands comprised in any tracts or areas which may be set apart for certain specified kinds of holdings, under sections twenty-six, forty-one, and one hundred and fifty-nine of this Act, shall be and be deemed Crown lands for the purposes of the "Mining Act, 1874," and any Act amending the same.

Crown lands set apart for specified holdings to be deemed Crown lands for purposes of Mining Act.
Sec. 12, Act 1895.

Qualifications,

**Qualifications, disqualifications, and limitation as to selecting,
leasing, &c.**

Cases in which a second selection may not be made.
Sec. 22, 1884, and 21, Act 1889, 40, Act 1895.

28. No person who, on or after the first day of January, one thousand eight hundred and eighty-five, and before the first day of June, one thousand eight hundred and ninety-five, has made a conditional purchase shall make another, except by way of additional conditional purchase in virtue of an original purchase as hereinafter provided, unless he has first received a certificate from the local land board of fulfilment of all the required conditions (except payment of balance of purchase money), or that having made such conditional purchase *bonâ fide* and solely in his own interest he had been compelled through adverse circumstances to vacate or abandon the same, or unless (notwithstanding the non-obtaining of such certificate) the Minister shall approve of such person making another conditional purchase as aforesaid.

The mere fact that forfeiture of a conditional purchase has before or after the commencement of this Act been notified shall not bar the issue of the certificate of abandonment referred to.

The privilege of selecting, &c., when exhausted.
Sec. 40, Act 1895.

29. No person who, on or after the first day of June, one thousand eight hundred and ninety-five, has applied, whether before or after the commencement of this Act, for an original conditional purchase, or a homestead selection, or a settlement lease, or an original homestead lease, and has obtained a title thereto in pursuance of such application, shall be qualified to apply for another holding of that class whether of the same kind as, or of a different kind from, the holding first applied for, unless he has previously obtained a certificate as prescribed that he was compelled by adverse circumstances to abandon or to surrender the holding first applied for, or unless (notwithstanding the non-obtaining of such certificate) the Minister shall approve of such person making another holding as aforesaid.

For the purposes of this section title in pursuance of an application shall be taken to have been obtained—in the case of a homestead selection, settlement lease, and original conditional purchase—when the application has been confirmed by the local land board, and in the case of a homestead lease when the approval of the issue of the lease has been notified in the *Gazette*, and a valid notice of non-acceptance has not been duly given :

Provided always that if the holding first applied for were a settlement lease or an original homestead lease, the disqualification enacted by this section shall cease to operate upon the expiration of the term of the lease by effluxion of time, or if the lease have been forfeited, surrendered, or otherwise sooner determined, then upon the expiration of the period which the term of the lease would have had to run, but for such forfeiture, surrender, or other sooner determination :

Limitations as to non-residential conditional purchases.

Non-residential selections.
Sec. 47, Act 1884.

30. No person shall make more than one original non-residential conditional purchase.

No person who has made or shall make an original non-residential conditional purchase shall be permitted to make any other conditional purchase whatsoever, except by way of additional purchase by virtue of an original non-residential conditional purchase.

No person who has made any conditional purchase at any time, whether before or after the commencement of this Act, shall be permitted to make or to hold a non-residential conditional purchase.

Limitations

Limitations based on area already held.

31. No person shall be competent to apply for an original conditional purchase or a homestead selection, or an original homestead lease, or a settlement lease, who—

Disqualifications by reason of area already held.
Sec. 41, Act 1895.

- (a) at the date of application owns; or
- (b) owned at any time previous to the date of application, and fraudulently divested himself of the ownership thereof by transfer, conveyance, assignment, or otherwise, or purported so to do, in order to evade the foregoing provision;

an area of land (and for the purposes of the foregoing provision lands granted in fee simple, or conditionally purchased, or conditionally leased, from the Crown shall alone be taken into account), which area, added to the area of the holding applied for, exceeds as a total area the maximum area permitted by law to the class of holding applied for.

Persons not natural-born or not naturalised.

32. A person who is not a natural-born or naturalised subject of Her Majesty shall not be qualified to apply for an original conditional purchase, or a homestead selection, or an original homestead lease, or a settlement lease unless he has resided in New South Wales for one year, and at the time of making such application has lodged a declaration of his intention to become naturalised within five years from the time of making such declaration.

Persons not natural-born or naturalised.
Sec. 41, Act 1895.

If such person shall fail to become so naturalised within the period aforesaid, he shall absolutely forfeit all land the subject of his application, together with all the improvements thereon.

Married women.

33. Any married woman who is, under an order for judicial separation made by any court of competent jurisdiction, living apart from her husband, may, out of moneys belonging to her for her separate use, select, purchase, or lease land, conditionally or otherwise; and such land shall form part of her separate estate, and she shall have the same powers of dealing with and disposing of the same, both at law and in equity, as if she were a *femme sole*, and her husband shall not be entitled to any interest in such land as tenant by the courtesy or *jure mariti*.

Married women.
Secs. 47, Act 1889;
14, Act 1895.

Except as aforesaid, a married woman shall not be entitled to lease or conditionally purchase Crown land under this Act:

Provided that nothing herein contained shall disentitle a married woman from holding any purchase or lease which may have devolved upon her under the will or intestacy of any deceased holder;

And further provided that if any conditional purchase has been made by an unmarried woman before or after the commencement of this Act, and she afterwards marry, she may continue to hold the same, and may make any additional conditional purchase or conditional lease during her coverture by virtue of any such conditional purchase or purchases.

Minors.

34. No person under the age of sixteen years shall be a conditional purchaser or homestead selector of Crown lands, but any person of or above that age (if under no legal disability except that of age) may be a conditional purchaser or homestead selector of such lands, provided that no person under the age of twenty-one years shall make a non-residential conditional purchase.

Minors.
Secs. 23, 47, and 124,
Act 1884, and 34,
Act 1889; 14, Act
1895.

No

No minor shall be capable of accepting or holding any lease or license under this Act or under the previous Acts except by way of inheritance, or except in so far as a minor, not less than sixteen years of age, is permitted to hold a conditional lease by virtue of a conditional purchase: Provided that a minor of or above the age of sixteen years (if of the male sex) may be a homestead lessee:

Minor may enter into certain agreements.

Sec. 123, Act 1884;
22 Act 1895.

Any person between the ages of sixteen and twenty-one years who, after the commencement of this Act, becomes the owner of a conditional purchase or homestead selection or conditional or homestead lease, and during his ownership either personally or by an agent enters into any agreement for or in relation to the performance of any work or rendering of any services on such purchase, selection, or lease, or in relation thereto, or to the loan of money or the sale or purchase of goods and chattels of any description whatsoever, or in like manner enters into any agreement connected with the occupation, management, or general purposes of such purchase, selection, or lease not being in violation of the provisions of this Act, shall be subject to the same liabilities and have the same rights in respect of such agreement as if he were of the full age of twenty-one years.

Applications shall be made in good faith.

Good faith in applicants.
Sec. 42, Act 1895.

35. Every application for a homestead selection or conditional purchase or for a settlement, conditional, or homestead lease, is hereby required to be made in good faith; and an application shall be taken to be made in good faith when the sole object of the applicant in making the application is to obtain the land or a lease thereof, as the case may be, in order that he may hold and use the land for his own exclusive benefit according to law.

The local land board shall disallow an application for any such holding as aforesaid, or in the case of a homestead lease shall recommend that the application be refused, unless it be satisfied that the application is made in good faith.

In any case where the local land board is satisfied that an application for any such holding as aforesaid has been made otherwise than in good faith, it shall have power to declare that any moneys lodged with such application shall be forfeited to the Crown, and the same shall be forfeited accordingly:

Provided always that the local land board shall not disallow an application for an additional conditional purchase or for an additional homestead lease as not having been made in good faith, merely because the original conditional purchase or original homestead lease is subject to a mortgage.

Every application for a conditional purchase or conditional or homestead lease, which was pending on the first day of June in the year one thousand eight hundred and ninety-five, shall be deemed to be within the provisions of this section.

Forfeiture for want of good faith.

Forfeiture for want of good faith.
Sec. 43, Act 1895.

36. In any case where an application for a homestead selection, or a conditional purchase, or for a settlement or conditional lease has been confirmed, or an application for a homestead lease has been recommended for approval after the first day of June, in the year one thousand eight hundred and ninety-five, or after the commencement of this Act, and it appears to the satisfaction of the local land board—

- (a) that the application was not made in good faith; or
- (b) that the land is not held or used for the exclusive benefit of the selector, purchaser, lessee, or apparent owner thereof,

the

the Governor shall have power to forfeit, by notification in the *Gazette*, the selection, purchase, or lease in question, together with all moneys paid thereon.

Nothing in this section contained shall affect any person acquiring any interest in a homestead selection, conditional purchase, settlement lease, conditional lease, or homestead lease after the same becomes capable of being transferred, unless he has, before acquiring such interest, had notice of a violation of the provisions of the last preceding section, or of section forty-two of the Crown Lands Act, 1895, or of the intention to institute an inquiry as to such violation.

Any person who, before the issue of a certificate of conformity in respect of a conditional purchase, whether made at any time before or after the commencement of this Act, under this Act or the previous Acts, takes a transfer or conveyance thereof, or of any interest therein, shall be held to have taken the same with notice and knowledge of all facts and matters by reason of which such conditional purchase may be liable to be forfeited or declared void.

Certain contracts void.

37. Every devise, contract, lease, agreement, or security made, entered into, or given before, at, or after the date of any application to make a conditional purchase, or a homestead selection, or a conditional lease, or a homestead lease, with the intent or having the effect of enabling any person other than the applicant to acquire by purchase or otherwise the land applied for, shall be illegal and absolutely void both at law and in equity.

Devise, contract, lease, or security void in certain cases.
Sec. 121, Act 1884;
22, Act 1895.

The provisions of this section, so far as they apply to homestead selections, shall apply to those selections only until the grant thereof.

Illegal contracts a misdemeanour.

38. If any person knowingly and with intent to defeat or evade or commit any fraud upon the provisions or purposes of this Act shall induce or make use of any other person to make any conditional purchase or homestead selection, or to execute any will, or to enter into any contract, lease, or agreement declared by this Act to be illegal, or to become the purchaser, selector, lessee, or licensee of any land otherwise than for the use, benefit, and advantage of such purchaser, selector, lessee, or licensee, the person so offending shall be guilty of a misdemeanour, and shall be liable to be imprisoned and kept to hard labour for any term not exceeding two years and not less than three months.

Illegal contract a misdemeanour.
Sec. 122, Act 1884;
22, Act 1895.

The provisions of this section, so far as they apply to homestead selections, shall apply only until the grant thereof.

Penalty for false declarations, &c.

39. If it be proved by inquiry before the local land board that any statement in writing or any statutory declaration or evidence on oath has been made or given for the purpose of misleading any officer, authority, or person in the exercise of his duty or office under this Act, or under the previous Acts, or that any such statement, declaration, or evidence wilfully misrepresents facts, or that any fraudulent attempt has been made to prove that the conditions of this Act or the previous Acts have been complied with, then and in any such case the Minister may declare any conditional purchase or homestead selection or leasehold in connection with which such statement, declaration, or evidence was made or given to be forfeited, together with all moneys paid on account of or in connection with such

Liability to forfeiture for misleading statement, &c.
Sec. 135, Act 1884;
22, Act 1895.

conditional purchase, homestead selection, or lease: Provided that in the case of a conditional purchase no forfeiture shall be held to affect any transferee unless declared within twelve months after the local board has issued a certificate in accordance with the provisions of this Act or the previous Act that the conditions attaching to such conditional purchase have been fulfilled.

The provisions of this section, so far as they apply to homestead selections, shall apply to those selections only until the grant thereof.

Conflicting Applications—Ballot.

Priority of conflicting applications to be determined by ballot. Sec. 11, Act 1889; 7 of Vic. 55 No. 1; and 38, Act 1895.

40. When any applications lodged with the land agent at the same time are (or appear to the land agent to be) conflicting (whether severally or collectively), he shall determine by ballot in the prescribed manner the priority of the applications.

Where the land agent has omitted to hold a ballot, or has held a ballot but not in the prescribed manner, the local land board may direct the land agent to hold a ballot or a fresh ballot as the case may be.

Conflicting applications shall be dealt with by the local land board in the order of their priority as determined by ballot.

Applications for conditional purchases and conditional leases of the same series shall, for the purposes of any ballot, be deemed to form together a single application for the whole of the land comprised within the said applications taken conjointly.

Sec. 18, Act 1895.

In the case of homestead selections a conflicting application from a person intending to personally perform the obligation of residence shall in all cases have priority over any application for a homestead selection without residence before grant.

Any applicant shall be at liberty, either before or immediately after the ballot, to withdraw his application, and thereupon to receive from the land agent a refund of any moneys paid to such agent in connection therewith; but an application for a conditional purchase or conditional lease, which upon a ballot being had, has been or shall be determined to have priority over all other applications included in such ballot, shall not be withdrawn without the approval of the local land board in accordance with section sixty-eight of this Act.

The fact that two or more applications for conditional purchases or conditional leases included in any ballot for priority have been or shall be made by different applicants for the benefit of one and the same person shall be *prima facie* evidence that none of such applications has been made *bona fide* and for the applicant's sole use and benefit.

HOMESTEAD SETTLEMENT PROVISIONS.

Subdivision for Homestead Selections.

Homestead selection areas. Sec. 13, Act 1895.

41. The Governor may, subject to the provisions of and under the power conferred by section twenty-six of this Act, set apart any tract of Crown lands for disposal by way of homestead selection; and any tract of Crown lands so set apart shall be dealt with as follows:—

- (I) A subdivision shall be made thereof into blocks, no one of which shall be more than one thousand two hundred and eighty acres in area, and the standard to be adopted in regulating the area of each such block shall be that the selector thereof may, by agriculture or by agriculture combined with any other ordinary pursuits, be enabled to establish and maintain his home thereon.
- (II) A valuation of the said blocks shall be made according to the capabilities and situation of the land, and in making such valuation

- valuation due regard shall be paid to the tenure of the holding and to the intention of these provisions that the selector may be enabled to establish and maintain his home thereon.
- (III) The value to an incoming tenant of any improvements on any such block may be appraised by the Minister after inquiry and report by the local land board in the prescribed manner, and such appraisal shall, as between the Crown or the owner of the improvements, as the case may be, and any person selecting the said block, be conclusive evidence of the value of the improvements at the date of the appraisal.
- (IV) A notification by the Minister shall be published in the *Gazette*, and in a local newspaper, giving particulars of the said blocks and of their respective areas and values, and of appraised value of any improvements thereon, and specifying a date from and after which the said blocks shall be available for selection; the value and area specified in the said notification, in respect of any block, shall be taken to be the capital value and area thereof for all purposes of the rent hereinafter provided.
- (V) The Minister may also notify that special conditions as to drainage, irrigation, the clearing, cutting, preservation, or planting of timber, or such other matters as require to be regulated in the public interest, will be made conditions of a homestead selection of any such block, and will be inserted in the grant of any such block when issued. Any such notification under this or the preceding subsection may be corrected, amended, modified, or revoked by notice in the *Gazette*.
- (VI) The setting apart of any tract of Crown lands for disposal by way of homestead selection and the notification required by this section may, whenever it shall be deemed expedient, be effectuated by one and the same notification in the *Gazette*, and in any such case any preliminary notification shall be deemed to have been unnecessary. Any subdivision whether made before or after any notification under this section or section twenty-six of this Act may be taken to be a subdivision within the meaning of this section, and one or more measured portions may by notification under this section constitute a block.

Applications for Homestead Selections.

42. From and after the date specified in the aforesaid notification, any person, who is not disqualified, may apply for any block so notified as a homestead selection. The application shall be made and lodged in the prescribed manner, and shall be accompanied by a half year's rent in advance and a survey fee according to the prescribed scale; or if the applicant desires to defer the payment of the survey fee, then by one-third of the total amount thereof.

The applicant for a homestead selection shall, upon the day appointed, satisfy the local land board that he or she is qualified, and that the application has been made in accordance with the provisions of this Act. The local land board shall confirm the application if so satisfied, unless it permits the applicant to withdraw the same. The local land board shall disallow any application if not so satisfied.

The title to any homestead selection applied for after the commencement of this Act shall commence from the date of application therefor,

Application and confirmation.
Sec. 14, Act 1895.

Commencement of title of homesteads, selections, and settlement leases.
59 Vic. No. 26.

therefor, if valid, and any such application shall withdraw such of the land therein described as may be available for the purpose from any annual lease or occupation license under which it may be held: Provided that the land agent shall, within one week of the receipt of any such application, notify the same through the post to the holder of any annual lease or occupation license within which the land applied for, or any part thereof, may be situated.

Sec. 22, Act 1895.

Except as against the Crown, any land which shall be applied for as a homestead selection, and for which the application is valid, shall be deemed to be land contracted to be granted, and, except as aforesaid the receipt of the said application shall be deemed to be a sale of the said land.

Trespass and Impounding on Homestead Selections.

Trespass by stock on unfenced lands. Sec. 55, Act 1895.

43. No person occupying land under a homestead selection shall—

- (a) bring an action for trespass committed by stock upon the said land, whether before or after the commencement of this Act;
- or
- (b) impound any stock trespassing upon the said land, unless the said land or the portion thereof trespassed upon was, at the date of the trespass, enclosed with a fence reasonably sufficient to keep out stock:

Provided always that nothing in this section contained shall apply to any trespass wilfully caused, or refer to any homestead selection for which a grant has been issued at the date of such trespass.

Conditions precedent to a grant.

Conditions to be performed. Sec. 15, Act 1895.

44. The applicant shall perform, to the satisfaction of the local land board, the following conditions, which shall be taken to be conditions precedent to the right to a grant:—

- (a) He shall within the prescribed time pay the balance (if any) of survey fee; and
- (b) He shall pay the value of the improvements as appraised, and interest on such value at the rate of four per centum per annum, the payment being made in four equal yearly instalments, at the dates and in the manner prescribed; and
- (c) He shall, within three months after the confirmation of his application, commence to live upon the homestead selection, and shall continue to have his home and place of abode there until the issue of the grant: Provided always that if the applicant die or be declared a lunatic, or become an insane patient within the meaning of the Lunacy Act of 1878, and the Acts amending the same, this condition may be performed by any member of his family or any other person to be approved by the local land board. The local land board shall have power to grant leave to the applicant to cease living upon the selection for such necessary causes as may be prescribed, and for such period as may be determined; and
- (d) He shall within eighteen months after the confirmation of his application erect upon the homestead selection and thereafter maintain a dwelling house of not less than twenty pounds in value; and
- (e) He shall at the prescribed date or dates pay an annual rent which shall be computed from the date of application and shall amount to one and a quarter per centum of the capital value of the block; the said rent shall be paid in two equal half-yearly instalments in advance; and
- (f)

Sec. 60, Act 1895.

- (J) He shall perform and observe the special conditions (if any) which have been notified by the Minister as hereinbefore provided.

Inquiry by Local Land Board.

45. The local land board may at any time inquire as to the performance of any condition; and at the expiration of five years from the confirmation of the application the local land board shall hold an inquiry whether the applicant has, up to the date of the inquiry, duly performed all conditions as aforesaid. Local land board to be satisfied of performance. Sec. 16, Act 1895.

If, upon the final inquiry, the applicant satisfies the local land board that he has, up to the date of the inquiry, duly performed all the said conditions, it shall issue to him a certificate to that effect.

If at any time the local land board is not satisfied that the applicant is duly performing any condition, or if upon the final inquiry the board is not satisfied that he has duly performed all conditions as aforesaid, the Governor may, by notification in the *Gazette*, forfeit the applicant's interest in the homestead selection, and thereupon the applicant's right to continue in occupation shall wholly cease and determine. The like notification may be made in any case where the applicant fails to duly pay the aforesaid rent or the balance (if any) of survey fee.

Homestead Grants.

46. The Governor shall issue a grant of the homestead selection (to be termed a homestead grant) to an applicant who has duly obtained a certificate from the local land board; and the Governor may, upon the expiration of five years from the date of the confirmation of the application, issue a grant to an applicant who has failed to obtain the said certificate in any case where the local land board reports that the applicant is nevertheless deserving of the grant. The grant of a homestead selection. Sec. 17, Act 1895.

- The grant of a homestead selection shall contain provisions for— The obligations under the grant.
- (a) The annual payment by the grantee, his heirs and assigns for ever of a perpetual rent, the yearly amount of which shall be two and one-half per centum of the capital value of the homestead selection as fixed under this Act; and
 - (b) The performance by the grantee, his heirs, and assigns for ever of an obligation to live upon the homestead selection, having his or their home and place of abode there; and
 - (c) Forfeiture to the Crown of the lands granted in case the obligation to live thereon or to pay any sums due as rent be not duly performed.

The obligations to live on the lands granted and to pay rent shall be incidents in perpetuity of the tenure of the lands held under a homestead grant; and the provisions to be inserted in a homestead grant for the purpose of defining the said incidents of tenure and securing the due performance thereof shall be in such form as may be prescribed.

The value of the homestead selection shall for the first period of ten years after the issuing of the grant thereof be the value, as notified in accordance with the provisions hereinbefore contained, and for every succeeding period of ten years shall be determined, irrespective of improvements, in accordance with the provisions of section twenty-five of this Act.

The Governor may from time to time by regulations define the minimum period of living on the land in each year which shall be taken to satisfy the aforesaid obligation, being not less than seven months in every year; and may in the like manner provide for the granting Regulations as to the performance of obligation to reside.

granting of exemptions from the performance of the aforesaid obligation or for the relaxation thereof in such cases of inability, difficulty, or hardship as are likely to arise, and may attach such conditions to the granting of an exemption or relaxation as may appear desirable to secure the proper user of the land and to carry out the policy of this Act, but no such exemption or relaxation shall be granted for more than one year either retrospectively or in advance.

In any case where, in pursuance of the regulations for the time being in force, an exemption or relaxation has been granted, and the conditions, if any, of such exemption or relaxation fulfilled, a forfeiture shall not be enforced for the non-performance of the obligation to live on the lands granted during the period of such exemption or relaxation.

The Governor shall not have power to discharge, release, or abrogate the obligation to live upon the lands held under any such grant or to pay the rent, and the acceptance of rent shall not of itself constitute a waiver of any forfeiture which may have accrued.

The grant of a homestead selection may contain provisions to secure the creation and maintenance of channels for drainage or irrigation purposes, and the preservation or planting of trees for timber and shade, and such reservations of rights, powers, minerals, and materials as may appear to the Governor necessary in the public interest.

Upon the forfeiture to the Crown of any lands held under a homestead grant, the Registrar-General shall make an entry of such forfeiture upon the folium of the register containing such grant, and the holder of the duplicate copy of such grant shall deliver up the same to the Registrar-General for the purpose of being cancelled.

No transfer of the lands described in a homestead grant shall be registered by the Registrar-General unless the Minister certifies, in the prescribed form, that all the obligations of the grant have been duly fulfilled up to the date of such certificate, and the registration of such transfer shall be evidence of the fulfilment of all the obligations under the grant up to the date of the aforesaid certificate.

Homestead Selections with residence by deputy before grant.

Homestead selections
without residence
before grant.
Sec. 18, Act 1895.

47. In any case where the applicant for a homestead selection is debarred by his calling from living on the selection, the condition precedent may, until issue of a grant, be performed by a deputy, to be approved by the local land board; but in every such case—

- (a) The application shall be expressed to be made under the provisions of this section, and the full amount of survey fee shall be paid therewith; and the applicant shall, before his application is confirmed, satisfy the local land board that his calling prevents him living on the selection, and that he ultimately intends to establish his home thereon; and
- (b) A deputy to be approved by the local land board shall perform the condition of living on the selection; and
- (c) The annual rent, until issue of the grant, shall be three and one half per centum of the capital value; and
- (d) The dwelling house to be erected and maintained shall be not less than forty pounds in value; and
- (e) The applicant shall, within three years after the confirmation of the application, have not less than one-tenth of the area of the homestead selection in full tillage, and shall during the fourth and fifth years after the confirmation have one-fifth of such area in full tillage, to the satisfaction of the local land board.

Save

Save as aforesaid, all provisions as to homestead selections shall apply to a homestead selection under this section, and the grant thereof when issued shall be in the same terms as the grant of a homestead selection in other cases: Provided always that a conflicting application from a person intending to personally perform the obligation of residence shall in all cases have priority over any application under this section lodged at the same time.

Dispensation of requirements of residence in certain cases.

48. If a number of homestead selectors, embracing at least twenty families, with a view to greater convenience in the establishment of schools and churches, and to the attainment of social advantages of like character, ask to be allowed to settle together in a hamlet or village adjacent to their selections, the Governor may, in his discretion, vary or dispense with the requirements as to residence upon the homestead selection and substitute residence in such hamlet or village, subject to such conditions as he may prescribe.

Dispensation of requirements of residence in certain cases.

Sec. 19, Act 1895.

Surrender, &c., of Homestead Selections.

49. The holder of an estate in fee-simple in possession in any lands granted under a homestead grant may, with the consent of the Governor, surrender the said lands to the Crown by an instrument in the prescribed form; the surrenderor shall be entitled to tenant right (as the same is hereinafter defined) in improvements existing at the date of such surrender upon the surrendered lands.

Surrender, &c., of a homestead grant and tenant right.

Sec. 21, Act 1895.

Upon the forfeiture to the Crown of lands granted under a homestead grant the Governor (upon application in the prescribed manner) may, by notification in the *Gazette*, grant the last owner of such lands tenant right (as the same is hereinafter defined) in improvements existing at the date of such forfeiture upon the forfeited lands.

Protection of Homestead Selections.

50. The owner for the time being of a holding consisting of a homestead selection, whether granted or ungranted (and whether applied for before or after the commencement of this Act) may, in any case where his home is established upon such holding, obtain for such holding protection under this Act by registering with the land agent for the district, or any other prescribed authority, an instrument in the prescribed form; and the land agent or other prescribed authority shall enter such particulars as may be prescribed in a book to be kept by him for the purpose, and such book shall be open to inspection by the public at such times and subject to such conditions as to payment of fees or otherwise as may be prescribed.

Protection of homestead selections.

Sec. 23, Act 1895.

Any holding protected under this Act—

- (a) Shall not be sold under any writ of execution issuing out of any Court; and
- (b) Shall not vest in any official assignee or trustee, or be ordered to be conveyed upon the bankruptcy of the owner thereof, or pass by any assignment for the benefit of his creditors; and
- (c) Shall not in any other way be taken from the owner thereof for the satisfaction of any debt or liability under process or constraint of law.

Any transfer, assignment, alienation, conveyance, charge, or incumbrance of a holding protected under this Act (or under the Crown Lands Act, 1895) shall be absolutely void, but nothing herein or therein contained shall affect the validity of any such charge or incumbrance created before the holding, which is the subject thereof, was registered.

Registration

Registration shall not have the foregoing effect, if the owner is in insolvent circumstances at the date thereof; and the protection shall cease as to any holding—

- (a) When the owner ceases to live thereon as his home; or
- (b) When he obtains for another holding protection under this Act; or
- (c) When the owner transfers the holding :

Provided always that nothing in this section contained shall

- (a) Exempt the holding, or part thereof, or interest therein, from levy or sale for rates or taxes hereafter to be legally imposed ; or
- (b) Affect any remedy for any cause of action accruing before the registration, or for any breach of trust, or for any debt for rent, instalments of purchase money, or interest due to the Crown, or any power of forfeiture.

Conditional purchases and conditional leases.

What land open to conditional sale and conditional lease.
Sec. 22, Act 1884.

51. All Crown lands if not within any of the classes of exemption specified in section fifty-three of this Act shall be open to conditional sale, and all Crown lands if not within any of the classes of exemption specified in section fifty-four of this Act shall be open to conditional lease under and subject to the provisions and conditions of this Act.

Conditional purchase with or without residence.
Secs. 47, Act 1884; 29, Act 1895.

52. A conditional purchase may be made subject to a condition of residence or exempt from a condition of residence; but in the case of a non-residential conditional purchase the deposit price and annual instalments shall be double such as would be required in the case of a residential conditional purchase, and such non-residential conditional purchase shall be subject to the special provisions and conditions hereinafter set forth.

Classes of exemption from conditional purchase.

What lands exempt from conditional purchase.
Secs. 21, Act 1884; 10, 19, 25, Act 1889.

53. Crown lands belonging to any of the classes hereinafter specified shall be exempt from conditional sale under this part. And for the purposes of this section it shall be immaterial whether the proclamation, dedication, reservation, setting apart, notification, lease, or application herein mentioned in connection with any such lands was made under this Act, or under the previous Acts, or under any repealed Act—

- (I) Lands held under conditional lease except by the conditional leaseholder having a preferent right of purchase as specially provided by this Act, or the previous Acts, or to which a right of conditional lease is attached; provided that no right to conditionally lease land shall be held to attach to land until application for the conditional lease shall be made.
- (II) Lands within the Western Division unless within special areas, or unless held by the conditional purchaser under conditional lease and not otherwise exempt from conditional sale.
- (III) Lands comprised within leasehold areas.
- (IV) Lands reserved or set apart for town or suburban lands or for village sites, except as provided in section fifty-seven of this Act
- (V) Lands reserved from sale or dedicated, reserved, or set apart for any public purpose other than as aforesaid.
- (VI) Lands in proclaimed gold-fields within areas reserved from conditional sale.
- (VII) Lands within population areas except as provided in section fifty-seven of this Act.

(VIII)

(VIII) Lands under lease or lawful occupation for mining purposes and lands of which a lease under any Act in force for the time being relating to mining has been applied for.

(IX) Lands held under any lease, other than annual lease, or than occupation license.

(X) Lands set apart for holdings other than conditional purchase or lands set apart for the purpose of effecting a proper survey and subdivision thereof under the provisions of section ten of the Crown Lands Act of 1895, or section twenty-six of this Act, provided that a notification that Crown lands are set apart for holdings of any kind shall not operate to prevent the lands situated within the tract or area so set apart being or becoming available for the purpose of an application for an additional conditional purchase, or a conditional lease of a series of which the original conditional purchase was made before the date of the notification in any case where—

Additional conditional purchases in classified areas.
Sec. 11, Act 1895.

(a) The application is made not later than forty days after the date of the notification—and

(b) The applicant has been for six months previously and still is in *bonâ fide* residence on some conditional purchase or conditional lease of the same series at the date of the notification :

Provided always that—

(c) The area which may be added to any series by all such additional conditional purchases and conditional leases shall not exceed the area sufficient, in the opinion of the Local Land Board, to enable the holder thereof by agriculture or by agriculture combined with any other ordinary pursuits to maintain his home thereon, and shall not, in any case, exceed the area which may be taken under this Act; and

(d) that such additional conditional purchases and conditional leases shall be taken so as to conform to the general design of the subdivision, if any, of such tract or area.

Classes of exemption from conditional lease.

54. Crown lands belonging to any of the classes hereinafter specified shall be exempt from conditional lease—

(I) Any land exempt from conditional purchase.

(II) Any land reserved from conditional lease specifically, or reserved from lease generally.

(III) Lands within any special area.

What lands exempt from conditional lease.
Secs. 48, Act 1884; 10 and 39, Act 1889.

Original conditional purchases not within Special Areas.

55. In the Eastern Division no application for an original residential conditional purchase shall be received for less than forty or for more than six hundred and forty acres, and in that Division no application for an original non-residential conditional purchase shall be received for less than forty or more than three hundred and twenty acres.

What areas may be purchased conditionally.
Sec 24 and 47, Act 1884.

In the Central Division no application for an original residential conditional purchase shall be received for less than forty or more than two thousand five hundred and sixty acres, and in that Division no application for an original non-residential conditional purchase shall be received for less than forty or more than three hundred and twenty acres.

Additional conditional purchases not within Special Areas.

What areas available for additional conditional purchase. Secs. 42, 47, 48, Act 1884; 19 and 25, Act 1889.

56. Any holder of any original conditional purchase may (by application before, at, or after the confirmation of the application relating to such original conditional purchase or any additional conditional purchase of the series) make additional conditional purchases of Crown lands adjoining the original or any prior additional conditional purchase or each other, and for the purposes of this section it shall be immaterial whether the original or prior additional conditional purchase were made under this Act, or under the previous Acts, or under any repealed Act, or partly under one and partly under any other, provided that—

- (a) No additional residential or non-residential conditional purchase in any Division shall be of a less area than forty acres;
- (b) In the Eastern Division an original residential and additional residential conditional purchases shall not exceed in the whole six hundred and forty acres unless such additional conditional purchases shall be made of land held under conditional lease, in which case the original and additional purchases shall not exceed in the whole one thousand two hundred and eighty acres; and in that Division an original non-residential and additional non-residential conditional purchases shall not exceed in the whole three hundred and twenty acres.
- (c) In the Central Division an original residential and additional residential conditional purchases shall not exceed in the whole two thousand five hundred and sixty acres; and in that Division an original non-residential and additional non-residential conditional purchases shall not exceed three hundred and twenty acres.
- (d) The payment to the Crown of the balance of purchase money due upon any conditional purchase or the issue of a grant in respect thereof shall not prevent additional conditional purchases being made, and conditional leases being granted, in the same way as if the said balance had not been paid, or the said grant had not issued; and it shall be immaterial whether the payment of the said balance or the issue of the said grant took place before or shall take place after the commencement of this Act.
- (e) No application to make any additional conditional purchase of Crown lands whatever by virtue of any holding under the previous Acts or under any repealed Act shall be entertained or dealt with otherwise than in accordance with the provisions of this Act.
- (f) No conditional purchase made under the provisions of section twenty-two of the Crown Lands Alienation Act of 1861 shall be deemed to be an original conditional purchase within the meaning of this section.

Payment of balance of purchase money, or issue of grant, not to affect power to extend series. Sec. 31, Act 1895.

Sec. 3, Act 1884.

Conditional purchases within special areas.

Conditional purchases in special areas. Secs. 24 and 42, Act 1894, 18, Act 1889.

57. It shall be lawful for the Governor, by proclamation in the *Gazette*, to set apart from time to time, in the Eastern and Central and Western Divisions any areas of Crown lands (not being within pastoral or homestead leases) to be called special areas, which it shall be lawful to conditionally purchase in such areas not exceeding three hundred and twenty acres in the Eastern, or six hundred and forty acres in the Central or Western Division, or in the case of non-residential conditional purchases not exceeding three hundred and twenty acres in any Division, and at such prices (not being less than thirty shillings per acre), deposits, and instalments as may be notified in the proclamation.

It

It shall also be lawful for the Governor, by proclamation in the *Gazette*, to set apart as special areas any lands within the suburban or population boundaries or population areas of any cities, towns, or villages, and such lands (without cancellation or revocation of such boundaries or areas) shall be open to conditional purchase on or after such dates, and in such areas, and subject to the payment of such prices, deposits, and instalments, and subject to the fulfilment of such conditions as to residence, improvements, fencing, or otherwise as may be specified in the proclamation. Any conditions so set forth shall have the force of law, and any breach thereof shall render the conditional purchase liable to forfeiture in accordance with this Act.

Special areas within suburban or population boundaries.

A conditional purchase may include land within a special area and adjoining land not within a special area.

An additional conditional purchase of land within a special area may be made by virtue of an original conditional purchase within a special area or by virtue of an original conditional purchase not within a special area.

An additional conditional purchase may be made of land not within a special area by virtue of an original conditional purchase within a special area :

Provided that in all cases—

- (a) the maximum area notified in the proclamation of the special area shall not be exceeded so far as regards such special area ;
- (b) where conditional purchases of the same series include land within two or more special areas, the total area of special area land shall not exceed three hundred and twenty acres in the Eastern Division or six hundred and forty acres in the Central or Western Division or in the case of non-residential conditional purchases three hundred and twenty acres within any Division ;
- (c) where conditional purchases of the same series include land within a special area and land not within a special area the aforesaid limitations shall apply with respect to the area of special area land, and the total area of the series shall not exceed the maximum areas limited by sections fifty-five and fifty-six of this Act ;
- (d) the privilege of making additional conditional purchases within suburban or population boundaries or population areas may be barred by the terms of the proclamation of the special area.

The Governor may at any time revoke or modify any proclamation, before or after the commencement of this Act, of any special area, or of any conditions applicable thereto, and any such revocation or modification shall take effect on proclamation in the *Gazette*.

Before any special areas are declared to be open for conditional purchase the same shall be surveyed, and shall, subject to the provisions of section sixty-nine of this Act, be taken in portions as measured.

Conditional leases.

58. Any applicant for an original or additional conditional purchase in the Eastern or Central Division, or any holder of an original or additional conditional purchase applied for after the first day of January, one thousand eight hundred and eighty-five, or after the commencement of this Act, in the Eastern or Central Division (not being a non-residential conditional purchase within either Division or a conditional purchase within a special area within the Eastern Division) may obtain a conditional lease, or additional conditional leases, to comprise (unless the Board shall allot a less area not being less

Application for conditional lease. Sec. 48, Act 1884; 26, Act 1889.

Inquiry in the matter of application for provisional reversal of C.P. 90-49, and conditional lease held in virtue of it, by the Assets Realization and General Finance Company.

THE decisions of the Local Land Board, at Nyngan, on 23rd October, 1894, 14th December, 1894, and 7th March, 1895, were tendered and received in evidence, and also the decision of the Land Appeal Court, No. 3,035, dated 2nd July, 1894.

W. C. CARDEW, Chairman.
DANIEL SOANE, J.P. } Members.
J. O. MACHATTE. }

Dubbo, 18th December, 1895.

Inquiry as to the matter of reversal of forfeiture *re* C.P. 90-49, Dubbo, now Nyngan, held by the Assets Realization and General Finance Company (Limited.)

Mr. Booth, solicitor, appeared for the Company.

MR. BURNS, of Nyngan, solicitor, applied to appear on behalf of one Jones, a subsequent applicant, on 25th September, 1895, for the land under inquiry.

[Mr. Booth objected to any appearance on behalf of Jones, on the grounds that he was no party to the proceedings.

Board sustained the objection].

W. C. CARDEW, Chairman.
DANIEL SOANE, J.P. } Members.
J. O. MACHATTE. }

Dubbo, 18th December, 1895.

Office Memorandum.

4 April, 1895.

Dubbo, now Nyngan.—C.P. 90-49; 640 acres; 20th February, 1890; confirmed 7th October, 1890; Henry Newell; transferred by the Sheriff to Adam Rae, 19th December, 1893.

THE facts in this case are set out in the *précis*, 94-5,729 Dep.

The Land Appeal Court, on 27th June last, recommended waiver of forfeiture of the conditional purchase.

The Minister, on 24th August last (*vide* 94-18,875 Dep.), expressed an opinion that he could not see any features in the case to warrant waiver of forfeiture, but before coming to a decision in the matter he desired that the Land Board should hold an inquiry as to Rae's *bona fides*.

The case was set down for hearing before the Board on three occasions, but Rae did not appear, owing, it is stated, to sickness.

On the last occasion the Board refused to grant a further adjournment, and took the evidence of Conditional-Purchase Inspector R. Sims, junr., and the Sheriff's officer, J. T. Steel, who sold Newell's right, title, and interest in the land.

The Board expressed no opinion as to Rae's *bona fides*, but forwarded the evidence for the information of the Minister.

In view of the evidence of Mr. Steel, and the letter from Mr. W. B. Wilkinson, which was read at the sale, there seems little reason to doubt that Rae or his agent (for Rae did not attend the Sheriff's sale) was aware of the fact that the original selector—Newell—did not comply with the conditions in connection with the conditional purchase.

Under the circumstances, it is submitted that there are no grounds for accepting the recommendation of the Land Appeal Court as to waiver of forfeiture, and that forfeiture be now notified.

ALFRED SALWEY,
Acting in Charge Division.

F. H. Wilson, Acting U.S., 5/4/95. Forfeiture may be notified.—J.H.C., 8/4/95. Aliancee informed, 18/4/95.

Office Memorandum.

Dubbo, now Nyngan.—C.P. 90-49; 640 acres, 20th February, 1890; confirmed 7th October, 1890; Henry Newell; transferred by the Sheriff to Adam Rae, 19th December, 1893.

On 22nd March, 1894, the Board held an inquiry subject to the 20th section, and found that the conditions of residence and fencing were not complied with by the original selector, Henry Newell, and recommended forfeiture of the conditional purchase.

Notice of appeal was lodged, and the matter came before the Land Appeal Court on 27th June, 1894, when the appeal was dismissed, but the Minister was recommended by the Court to waive the forfeiture incurred.

This recommendation was not, however, approved, as the Minister having gone through the papers could not see any features in the case to warrant waiver of the forfeiture incurred, but decided that before coming to a final decision an inquiry should be held by the Land Board as to Rae's *bona fides*, and as to the manner in which he had fulfilled the conditions since the date of the transfer to him (*vide* conditional sales 94-18,875 Dep.)

The case was set down for hearing before the Board on three occasions, but Rae did not appear owing, it is stated, to sickness. On the last occasion the Board refused to grant any further adjournment, and took the evidence of Conditional-Purchase Inspector R. Sims, junr., and the Sheriff's officer, J. T. Steel, who sold Newell's right, title, and interest in the land.

No decision was given by the Board as to Rae's *bona fides*, but the evidence taken was forwarded for the information of the Minister, who, on the 8th April, 1895, decided that forfeiture should be notified (*vide* conditional sales 95-7,878 Dep.), and, in accordance with this forfeiture, was gazetted on 31st July, 1895.

On the 4th September, 1895, a letter was received from the Assets Realization and General Finance Company (conditional sales 95-6,081 Cor.), asking for withdrawal of the forfeiture pending further inquiry in the matter, and pointing out that in their position as mortgagees they had advanced about £500 to Rae.

On

Provided that the land so purchased shall not, with any conditional purchases of the same series, exceed one thousand two hundred and eighty acres in the Eastern or two thousand five hundred and sixty acres in the Central or Western Division.

And in all such cases the remaining area of such conditional lease may be held at a proportionate part of the rental thereof, although such lease may, when taken with the land conditionally purchased, exceed one thousand two hundred and eighty acres in the Eastern, and two thousand five hundred and sixty acres in the Central or Western Division.

A refund of the rental shall not be granted, until after confirmation of the application for the additional conditional purchase, but, when granted, shall be calculated from the date of such application.

Unmeasured land to be marked prior to application, land and improvements to be described.

60. When the land to be applied for as a conditional purchase is unmeasured land the intending applicant shall before lodging his application mark some corner of such land in the prescribed manner, and shall in his application describe such land in such manner as to permit of its identification by the description.

Land to be marked before application.
Sec. 25, Act 1884.

If the land applied for has not a frontage it must be situated at a reasonable distance from a frontage.

When such land is measured land the applicant shall so describe it.

Description of measured and improved land.

And whenever the land so applied for contains improvements the applicant shall state that fact in his application and shall describe the nature and position of such improvements.

Tender of applications for Conditional Purchases and Conditional Leases.

61. Every application for an original conditional purchase shall be tendered by the applicant in person, and every application for an additional conditional purchase may be tendered by the applicant in person, or by any duly authorised agent to the land agent on some land office day.

Tender of application.
Secs. 24, 26, 47, Act 1884, 11, 18, 26, and 28, Act 1889.

With the application there shall be lodged with the land agent a declaration made by the applicant in the prescribed form, a fee in accordance with the prescribed scale for the survey of the area applied for, and a deposit at the rate of—

Deposit to be lodged with application.

two shillings per acre in the case of a conditional purchase other than a non-residential conditional purchase, or other than a conditional purchase within a special area ;

four shillings per acre in the case of a non-residential conditional purchase not being within a special area.

Such deposit in the case of a conditional purchase within a special area, as may have been notified in the proclamation of the special area, provided that the deposit in connection with a non-residential conditional purchase shall be double such as would be required in connection with a residential conditional purchase.

With any application for a conditional lease a deposit of two-pence per acre of the area applied for, and a survey fee according to a prescribed scale, shall be paid to the land agent. Applications for conditional leases or additional conditional leases shall be made in the prescribed manner.

If

Declaration by applicant.

If any person shall make a false statement in any such declaration as aforesaid as to any of the matters contained therein, he shall forfeit all moneys paid by him in respect of the land applied for, and all right and title to such land. And any conveyance, transfer, mortgage, or disposition of such land made by such person shall be null and void if taken with notice or knowledge of such false statement.

Sec. 20, Act 1889.

The declaration in connection with an additional conditional purchase may be made, in such form as shall be prescribed, by a duly authorised agent of the applicant; but if such agent shall wilfully make a false statement in such declaration, he shall be liable to the penalties in that behalf made and provided; and the forfeitures provided in this section shall be held to have been incurred by the person for whom such agent shall have acted.

Where a conditional purchase is held absolutely by a corporation, company, or partnership, any application for an additional conditional purchase or for any conditional lease or any prescribed declaration in respect thereof may be made by any officer of such corporation or company or officer or member of such company or partnership duly authorised for the purpose.

Application for additional conditional purchase may be made by mortgagor.

When the transferee of any land conditionally purchased before or after the commencement of this Act (or in the case of a corporation, company, or partnership, being such transferee, any officer of such corporation or company, or any officer or member of such company or partnership) has made, or shall make, a statutory declaration showing that the transferee holds such land by way of mortgage or security only, the owner (subject to such mortgage or security) of the said land, or such transferee, may make an application in the prescribed manner for an additional conditional purchase or conditional lease to be registered in the name of the transferee, subject to the conditions of the additional conditional purchase or conditional lease being fulfilled by the aforesaid owner. With any such application by the owner as aforesaid the written consent of the transferee shall be tendered to the land agent. Any land purchased or leased under this provision shall be subject to the same equity of redemption as the land by virtue of which the same may be purchased or leased.

Duties of Land Agent.

Receipt for deposit. Secs. 27 and 28, Act 1884.

62. The applicant who shall have duly complied with all prescribed requirements shall be entitled to a receipt from the land agent for the deposit paid by him.

Applications to be transmitted to local land board.

The land agent shall enter the particulars of all such applications, deposits, and declarations in a register to be kept by him in the prescribed manner, and shall thereupon transmit such applications to the local land board, together with all documents relating thereto, to be dealt with as hereinafter provided.

A list of all such applications so transmitted to the local land board shall be kept by such land agent in the prescribed manner, and be exhibited by him for public inspection in some conspicuous part of his office.

All applications so transmitted shall be dealt with by the said board sitting as in open Court on a day of which at least fourteen days notice shall be given in the prescribed manner.

Caveats against applications.

Caveats against applications. Secs. 30 and 31, Act 1884.

63. Any person claiming a right to land applied for under conditional purchase may in the prescribed manner and within the prescribed

prescribed time lodge a caveat with the local land board setting forth objections against the confirmation of any such application, and shall at the time of lodging the same, deposit with the board the sum of ten pounds, to be dealt with by the board as hereinafter provided.

All applications in respect of which caveats have been so lodged shall be dealt with at a meeting of the board, holden after the prescribed notice thereof shall have been given to the applicant and the caveator, at which meeting the board sitting as in open Court shall hear and determine the grounds of objection set forth in the caveat, and if the caveator be not present, or if the board shall consider that the objections are not sustained, it may order the deposit of the caveator or any part thereof to be paid to the applicant by way of compensation, or may make such other order in the premises as it may deem just.

The board may upon such terms as it may deem fit postpone the hearing of any application under caveat to some day of which the prescribed notice shall be given to the applicant and the caveator.

Unless the caveator shall give the prescribed notice of appeal to the land appeal court, and with such notice deposit the sum of five pounds with the local land board, the adjudication of such board shall be final and conclusive, but if such notice shall have been duly given and such deposit made, the appeal shall be heard and determined by the land appeal court.

Commencement of title. Effect of valid application on annual lease or occupation license.

64. The title to any conditional purchase or conditional lease applied for after the commencement of this Act shall commence from the date of application therefor, if valid.

Commencement of title to conditional purchase or lease. Sec. 12, Act 1889.

Any such application shall withdraw such of the lands therein described as may be available for the purpose from any annual lease or occupation license under which they may be held.

The land agent shall, within one week of the receipt of any such application, notify the same through the post to the holder of any annual lease or occupation license within which the land applied for or any part thereof may be situated.

If land be allotted in satisfaction thereof of a less area than, or in a different position from, that applied for, such of the land described as may not be allotted shall, at the date of confirmation of the application, revert to the lease or license.

Action by Chairman and Board.

65. Upon receipt from the land agent of any application for a conditional purchase or conditional lease, the chairman of the land board may refer the same to the district surveyor.

Confirmation, modification, or disallowance of application. Sec. 13, Act 1889.

If the land therein described is unmeasured, and appears to be available, and to be capable, as applied for, of being measured in a proper form, the district surveyor shall cause the same to be measured.

But if the land is not, or is only partly, available, or if any other objection appears to exist, the district surveyor shall so report.

The board shall thereafter deal with the application, either by refusing it, or permitting its withdrawal, or directing the survey of such land as may be proposed to be allotted, and for this purpose may, subject to the provisions of this Act, allot land in a modified or different position from that applied for.

Any allotted lands which are not described in the original application shall, so far as the withdrawal of the same is concerned, be deemed to have been applied for on the date of the confirmation.

When

When the land has been measured, if no sufficient objection exist, and the local land board be satisfied that the applicant has, *boná fide*, applied for the land for his own sole use and benefit, either wholly or subject to the provisions of section sixty-one of this Act, the board shall, in open court, confirm such application as made or modified, subject to payment as prescribed of any necessary extra deposit.

The chairman shall, within the prescribed time thereafter, issue a certificate of such confirmation.

The board, in open court, may, for sufficient reason, with or without a report from the district surveyor, and either before or after measurement of the land, disallow any application, wholly or in part.

Trespass and Impounding.

Trespass by stock on unfenced lands.
Sec. 55, Act 1895.

66. No person occupying land under a conditional purchase or conditional lease, or in virtue of an application for a conditional purchase or for a conditional lease shall—

(a) bring an action for trespass committed by stock upon the said land, whether before or after the commencement of this Act; or

(b) impound any stock trespassing upon the said land, unless the said land or the portion thereof trespassed upon was, at the date of the trespass, enclosed with a fence reasonably sufficient to keep out stock :

Provided always that nothing in this section contained shall apply to any trespass wilfully caused, or refer to any conditional purchase for which a grant has been issued at the date of such trespass.

Errors of description, &c.

Error in description not to invalidate purchase.
Sec. 57, Act 1884,
14, Act 1889.

67. No error or uncertainty in the description of land conditionally purchased either before or after the passing of this Act shall invalidate the purchase in any case where the local land board is satisfied that the land occupied by the conditional purchaser is the land intended to be described in his application.

And if the board shall notify to a conditional purchaser the description of the land purchased by him as finally approved by the board such notification shall be conclusive evidence that the land therein described is the land conditionally purchased.

No error, uncertainty, omission, or misdescription in any application for a conditional purchase or conditional lease, made before or after the commencement of this Act, or in any declaration made in connection with any such application, shall invalidate the application in any case where the local land board is satisfied that such error, omission, uncertainty, or misdescription was not wilful, and made with intent to deceive.

The board shall have full power to authorise the correction of any error or omission in any application or declaration, so as to bring the same into conformity with the statutory requirements.

Withdrawal of application.

Applications may be withdrawn after six months.
Secs. 12 and 15, Act 1889.

68. If an application for a conditional purchase or conditional lease shall not have been confirmed within six months from the date of such application, the applicant shall on giving, within one month after the expiration of such six months, the prescribed notice of withdrawal to the chairman, be entitled to withdraw the same and to receive a refund of moneys paid by him in respect thereof, unless the land board shall be of opinion that the application was not *boná fide*, or that the delay in obtaining confirmation was improperly caused or contributed to by the applicant,

Where

Where an application cannot be granted, except subject to modification, or where other sufficient reason may, in the opinion of the board, exist, the applicant may before or within twenty-eight days after confirmation withdraw his application, subject to the approval of such board.

In any case of withdrawal the board may deduct from the moneys deposited such amount as may be deemed necessary to defray the cost of survey and the expenses of dealing with such application.

The whole of the lands described in the application shall, at the date of approval of its withdrawal, revert to the lease or license from which the land may have been taken.

On the withdrawal, refusal, or modification of any application for a conditional purchase or conditional lease, the land ceasing to be affected thereby shall be held to have been available from the date of such application.

Any application made and not disposed of before such withdrawal, refusal, or modification as aforesaid, shall be dealt with as if the prior application had not been made.

Rules of measurement, &c.

69. Measured Crown land, upon being applied for as a conditional purchase or conditional lease, shall be taken in portions as measured, and if the area applied for, or any part thereof, is part of a measured portion, such portion may on approval by the local land board be subdivided, and the applicant shall pay the cost of survey for such subdivision, provided that in either case the limitations and provisions as to form of measurement of unmeasured land hereinafter contained shall, as far as practicable, be held to apply to applications for measured land. For the purposes of this section land measured originally for conditional lease under the fifty-second section of the Crown Lands Act, 1884, may be held by the local land board to be measured or unmeasured—

Measurement of land applied for under conditional purchase or conditional lease. Sec. 27, Act 1889.

- (I) No land shall be considered to be measured until the plan of the measurement shall have been approved by the district surveyor, or an officer duly authorised by the Minister in that behalf, of which approval the signature of the district surveyor, or such duly authorised officer on such plan shall be *prima facie* evidence: Provided that, where lands have been measured in pursuance of the provisions of the Crown Lands Act 1884, or any Act repealed thereby, and the plan of such measurement has been approved or accepted by the then surveyor-general, or some other officer, such lands shall, for the purpose of any of such Acts, or this Act, be considered measured lands.
- (II) Any land applied for as an original conditional purchase if unmeasured and having no frontage shall be measured in the form of a rectangle, the length of which shall not exceed twice the width; and if having frontage shall be measured with a breadth of frontage not exceeding one-half of the depth, and all such measurements shall have the boundaries, other than the frontage directed to the cardinal points. And any additional conditional purchase or conditional lease shall not, together or in combination with any original or previous additional conditional purchase or lease, have a greater breadth of frontage or length than as hereinbefore provided for an original conditional purchase of an area equal to the aggregate area of such original and additional conditional purchases or conditional

conditional leases; but whenever it shall appear necessary or desirable, the local land board may alter or modify the boundaries of any land applied for, or direct a measurement of the land as applied for, notwithstanding that such measurement may exceed the limitations or provisions of this section.

- (III) The intervention of any road, not being a frontage or intended frontage road, between an original conditional purchase and any additional conditional purchase or conditional lease shall not be an objection to the measurement of the land applied for, and in every such case the additional purchase or purchases or conditional lease shall be measured as herein provided. But no additional conditional purchase or conditional lease shall be allowed of land not on the same side of any frontage road or water-course or other prescribed frontage as the purchase or purchases, by virtue of which such additional conditional purchase or conditional lease is applied for, unless all the available land on that side has been exhausted. In the latter case such additional conditional purchase or purchases or conditional lease may be measured on the opposite side of such frontage as hereinbefore provided.

Modification of boundaries, &c.
Sec. 60, Act 1884.

Notwithstanding any of the provisions of this Act whenever it shall appear desirable to the local land board or the Minister, Crown lands may be measured across any frontage road, or intended or designed frontage road, and the boundaries of portions having frontages may be made approximately at right angles with the frontage and may be so applied for, and may be otherwise modified, although such modification may have the effect of altering the frontage or depth of any portion or the direction of any other boundaries thereof as hereinbefore prescribed, and the boundaries of portions having no frontages may be modified in like manner, and necessary roadways, trigonometrical stations, and sites for and sources of water supply may be excluded from any measurement.

Encroachments.

Power of adjustment where encroachments made on exempt lands.
Sec. 58, Act 1884.

70. In any case where any portion of land is found to encroach upon or be included within an area reserved or exempt from sale, or to encroach upon or be included within other land purchased, the title of the holder of or the claim of the applicant for any such purchase shall not be prejudiced or affected further than to the extent of the encroachment on or inclusion within such area if the residue be not less than forty acres.

Conditions to be fulfilled.

Residence to mean continuous and *bona fide* living on land.
Sec. 29, Act 1895.

Residence on original conditional purchases.

71. Residence for the purpose of this Part shall be taken to mean continuous and *bona fide* living on the land as the usual home, without any other habitual residence, of the holder of the conditional purchase.

Original purchases.

Term of residence.
Sec. 29, Act 1895.

72. The holder of any original conditional purchase (other than a non-residential conditional purchase) applied for after the first day of June, one thousand eight hundred and ninety-five, or after the commencement of this Act, shall hold the same, subject to a condition of residence, until the expiration of ten years from the date of the application for the conditional purchase, and the conditional purchaser shall, within three months from the date of confirmation of his application

application by the local land board, commence and thereafter continue to reside on his conditionally purchased land for the prescribed term :

Provided always that—

- (a) when a conditional purchase has been transferred *bonâ fide* by way of mortgage, the condition of residence may be performed by the owner subject to such mortgage ; and
- (b) when the beneficial owner of a conditional purchase dies, or is declared a lunatic, or becomes an insane patient within the meaning of the Lunacy Act of 1878, and the Acts amending the same, the condition of residence shall be suspended until the conditional purchase has been transferred or conveyed, and no longer.
- (c) When a conditional purchase has been transferred other than by way of mortgage after issue of a certificate by the land board that the conditions which attached to the conditional purchase during the first five years from the date of application have been fulfilled, the condition of residence shall be performed by each successive holder during such portion of the balance of the ten year period aforesaid as the conditional purchase may be held by such holder.

Residence on additional conditional purchases and leases.

73. The condition of residence defined in the preceding section shall attach to every additional conditional purchase or conditional lease applied for after the first day of June, one thousand eight hundred and ninety-five, or after the commencement of this Act, and it shall be immaterial whether the original conditional purchase of the series was made under this Act, or under the previous Acts, or under any repealed Act. The said condition shall not be taken to have been performed by the performance of the condition of residence which attached to the original conditional purchase, or any prior additional conditional purchase of the same series :

Residence on additional conditional purchases and conditional leases. Sec. 30, Act 1895.

Provided always that—

- (a) if the person fulfilling the condition of residence has, before the commencement of the term of such residence, continuously resided upon some purchase or lease of the same series, the term of residence shall be reduced by the period during which residence was previously carried on, but not so as in any case to be reduced to less than five years ; and
- (b) conditions of residence attaching to any number of purchases or leases of the same series may be performed concurrently ; and
- (c) a person residing upon any purchase or lease of a series shall, for the purposes of any conditions of residence, be taken to be residing upon every purchase or lease of the series ;
- (d) an additional conditional purchase if made out of a conditional lease, and if such conditional lease was applied for before the first day of June, one thousand eight hundred and ninety-five, shall not be subject to any condition of residence.

Sec. 30, Act 1895.

The performance of the aforesaid condition of residence in respect of an additional conditional purchase or a conditional lease shall be waived so long as the person, upon whom the performance of the said condition would for the time being devolve, is the person who applied for the original conditional purchase of the series and for the said additional conditional purchase or conditional lease. But this provision as to waiver shall not operate where the applicant for the additional conditional purchase or conditional lease—

- (a) has taken up a full area ; or
- (b) is the owner of a full area ; or

(c)

(c) has owned a full area at any time previous to the date of application, and has divested himself of the ownership thereof by transfer, conveyance, assignment, or otherwise, or purported so to do in order to obtain the benefit of the foregoing provision.

In the construction of the foregoing provision a full area shall be taken to mean an aggregate area of conditional purchases and conditional leases, whether of the same or different series, amounting to two thousand five hundred and sixty or more acres in the Central Division, or one thousand two hundred and eighty or more acres in the Eastern Division, or one thousand nine hundred and twenty or more acres if the said conditional purchases and conditional leases are some in one Division and some in another Division.

Residence by married women.

Residence by married women.
Sec. 47, Act 1889.

74. If any conditional purchase has been or shall be made by an unmarried woman, and she shall have married, or shall marry, prior to the completion of the term of residence required for her conditional purchase, it shall be a sufficient compliance with the previous Acts, or this Act (so far as residence is concerned) if she shall have resided or shall reside for the remainder of such term, either upon her conditional purchase or upon any conditional purchase held by her husband, for which his term of residence may not at the time have been completed.

Or the husband may complete any term of residence required for his conditional purchase upon any conditional purchase held by his wife for which her term of residence may not at the time have been completed.

In either case notice as prescribed shall be forwarded to the chairman of the land board on the conditional purchaser's intention so to reside.

Residence by minors with their parents.

Residence by minors.
Sec. 47, Act 1889.

75. In all cases where a minor shall have conditionally purchased land adjoining land held as a conditional purchase or conditional lease by the parent or parents of such minor, such minor may, up to the age of twenty-one years if a male, or twenty-four years if a female and unmarried, continue to reside with his or her parents on such adjoining land on making a declaration in the prescribed form to the local land board of the intention of such minor so to reside.

Such residence, if continuous and *bonâ fide*, shall be deemed to be a fulfilment of the conditions of residence within the meaning of this Act.

For the purposes of this section the word "adjoining" shall be deemed to include lands separated by roads or creeks or by conditional purchases or leases held by any child of the same parent.

Condition of fencing or improvements.

Condition of fencing or improvements.
Secs. 33, 43, 51, Act 1884; 9, 11, 13, 14, Act 52 Vic. No. 7; 4, 16, 17, 23, 24, Act 1889; 33, Act 1895.

76. Every conditional purchase (other than a non-residential purchase) and every conditional lease applied for after the first day of June, 1895, or after the commencement of this Act (or the application for which shall have been confirmed within two years before the date of passing of this Act) shall be subject, at the option of the purchaser or lessee, and without any application in that behalf to a condition of fencing, or in the alternative, to a condition of improvement.

77. Every non-residential conditional purchase shall be subject to a condition of fencing, and in addition to a condition of improvements, but the condition of fencing may be superseded by a condition of extra improvements on application (within two years from the date of confirmation of the application for the land) to and with the permission of the Land Board.

78. The following provisions shall apply with respect to the condition of fencing in connection with conditional purchases and conditional leases:—

- (a) The fence shall be erected on the exterior boundaries of each conditional purchase and conditional lease; or on the exterior boundaries of the conditional lease and the conditional purchase by virtue of which it shall have been granted; but all conditional purchases of the same series, and all conditional leases granted by virtue thereof, shall, for all purposes of fencing, be deemed to be one holding, and it shall be sufficient for the fence to be erected on the exterior boundaries of such holding so as to enclose the whole area. Original and additional conditional purchase one holding.
- (b) Where the conditional purchaser or conditional lessee elects to fence, the fence shall be a substantial one, and prescribed by the Land Board; but such Board shall not prescribe any fence likely to be a harbour or shelter for rabbits or such other animals as may, by the Minister, be declared by notice in the *Gazette* to be vermin. Local Land Board to determine kind of fence.
- (c) Subject to the provisions of the next succeeding subsection the fence shall in the case of a non-residential conditional purchase be erected within one year from the date of confirmation of the application for such purchase, and in the case of any other conditional purchase or any conditional lease the fence shall be erected within three years from the date of confirmation of the application for the purchase or lease.
- (d) Upon sufficient cause the Chairman or Board may on application extend the period within which the condition of fencing shall be fulfilled. Extension of period for fencing.
- (e) Where a condition of residence attaches to the conditional purchase or conditional lease the holder of the conditional purchase or lease shall maintain the fence in good repair and condition during the entire period of the term of residence.
- (f) The Chairman or the Board on the application of the purchaser or lessee may grant him an exemption from fencing any part of his land which has frontage to a permanent river, creek, or other natural boundary held by the Chairman or Board to be sufficient, or Exemption from fencing frontage to river, creek, &c. Sec. 33, Act 1884.

Any boundary line fenced by the holder or occupant of adjoining land with a fence, which in the opinion of the Chairman or Board is of a sufficiently useful and substantial kind, or Sec. 11, 52 Vic. No. 7.

Any boundary line in any case where a fence although not erected upon the actual boundary line is, in the opinion of the Chairman or Board, a sufficient boundary fence. Sec. 23, Act 1889.

79. Where in any case the unfenced sides of lands, whether held by different persons and under different conditions or not, are separated by a road or watercourse, the Chairman or the Board, on application being made to the Chairman in the prescribed form and within the prescribed time, may grant permission for such road or watercourse to be wholly or in part inclosed, provided that gates or suitable substitutes such as the Chairman or Board may consider necessary and direct, shall be erected or made so as not to unnecessarily interfere with any traffic, or, to any large extent, divert the natural flow of water. Roads and water-courses—special provisions to fences. Sec. 14, 52 Vic. No. 7.

Any

Any such gate may on application to, and approval of, the Minister who may administer the "Public Gates Act" be made a public gate within the meaning, and subject to the provisions of that Act. And nothing in the Public Gates Act shall be held to have prevented or to prevent the foregoing provision from having its full effect and operation.

Upon complaint being made in the prescribed form to the Chairman of the local land board, such board may, for any sufficient reason, cancel any permission granted under this section, and may order any fence, gate, or other structure on any road or watercourse to be removed by such persons, and within such periods as such board shall determine.

The holder of any conditional purchase or conditional lease who shall obtain permission under this section shall be deemed to have elected to make improvements in lieu of fencing, but the Land Board, on application as prescribed, may exempt the holder of the land from making improvements in addition to the fencing erected or to be erected.

Ring-fences.

One or more conditional purchases may be enclosed by ring-fence.

Sec. 17, Act 1889.

Sec. 37, Act 1895.

80. Where conditional purchases (other than non-residential conditional purchases) or conditional leases adjoin so as to form one block, or are separated only by road or creeks, and such conditional purchases or conditional leases are held by members of one family, standing in the relation of parents and children, it shall be lawful for the land board, or the chairman of such board, upon a joint application made within the prescribed time and in the prescribed manner by the holders of the land, to exempt such holders from any condition of fencing or improvements in connection therewith further than the erection of a ring-fence of a character to be prescribed by such board on the external boundaries of the lands so as to enclose them as one holding.

The chairman or the board may, notwithstanding anything to the contrary in this Act, accept any such application, wholly or in part, and the board may disallow any such application, wholly or in part;

Provided that such chairman or board shall, in connection with any accepted application, fix the term (and may upon application as prescribed extend the term) within which the fence shall be erected, such term being determined as far as practicable with due regard to the respective dates of commencement of the purchases or leases.

If the ring fence be not erected within the term allowed, each and every purchase or lease shall be liable to forfeiture by notice in the *Gazette*.

Alternative Condition of Improvements.

Alternative condition of improvements.

Sec. 33, Act 1895;

the Act 52 Vic. No. 7

Secs. 16 and 26, Act 1889.

81. Where the holder of a conditional purchase or conditional lease elects to perform a condition of improvement instead of a condition of fencing, the following provisions shall apply:—

The area embraced by any original conditional purchase, and any additional conditional purchases made by virtue thereof, and any conditional leases whatsoever granted by virtue of such conditional purchases, may, for all purposes of improvements, be held to be one holding, notwithstanding that one, or more, of such conditional purchases or leases may have been made or granted under the previous Acts or under any repealed Act.

The

The improvements, including any fencing, shall be of a fixed, permanent, and substantial character, and necessary for the beneficial occupation of the land.

Such improvements (including any fencing) shall within, and at the expiration of, three years from the date of confirmation of the application, be of the value of at least six shillings per acre, but shall not be required to be of a greater value than three hundred and eighty-four pounds; and within, and at the expiration of, five years from the date of confirmation of the application shall be of the value of, at least, ten shillings per acre, but shall not be required to be of a greater value than six hundred and forty pounds.

In the case of a non-residential conditional purchase where the Land Board shall have granted permission to substitute improvements in lieu of fencing, such improvements (including any fencing) shall be of the value of thirty shillings per acre within five years from the date of confirmation of the conditional purchase.

Suspension of conditions.

82. If the holder of any conditional purchase or conditional lease applied for before or after the commencement of this Act shall through illness, drought, flood, or other sufficient cause be prevented from fulfilling any conditions of residence, fencing, or improvements attaching thereto, the board or the chairman in the case of fencing may, on application as prescribed, and after inquiry in open Court, suspend for a specified period not exceeding six months any or all of such conditions, or the Board may refuse the application for suspension. On the expiration of such specified period the holder shall (if a condition of residence attaches to the purchase or lease) commence and continue to reside thereon for a period which (when taken with the period during which he may have resided thereon since the date of his obligation to do so) shall complete the full term prescribed by the Act under which the conditional purchase or conditional lease was made, and shall, during the term extended as aforesaid or otherwise, complete any other conditions, subject upon default in either case to forfeiture.

Suspension of conditions in case of illness, drought, flood, or other sufficient cause.
Sec. 24, Act 1889.
Sec. 37, Act 1895.

Payment of purchase money.

83. Every holder of a conditional purchase, the application for which shall be made after the commencement of this Act, shall at the end of the third year after the date of his application pay to the land agent an instalment on his purchase and

Thereafter shall pay in like manner a like instalment annually during a period until the balance together with interest at the rate of four per centum per annum thereon shall have been paid :

Three months grace shall be allowed for the payment of the first and for each and every instalment, provided that in the case of any moneys not being duly paid the provisions of section eighty-four of this Act shall apply.

In the case of a conditional purchase (other than a non-residential conditional purchase or a conditional purchase within a special area), each instalment shall be one shilling per acre, and the balance, after payment of the first instalment, seventeen shillings per acre.

In the case of a non-residential conditional purchase (if not within a special area) each instalment shall be two shillings per acre, and the balance, after payment of the first instalment, thirty-four shillings per acre.

Conditions for payment of residue of purchase money.
Secs. 35, 38, 47, 126, Act 1884, 22, Act 1889, 23 and 48, Act 1895.

In

In the case of a conditional purchase within a special area, each instalment shall be at such rate as has been or shall be notified in the proclamation of the special area, provided that the instalment in the case of a non-residential conditional purchase shall be double the instalment which would be payable in the case of a residential conditional purchase.

After the last payment of such instalments and interest the conditions of payment shall be deemed to have been duly fulfilled:

It shall be lawful for the conditional purchaser to pay off the whole or any portion of such instalments at any time after the final certificate mentioned in section ninety shall have been granted to him.

Overdue moneys to bear interest accruing day by day.

84. Any sums which shall become payable to the Crown as purchase money or interest, shall from and after the due date for the payment thereof bear interest at the rate of ten per centum per annum, and such interest shall be considered as accruing due day by day. Nothing in this section contained shall be construed so as to prevent or to compel the enforcement of any forfeiture, or the acceptance of any overdue sums together with interest as aforesaid, and the acceptance by or on behalf of the Crown of any purchase money or part thereof in respect of any conditional purchase or of interest shall not be held to operate as a waiver by the Crown of any forfeiture accruing by reason of the breach of any condition annexed by law to the estate or interest of a conditional purchaser.

Forfeiture on default of payments.

85. In default of payment of any instalment after the day when such payment shall have fallen due, the conditional purchase may be declared by the Minister to be forfeited, and upon such declaration being published in the *Gazette*, the conditionally purchased land in respect of which such payment is due shall revert to Her Majesty and become Crown lands for the purposes of this Act. And any payment made in respect of such purchase shall in such case be forfeited to Her Majesty.

Conversion of holding under repealed Act as regards unpaid balance.

86. Any holder of a conditional purchase made before the first day of January, in the year one thousand eight hundred and eighty-five, and not brought under the instalment system, may, by writing addressed to the land agent, apply to convert his holding so far as regards the balance unpaid of his purchase money into a holding under the conditions of payment prescribed by the previous Acts.

Reduction in the rate of interest on repealed Act conditional purchases. See. 5, Conditional Purchasers Relief Act.

87. The rate of interest payable on the balance of purchase money for the time being unpaid upon conditional purchases applied for before the first day of January, in the year one thousand eight hundred and eighty-five, and subject to the provisions of section eight of the Lands Acts Amendment Act, 1875, but not brought under the provisions of section thirty-five of the Crown Lands Act of 1884, shall be reduced to four per centum per annum, such reduction taking effect as from the first day of January, in the year one thousand eight hundred and ninety-six.

Provided always that—

- (a) the aforesaid reduction in the rate of interest shall not operate in respect of any interest which may have accrued before the date hereinbefore mentioned for the taking effect thereof in any case;
- (b) nothing in this section contained shall affect the provisions of section forty-eight of the Crown Lands Act of 1895, or section eighty-four of this Act.

Reduction of payments.

Reduction of annual payments on conditional purchases. 60 Vic. No.

88. Subject to the provisions hereinafter contained, the Minister may reduce the rate of one shilling per acre per annum payable in respect of a conditional purchase (whether applied for before or after the

the commencement of this Act) to ninepence per acre per annum, or (if the case so admit) to sixpence per acre per annum, and where the rate shall have been reduced under this Act to ninepence per acre per annum, may further reduce the rate to sixpence per acre per annum; and in any such case any annual payments in respect of the said conditional purchase accruing due after the date fixed for the operation of the reduction may be made at the reduced rate as determined by the Minister.

The rate of annual payments in respect of a conditional purchase within a special area (whether the value of such conditional purchase has been determined by appraisalment or not) may, subject to the provisions hereinafter contained, be reduced to three-fourths or one-half of the rate payable previous to the first reduction under this Act: The like within special areas.

Provided always that the Minister shall in every such case so determine the rate that the annual payments, as reduced, will extinguish the balance of purchase money, together with the interest thereon within the period of sixty-six years from the date when the instalment of purchase money first succeeding the deposit became due.

Before any reduction is made by the Minister in respect of any conditional purchase, an application for such reduction shall be made in the prescribed manner by the holder of the conditional purchase, or if the same is held by way of mortgage, then by the person who holds subject to the mortgage, and shall be accompanied by a declaration and fee as prescribed; Conditions precedent to a reduction.

And a reduction shall not be made to any applicant whose home and place of abode is not established on a holding of which the conditional purchase in respect of which the reduction is applied for forms part.

A holding for the purposes of this section shall mean a continuous block, or portions separated by roads or watercourses, and may include land held in fee simple and conditional purchases or conditional leases of the same or different series.

Provided that the conditional purchases (included in such holding) in respect to which the reduction may be made shall not exceed an area of one thousand two hundred and eighty acres in the Eastern Division, or two thousand five hundred and sixty acres in the Central or Western Division:

Provided that nothing herein shall prevent the Minister from making a reduction (subject to such conditions as he may deem expedient) in any case where he is satisfied that the applicant, although not resident as hereinbefore required, holds the land *bonâ fide* for his sole use and benefit, and is not in a position to pay the instalments at the original rate, and is not the holder under any tenure of a greater total area in this Colony than is necessary for the maintenance of a family, such total area not exceeding in any case one thousand two hundred and eighty acres in the Eastern Division, or two thousand five hundred and sixty acres in the Central or Western Divisions:

Provided further that this reduction under the last proviso shall not run with the land, but shall attach only as a concession to the applicant personally.

In any case where the Minister is satisfied, with or without a report from the Local Land Board, that the holder for the time being of the conditional purchase, in respect of which a reduction has been granted (or, if the same is held by way of mortgage, then that the person who holds, subject to the mortgage) has ceased to keep his home and place of abode thereon, or that the declaration accompanying the application for the reduction contains any false statement, the Minister may direct that payments at the rate obtaining previous to any reduction shall be resumed; and in any such case payments at the said rate shall be resumed from and after such date as the Minister may specify for that purpose. Reductions may be cancelled in certain events.

Suspension of payment of instalments upon Conditional Purchases.

Suspension of
payment of
instalments.
Sec. 28, Act 1895.

89. The holder of a conditional purchase (whether applied for before or after the commencement of this Act), may, in case of temporary inability to pay the instalments of purchase money thereon as they fall due, apply to the Minister in the prescribed manner that the condition of payment attaching thereto may be suspended; and the Minister may, either with or without reference to the local land board, upon the conditional purchaser paying the prescribed fee to cover expenses incurred by the Crown in consequence of the aforesaid application, suspend the said condition for one year under any one suspension.

During the period of any such suspension, interest on the balance of purchase money, calculated at the rate of four per centum per annum, shall be added to the balance of the purchase money owing, unless the conditional purchaser pays such interest on the date at which an instalment of purchase money would otherwise be payable.

The Minister shall not grant suspension of the condition of payment unless he is satisfied that the holder of the said conditional purchase, or if the same has been transferred by way of mortgage, that the owner thereof subject to such mortgage, is in residence upon the said conditional purchase, or upon some purchase or lease of the same series, and is the holder or owner thereof (as the case may be), *bonâ fide* for his sole use and benefit.

Suspension of the condition of payment shall be deemed to be determined:—

- (a) Upon the conditional purchase being transferred; or
- (b) Upon the holder or owner ceasing to reside upon the series;
- or
- (c) Upon an instalment of the purchase money being paid.

Upon the expiration of the period of suspension, payment of instalments, as prescribed by the Crown Lands Acts, shall be resumed, and no sums paid by way of interest as aforesaid shall be taken to form part of the balance of purchase money.

Issue of certificate of fulfilment of conditions of a conditional purchase.

Certificate of Board
of fulfilment of
certain conditions.
Sec. 36, 37, Act
1884, 22, Act 1889,
29, Act 1895.

90. In connection with original residential conditional purchases applied for since the first day of June, one thousand eight hundred and ninety-five, or after the commencement of this Act, the local land board shall hold inquiries, after the expiration of five and ten years from the date of the application, whether all conditions applicable to the conditional purchase except payment of balance of instalments have so far been duly complied with, and if the board be satisfied of such compliance it shall issue certificates to that effect; and such certificates shall be designated the first and final certificate respectively.

And like certificates shall be granted by such board with respect to any additional conditional purchase when such board shall be satisfied after like inquiry that all conditions applicable thereto except that of payment of balance of instalments have been duly complied with: Provided that the board may issue a final (and if necessary dispense with the first) certificate before the expiration of ten years from the date of application for an additional conditional purchase if the condition of residence shall have expired before the expiration of such ten years.

In connection with a non-residential conditional purchase a certificate shall be granted by the board upon fulfilment of the condition of improvements, and may be granted before or after the expiration of five years from the date of confirmation of the application relating to the conditional purchase.

Any such certificate shall be transferable subject to the prescribed conditions and shall be *primâ facie* evidence of the title of the holder thereof to the land therein described subject to the fulfilment of the prescribed conditions of payment.

No such certificate shall be issued by the board before the expiration of thirty days from the date of publication in the *Gazette* of notice of its intention to issue the same, within which period any person may lodge in the prescribed form and manner a caveat against such issue, and every such caveat shall be disposed of by the board before issuing such certificate in manner hereinbefore provided for dealing with caveats :

Upon satisfactory proof being adduced that the original certificate issued has been lost or destroyed, the board may after the prescribed notice in the *Gazette* and in the prescribed manner, issue to the person entitled thereto a fresh certificate.

Subject to the issue of the final certificate and upon payment of the balance of instalments, stamp duty, and deed fee, a grant in fee simple of the land shall be issued upon application ; but the grant shall not be issued before the issue of the final certificate.

91. The conditions and obligations imposed by, and all other the provisions relating to, conditional purchasers contained in this Act shall be equally applicable and attach to persons deriving title through or under such conditional purchasers, and to all persons upon whom title shall devolve or be cast by operation of law ; but this section shall be read subject to the provisions contained in sections seventy-two, ninety-two, and one hundred and one of this Act relative to cases of death, lunacy, insolvency, or judgment debt of a conditional purchaser.

Applicability of conditions to representatives of conditional purchasers.
Sec. 40, Act 1884.

92. If any conditional purchaser shall die or be declared a lunatic, or become an insane patient within the meaning of the Lunacy Act of 1878, or the Acts amending the same, before the fulfilment of the prescribed conditions of residence and fencing his conditional purchase may, together with any conditional lease or right of conditional lease attached thereto (if any), be held by his representatives or their assigns, subject to the fulfilment by them of all unfilled conditions, except the condition of residence (which condition shall, in accordance with subsection (b) of section seventy-two of this Act, be suspended until the land has been transferred or conveyed, and no longer), but in trust for and for the benefit of the persons rightfully entitled.

Cases of death or lunacy of conditional purchaser.
Sec. 125, Act 1884.

Forfeiture for breach of conditions.

93. If the local land board or the land appeal court shall report to the Minister that after due inquiry held by such board the prescribed conditions of residence or fencing have not in the opinion of such board been or are not being duly fulfilled by any conditional purchaser or lessee or his representatives, it shall be lawful for such Minister to declare the conditional purchase or lease to be forfeited, and any payment made in respect of such purchase or lease shall in such case be forfeited to Her Majesty.

Provisions as to forfeiture on non-fulfilment of conditions of fencing and residence.
Sec. 39, Act 1884.

Effect of forfeiture.—When forfeiture takes effect.

94. Every forfeiture of land conditionally purchased, whether under this Act or the previous Acts or any repealed Act, shall be deemed to operate as a forfeiture of all additional conditional purchases held in virtue of such first-mentioned lands as well as of all conditional leases or rights attached to the lands so forfeited, and whenever any land shall be forfeited under this Act such land shall become Crown Land and may be dealt with as such ; but no forfeiture of any purchase or lease under this Act or the previous Acts or any repealed Act shall take effect until the expiration of thirty clear days after notification of such forfeiture in the *Gazette*.

Forfeited lands.
Sec. 136, Act 1884.

Transfers of conditional purchases and conditional leases.

95. An original conditional purchase, together with any additional conditional purchases made in virtue thereof before the first day of June, one thousand eight hundred and ninety-five, may be transferred

Transfers to be in prescribed form.
Sec. 117, Act 1884.

transferred in the prescribed manner after completion of residence (if any) required: Provided that the original conditional purchase and additional conditional purchases made in virtue thereof shall not be transferred separately until all the conditions applicable to the whole area, except that of payment of balance of purchase money or of instalments thereof, shall have been duly fulfilled.

Sec. 29, Act 1895.

96. An original conditional purchase applied for after the first day of June, one thousand eight hundred and ninety-five, or after the commencement of this Act, may be transferred at any time after, and shall not be transferred before the issue of a certificate by the local land board, after the expiration of five years from the date of the application for the purchase that all conditions applicable to the conditional purchase, except payment of balance of instalments, have so far been duly complied with: Provided that an additional conditional purchase made after the first day of June, one thousand eight hundred and ninety-five (or after the commencement of this Act), whether by virtue of an original conditional purchase made before or since that date, shall not be transferred separately from the original or any prior additional conditional purchases until after issue of the first certificate of fulfilment of conditions in connection with the last additional conditional purchase of the series.

Sec. 47, Act 1884.

97. The estate or interest of a non-residential conditional purchaser shall be incapable of being transferred, alienated, mortgaged, encumbered, or pledged until after the issue of the certificate of conformity by the local land board, but subject to the payment of instalments due on the land purchased may devolve or be transferred by operation of law.

Sec. 117, Act 1884.

98. All transfers of conditional purchases shall be notified to the land agent in such form as may be prescribed.

Sec. 118, Act 1884.

99. The holder of a conditional lease may transfer his right of lease in the prescribed manner; but a conditional lease shall not be transferred except with the land in virtue of which it was granted.

Sec. 119, Act 1884.

100. Every transfer of land conditionally purchased, if made by a person not under legal disability, shall, subject to the provisions and conditions of this Act, be deemed to pass to the transferee the whole estate and interest, whether at law or in equity, of the transferor of such land as effectually to all intents and purposes as if a conveyance or assignment under seal of such estate and interest to such transferee had been duly executed by such transferor; but this enactment shall be subject to the conditions following, namely:—

- (I) The equities of all persons claiming any estate or interest in any such land by matter prior to the date of execution of any such transfer shall not be affected by this section, but shall be capable of assertion and enforcement as if this Act had not been passed.
- (II) No transfer shall have the effect hereinbefore expressed, unless such transfer has been made, executed, and lodged in accordance with the regulations.
- (III) No such transfer shall prejudice or affect any conveyance or assignment, or any other assurance under seal relating to land conditionally purchased, if such conveyance, assignment, or assurance shall have been previously registered, as by law required, in the office of the general registry of deeds in Sydney.

Cases of death,
lunacy, insolvency,
or judgment debt.
Sec. 125, Act 1884.

101. Any sale, transfer, or other disposition whatsoever of the estate, right, title, or interest of any conditional purchaser by an official assignee or other lawful authority upon the insolvency of such purchaser, or by a Sheriff or Registrar of a District Court, or any other person by virtue of or under the authority of any writ of execution or other process of any Court, or by the trustees of any deed
of

of assignment for the benefit of creditors, or by any person under any decree or order of any Court shall pass to a purchaser or to any other person only such estate, right, title, or interest as the conditional purchaser himself was entitled to at the date of sequestration, writ, process, decree, order, or assignment respectively, and subject to all conditions remaining unfulfilled at such date.

102. The effect given to duly registered deeds and instruments affecting lands, hereditaments, and other property by the eleventh section of the Registration Act, seventh Victoria number sixteen, shall be deemed to be annexed and to be incident to all transfers within the meaning of this Act, if duly registered under the said Registration Act, after the prescribed registration or record thereof in the books of the Department of Lands shall have been duly effected. Sec. 120, Act 1884.

Subdivision of Conditional Purchases.

103. Any conditional purchase (whether made before or after the commencement of this Act) of not less than one hundred acres may, upon application by the holder at any time after the issue of a certificate of conformity in respect thereof, be subdivided into portions which shall in no case be less than forty acres each. Subdivision of conditional purchases. Sec. 34, Act 1895.

The application shall be accompanied by the prescribed deposit which shall be available for the payment of the costs of any survey and report which may be required; and the applicant shall surrender such land as may be necessary for providing roads of access to the subdivided portions, which land shall thereupon become Crown land free from any claim of the conditional purchaser thereto.

The local land board shall settle the line or lines of subdivision so as to conform to any regulations which may be made in that behalf, and shall determine the portion of the subdivided conditional purchase, to which any conditional lease acquired in virtue of the conditional purchase before the subdivision thereof shall be attached, but so that the conditional lease shall be attached to such portion thereof as the applicant proposes not to transfer.

After subdivision the balance of purchase money payable in respect of any portion of the subdivided conditional purchase may be paid up and a grant thereof issued, as if such portion were a separate conditional purchase.

No portion measured off in any such subdivision as aforesaid shall be capable of being separated by transfer, devolution, or otherwise from the residue of such portions, until a grant of such first-mentioned portion has been issued.

Conversion of conditional purchases and leases into homestead selections.

104. Any conditional purchase, together with any conditional lease held by virtue thereof, or any conditional purchases or conditional purchases and conditional leases (whether of the same or different series, and although including more than one block) held by the same person (whether such conditional purchases or leases were applied for wholly or partly before or after the commencement of this Act), may be converted into a homestead selection, subject to the general provisions of this Act in that behalf, and to the following provisions:— Conversion of conditional purchases and leases into homestead selections. Section 6, Conditional Purchasers' Relief Act.

- (a) Application for conversion shall be made to the Minister in the prescribed form, and the conversion shall be subject to the approval of the Minister.
- (b) If the land included in the application is the subject of any mortgage or charge, an application by the mortgagor shall not be valid without the consent in writing of the person having the mortgage or charge.

(c) .

- (c) The applicant shall be at the date of application, and shall have been for at least six months preceding that date in *boná fide* residence, within the meaning of section seventy-one of this Act, on the land included in his application.
- (d) No conditional purchase or conditional lease in respect of which a liability to forfeiture has been incurred shall be converted into a homestead selection while that liability to forfeiture continues.
- (e) It shall be immaterial whether the land was wholly or in part applied for before, or shall be applied for after, the commencement of this Act, or whether in the case of a conditional purchase a certificate of due compliance with the conditions applicable has or has not been issued: Provided that no purchase or lease applied for since the first day of January, one thousand eight hundred and eighty-five, shall be converted into a homestead selection unless or until the application for such purchase or lease has been confirmed.
- (f) An application for conversion shall not be approved unless payment has been made for such improvements on the land as are by any enactment directed to be paid for.
- (g) The fact that the area may exceed one thousand two hundred and eighty acres shall not be a bar to conversion, provided that the area shall not exceed one thousand two hundred and eighty acres in the Eastern or two thousand five hundred and sixty acres in any other Division, unless the Minister (who may refer to the Local Land Board for report) shall be satisfied that a larger area is necessary for the maintenance of a family.
- (h) After approval of conversion, the Governor may issue a homestead grant of the land.
- (i) All moneys paid as interest on land held under conditional purchase, or as rent on land held under conditional lease, shall be taken to have been paid for the occupation or use of the land while the land was held under conditional purchase or conditional lease; but all moneys paid by way of purchase money on land held under conditional purchase, and not applied, as in the next subsection mentioned, towards the payment of interest as aforesaid, shall be credited towards the rent of the homestead selection.
- (j) In respect of any conditional purchase converted into a homestead selection, interest on the balance of purchase money owing on such conditional purchase shall be paid up to the date of the issue of the homestead grant, but may be taken (wholly or in part) out of any moneys paid by way of purchase money as aforesaid.
- (k) Notwithstanding anything in section forty-six of this Act, the Governor shall have power from time to time to waive the condition of residence attaching to any homestead selection converted into such under the provisions of this Act in any case where the land is, at the date of commencement of this Act, held *boná fide* by way of mortgage or security: Provided that no one waiver shall operate over a longer period than one year, and during the period of waiver the annual rent shall be three-and-a-half instead of two-and-a-half per centum per annum of the capital value of the land.
- (l) Upon the forfeiture to the Crown of any land held under a homestead grant issued under the provisions of this section in any case where at the date of application for conversion the land was held by way of mortgage or security, the Governor may, for any reason which he may deem sufficient, grant tenant rights in the improvements on such land to the last holder of the mortgage or security. (r)

(I) The annual rent of the homestead selection from the date of issue of the grant shall be two and one-half per centum of the capital value of the homestead selection.

Rent of homestead selections.
Sec. 7, Conditional Purchasers' Relief Act.

(II) Such capital value for the first ten years period, which shall commence from the date of issue of the grant shall be taken to be—

- (a) in the case of a conditional purchase (whether a residential or a non-residential conditional purchase not being within a special area), one pound per acre ;
- (b) in the case of a conditional purchase within a special area, at the price of the conditional purchase ;
- (c) in the case of a conditional lease, the sum represented by capitalising the annual rent of the lease on a two-and-a-half per centum basis ;

or, if the applicant make request in his application for an appraisalment, or at the direction of the Minister, the capital value of the whole land included in the application shall be determined by appraisalment ; and any such appraisalment shall, so far as procedure is concerned, be subject to the provisions of section twenty-five of this Act :

Provided that no appraisalment shall be made of land which has been appraised within the previous two years.

Conversion of Conditional Purchases into Mining Conditional Purchases.

105. The right of any holder of a conditional purchase made under sections thirteen, twenty-one, or twenty-two of the "Crown Lands Alienation Act of 1861" to convert such purchase into a conditional purchase for mining purposes, in accordance with any regulations in force for the time being made under the said Act, may be exercised subject to the terms and conditions contained in such regulations as if this Act or the previous Acts had not been passed.

Conversion of certain conditional purchases into mining conditional purchases.
Sec. 7, Act 1884.

And all regulations made prior to the commencement of this Act, purporting to authorise such conversion, shall be deemed to have had the force of law, and any conversion effected or sanctioned in pursuance, or purporting to be in pursuance thereof, or any conversion approved or permitted by any Secretary for Lands or other person on his behalf, shall be deemed to have been and to be valid.

The Act 51 Vic. No. 29.

Improvement Purchases in gold-field.

106. Upon application (accompanied by the prescribed deposit and survey fee) by the owner of improvements in authorised occupation by residence under any Act in force for the regulation of mining on Crown lands of land within a proclaimed gold-field, the Governor may sell and grant such land to such owner without competition, at a price to be fixed by the local land board not being less than at the rate of eight pounds per acre for town lands, or two pounds ten shillings per acre for suburban and other lands, or two pounds ten shillings for any area less than one acre:

Improvement purchases in gold-fields.
Sec. 46, Act 1884 ; and 11, Act 1889.

Provided that such sales be made in accordance with the general subdivision of the land, and embrace only allotments or portions on which the improvements may be, and that the areas to be sold shall not exceed—
one quarter of an acre for town lands, and
one acre for suburban or other lands :

Such price shall be exclusive of the value of the improvements.

For the purposes of this section improvements of value equal to the respective minimum rates hereinbefore provided for shall be sufficient,

No

No person shall be permitted to make a subsequent purchase within three miles of a prior purchase by him.

Any sums which shall be payable to the Crown in connection with any improvement purchase shall, from and after the due date for the payment thereof, bear interest at the rate of ten per centum per annum, and such interest shall be considered as accruing due day by day; but nothing in this section shall be construed so as to prevent or to compel the enforcement of any forfeiture, or the acceptance of any overdue sums, together with interest, as aforesaid.

Sec. 5, of 55 Vic.
No. 1.

Any forfeiture of an improvement purchase shall be notified by the Minister in the *Gazette*, and shall take effect on the expiration of thirty clear days after the date of notification of forfeiture.

Auction sales.

Sale by auction of
lands.

Sees. 61, 62, Act
1884; Sec. 44, Act
1889.

107. Crown lands, not exceeding in the aggregate for the whole Colony two hundred thousand acres in any one year, may be sold by public auction, at any place which may appear to the Minister to be most convenient for the purpose (whether such place be within or outside the land district in which the lands to be sold are situate), and at such times as the Minister shall direct and notify in the *Gazette*, not less than two months before the day of sale, and the upset prices per acre shall not be lower than—

For town lands eight pounds.

Suburban lands two pounds ten shillings.

Other lands one pound five shillings.

But such upset prices may be respectively fixed at any higher amounts.

The value of any improvements (within the meaning of section one hundred and seventy-nine of this Act) shall be added thereto, and when not the property of the Crown shall be refunded to the owner, or if it should appear that such improvements were made under misapprehension, or for other sufficient reason, the Governor (or the Minister, after report by the Land Board), may remit or refund the value thereof to the improver or his representatives.

Town lands shall not be sold under this section in areas exceeding one-half acre.

Suburban lands shall not be sold in areas exceeding twenty acres.

Country lands shall not be sold in areas exceeding six hundred and forty acres.

A deposit of not less than one-fourth of the purchase money shall be paid by the purchaser at the time of sale, and in case the purchaser fails to pay the deposit the land may be again offered by the land agent, who shall not accept any bid by the person so failing to pay.

Auction Sales
Balances Act 1887.
50 Vic. No. 39.

The balance of purchase money shall be paid within three months after the date of sale, provided that the Minister may make special terms of payment on auction sales of

Town lands,

Suburban lands, and

Lands which may have been or may hereafter be subdivided into areas not exceeding twenty acres:

Provided that in every case a deposit of one fourth of the purchase money shall be paid at the time of sale, and the time allowed for any deferred payments shall in no case exceed five years from the day of sale.

And that all such deferred payments shall bear interest at the rate of five pounds per centum per annum.

After

After Auction Sales, &c.

108. The Governor may grant any town or suburban Crown lands or Crown lands within population areas which have been offered for sale at auction and not sold (whether such offering for sale was before or after the commencement of this Act) at the *last* upset price thereof to any person who shall duly apply for the same.

Provision as to sales after auction.
Sec. 56, Act 1895.

The applicant shall, with his application, lodge a deposit of one fourth of the said upset price, and if the application be approved by the Minister shall pay the balance of the said price, subject to such terms and conditions as were notified in the *Gazette* in connection with the aforesaid offering at auction.

Auction sales or after auction sales may be annulled.

109. On default of payment of any instalment for thirty days after the day when the same shall have fallen due, or on default of payment of any balance of purchase money, when the same shall have fallen due, in connection with any land sold at or after auction, the Minister may, by notice in the *Gazette*, annul the sale.

Auction sales, or after auction sales, may in certain cases be annulled.

Sec. 62, Act 1884;
Auction Sales
Balances Act; 56 Act
1895; Act 55 Vic.
No. 1.

On the expiration of thirty clear days after the date of notice in the *Gazette* as aforesaid, the land, the subject of such sale, shall be forfeited to the Crown and become Crown lands within the meaning and for the purposes of this Act, and all payments made in respect of such land be forfeited to Her Majesty :

Any sums which shall become payable to the Crown shall, from and after the due date for the payment thereof, bear interest at the rate of ten per centum per annum, and such interest shall be considered as accruing due day by day.

Sec. 48, Act 1895.

Nothing in this section contained shall be construed so as to prevent or to compel the enforcement of any forfeiture, or the acceptance of any overdue sums together with interest as aforesaid.

Special sales without competition. Rescission of reservation.

110. The Governor may authorise the rescission of any reservation of water frontage on the sea-coast, or to any bay, inlet, harbour, or navigable river, or of land adjoining such frontage contained in any Crown grant either wholly or to such extent and subject to such conditions and restrictions as he shall think fit.

Rescission of reservation of water frontage.
Secs. 63, 65, and 68,
Act 1884.

The land the subject of such rescission may be granted to the owner of the land contained in such Crown grant on payment in the prescribed manner of the fair value thereof to be determined in accordance with section twenty-five of this Act, being not less than for—town lands, eight pounds per acre; suburban lands, two pounds ten shillings per acre; other lands, one pound five shillings per acre :

Provided that nothing in this section shall empower the Governor to grant any land used as a public thoroughfare, or any land set apart and dedicated for any public purpose :

Provided also that notice for four consecutive weeks shall be given in the *Gazette* and some local newspaper if any before the issuing of such grant, and that the applicant shall pay all costs of survey, reports, notification, and deed fee incurred in dealing with any application under this section.

At any time before the expiration of the four weeks referred to, any person feeling aggrieved may in the prescribed manner lodge a caveat with the local land board setting forth objections against the authorisation of any such rescission as aforesaid, and shall at the time

of lodging the same deposit therewith the prescribed sum, and all such applications shall be dealt with as provided in section sixty-three of this Act in reference to other caveats.

On the approval of any application to purchase made under this section such approval shall be notified in the *Gazette*. And if within three months after such notification the applicant shall fail to pay the full amount of purchase money, together with the deed fee and all costs as hereinbefore provided for, the right to purchase such land may be treated by the Minister as having lapsed, and the land itself may be sold by auction, or reserved, or otherwise disposed of pursuant to the provisions of this Act.

Any sums which shall be payable to the Crown shall from and after the due date for the payment thereof bear interest at the rate of ten per centum per annum, and such interest shall be considered as accruing day by day, but nothing in this provision shall be construed so as to prevent or compel the enforcement of any forfeiture or the acceptance of any overdue sums together with interest as aforesaid.

Reclamations.

Reclamation of lands by proprietor of adjoining lands. Sec. 64, 65, and 68, Act 1884, and 54, Act 1895.

111. The Governor may on the application of any proprietor in fee simple of land having frontage to the sea, or to any tidal water, or to any lake authorise such proprietor to reclaim any land adjoining thereto and lying beyond or below high-water mark :

Provided always that no such reclamation shall be authorised which may interrupt or interfere with navigation :

Provided also that notice of the application to reclaim such land shall be published in the *Gazette* and some local newspaper, if any, for four consecutive weeks before such authority for reclamation shall be given.

And that the applicant shall pay all costs of survey, reports, notification, and deed fee incurred in dealing with his application.

At any time before the expiration of the four weeks aforesaid, any person feeling aggrieved may in the prescribed manner lodge a caveat with the local land board setting forth objections against the authorisation of any such reclamation as aforesaid, and shall at the time of lodging the same deposit therewith the prescribed sum, and all such applications shall be dealt with as provided in section sixty-three of this Act in reference to other caveats.

In any case where after the commencement of this Act the Governor shall authorise the reclamation of any land (whether application for such reclamation has been made under the previous Acts or shall be made under this Act) the local land board shall appraise—

(a) the amount by which the value of the whole holding will be enhanced, by reason of the land to be reclaimed having been reclaimed and being held and enjoyed with the land held in fee simple, and

(b) the amount of the estimated cost of the reclamation ; and the excess (if any) of such first-named amount over such last-mentioned amount shall, within three months after the notice in the *Gazette* calling for the same, be paid by the applicant to the Colonial Treasurer; and in default of such payment the authority to reclaim may be declared to have lapsed, and the same shall thereupon become void and of no effect.

The applicant shall, within such period as may be allowed for the purpose, complete the reclamation to the satisfaction of the Minister, and upon the due completion thereof a grant of the land so reclaimed shall be issued.

If the reclamation be not completed to the satisfaction of the Minister, or be not so completed within the aforesaid period, the Minister

Minister may, by notification in the *Gazette*, declare the right to purchase the land, together with all moneys paid thereon to be forfeited, and the same shall become forfeit accordingly; and upon such forfeiture the said authority to reclaim shall become void and of no effect, and any land which may have previously been reclaimed under such authority shall revert to the Crown, freed and discharged from any right or claim of the applicant or any other person in or to the same.

Any sums which shall become payable to the Crown shall, from and after the due date for the payment thereof, bear interest at the rate of ten per centum per annum, and such interest shall be considered as accruing due day by day; but nothing in this provision contained shall be construed so as to prevent or to compel the enforcement of any forfeiture or the acceptance of any overdue sums, together with interest as aforesaid.

The Governor in giving authority to reclaim (in pursuance of any application whether made under the previous Acts or under this Act) may give the same subject to such terms and conditions as may appear desirable in the public interest, and in particular to the conditions—

- (a) that the reclaimed lands or any portions thereof may be resumed for public purposes by notification in the *Gazette*, and that upon resumption the lands shall vest in the Crown, freed and discharged from all private rights, interests, titles, and estates in and to the same; and
- (b) that no other compensation shall be payable than the value of any improvements upon the lands resumed, effected with the written approval of the Minister first had and obtained, together with a repayment of the purchase money, and of the cost of reclamation, or if the land resumed be a portion only of the land reclaimed, of a fair proportion of such purchase money and cost as aforesaid;

and the grant of any land to be reclaimed under any such authority as aforesaid shall embody the terms and conditions subject to which the authority was given, or such of them as require to be so embodied.

Lands insufficient in area for Conditional Purchase.

112. Crown lands to which no way of access is attainable, or which are insufficient in area for conditional sale, or are situated between granted land and a street or road which forms or should form the way of approach to such granted land, or

are encroached on by buildings erected on granted land

may be sold after recommendation by the Minister or the local land board as the case may be to the proprietor or proprietors in fee simple of adjacent lands at a price to be determined in accordance with section twenty-five of this Act, being not less than—for town lands, eight pounds per acre; for suburban lands, two pounds ten shillings per acre; for other lands, one pound five shillings per acre. Purchasers under this section shall, in addition to the price of the land applied for pay the cost of survey report and deed fee incurred in dealing with such applications.

On the approval of any application to purchase made under this section such approval shall be notified in the *Gazette*. And if within three months after such notification the applicant shall fail to pay the full amount of purchase money, together with the deed fee and all costs demanded for survey and reports incurred in connection with the land applied for, the right to purchase such land may be treated by the Minister as having lapsed, and the land itself may be sold by auction, or reserved, or otherwise disposed of pursuant to the provisions of this Act.

Sales in special cases.
Secs. 66 and 68, Act
1884.

Any

Any sums which shall become payable to the Crown shall, from and after the due date for the payment thereof, bear interest at the rate of ten per centum per annum, and such interest shall be considered as accruing due day by day, but nothing in this section contained shall be construed so as to prevent or to compel the enforcement of any forfeiture, or the acceptance of any overdue sums, together with interest as aforesaid.

Exchanges and Surrenders.

Exchange and
surrender.

Sec. 46, Act 1889;
47, Act 1895.

113. It shall be lawful for the Governor, on behalf of the Crown, with the consent of the owner, to exchange any Crown lands for any other lands of which a grant in fee-simple has been issued or may be called for, and to accept such surrenders and issue such grants as may be necessary for effectuating an exchange.

The surrenderor shall pay all costs and fees incurred in respect of the surrender and exchange of such land:

Provided that, if the land applied for by way of exchange is measured land, and is, in the aggregate, less than forty acres in excess of the land surrendered, such excess area may be granted to the lessee at a price to be determined in accordance with section twenty-five of this Act.

It shall be lawful for the Governor to accept a surrender of lands, in respect of which a balance of purchase money remains unpaid, if upon payment of such balance, with or without interest thereon, the right to a grant of the said lands in fee-simple will become absolute, and to grant Crown lands in exchange therefor; but in any such case the acceptance of the surrender shall not be taken to affect the aforesaid balance of purchase money, or any right, remedy, or liability in respect thereof, and a grant of the Crown lands allotted in exchange shall not be issued until the aforesaid balance of purchase money, together with interest, has been duly paid.

When any lands have been surrendered as aforesaid, and Crown lands have been allotted in exchange therefor, such provisions of such Act in respect of the payment of the balance of purchase money, together with interest, and of forfeiture upon default as applied to the surrendered lands, shall be deemed to apply to the lands so allotted in the same way as if the lands so allotted were the lands originally purchased.

The Governor may reserve from sale and lease any lands included in an application or proposal for an exchange.

The local land board shall inquire into and report upon any application or proposal referred to such board by the Minister, and the values of any lands included therein shall be determined in accordance with the provisions of section twenty-five of this Act, before the exchange is carried out.

In any such exchange the lands exchanged shall as nearly as practicable be of equal value, or if the Crown lands to be granted be of greater value the difference of value shall be paid before any grant is issued.

A surrender of lands to the Crown shall be evidenced by an instrument in the prescribed form, which shall, without enrolment in the Supreme Court, revert the surrendered lands in Her Majesty, Her heirs and successors according to law; and an entry of any such instrument shall be made in the register under the Real Property Act in all cases where it may be necessary.

Lands so surrendered shall become Crown lands for the purposes of this Act, but shall not be available for the purposes of any application until a notification to that effect has been published in the *Gazette*. And such surrendered lands may by notice in the *Gazette* be added to any adjoining lease or license or conditional purchase or homestead selection (notwithstanding that such lease, license, purchase, or selection may or may not already contain the
maximum

maximum area prescribed by law), subject to such conditions as to payment of purchase money or rental as may be determined by the Governor and consented to by the lessee, licensee, purchaser, or selector.

Any improvements on the surrendered land shall, notwithstanding the surrender, remain the property of the surrenderor, subject to the provisions of section one hundred and seventy-nine of this Act, but it shall be lawful for the Governor, in any case in which the public interest seems so to demand, to require that any surrender shall be a surrender of the land together with any improvements thereon; and upon the surrenderor consenting in writing thereto, the said improvements shall, upon the acceptance of the surrender, become the property of the Crown.

Any application or proposal for exchange of land lawfully made before the first day of June, one thousand eight hundred and ninety-five, and not refused on its merits or withdrawn, may be completed, subject to all the conditions agreed upon under the original application or proposal, notwithstanding the expiration of the pastoral lease, in virtue of which such application was made.

Every proposal for surrender and exchange shall be notified in the *Gazette* and in a local newspaper.

114. The Governor may acquire, for the purpose of access or approaches to any natural water, tank, or dam, or for a road, or travelling stock route, or camping reserve, or watering place, or for any like purpose, any land of any tenure, either by way of purchase or by granting in fee-simple, or for any less estate, any Crown land of equal value in exchange for such land. And any land so acquired shall thereupon be deemed to be reserved from sale and lease, and may, on revocation of the reserve, be dealt with in accordance with this Act.

Volunteer land order selections.

115. Where in any Act relating to the Volunteer Force reference is made to the thirteenth section of the "Crown Lands Alienation Act of 1861" such reference shall, in respect to all claims to free grants of land unsatisfied at the commencement of this Act, be deemed and taken to refer to Crown lands open to conditional sale under this Act.

Volunteer land order selections.
Sec. 22, Act 1884.

Authority to search for gold in alienated land within gold-fields.

116. Any Crown land within a proclaimed gold-field which, after the twenty-fifth day of May, one thousand eight hundred and eighty, has been sold conditionally, or by auction, or in virtue of improvements, or otherwise, as well as any such land alienated under this Act, shall be subject to the following condition, namely:—Any person specially authorised in the prescribed manner by the Minister shall be at liberty to dig and search for gold within such land, and should it be found to be auriferous the Governor may cancel, wholly or in part, the sale of such land; and upon the notification thereof in the *Gazette*, the proprietor shall be entitled to compensation for the value of the land as if it were not auriferous, and of the improvements thereon as appraised by the local board, and such land shall thereupon become Crown land within the meaning of the Mining Act, 1874, or any Act amending the same, and shall be reserved from sale until such reservation be revoked by the Governor: Provided that the person so specially authorised by the Minister to dig and search for gold shall, on the appearance of such notification in the *Gazette*, be deemed to be the first applicant for a claim or lease of such land, or a portion thereof; and the date of such application shall be reckoned from the day of publication of such notification in the *Gazette*, but in all other respects as to area, labour conditions, and other matters, such application shall be dealt with subject to the regulations in force for the time being authorising the occupation of Crown lands for gold-mining purposes.

Crown land within proclaimed gold-field.
Sec. 45, Act 1884.

CHAPTER II.

LEASES AND LICENSES.

General provisions as to Leases, &c.

General provisions
affecting lessees
and licensees.
Sec. 98, Act 1884.

117. The following provisions shall govern all leases and licenses and the holders of such leases or licenses, namely:—

- (I) No lease or license other than special lease shall confer any right to remove material from the leased land, or to sublet such land for other than grazing purposes, or to prevent the entry and removal of material by authorised persons.
- (II) Lessees and licensees may take from land under lease or license to them, not comprised within a timber or forest reserve, such timber and other material for building and other purposes upon the land under lease or license as may be required by them as tenants or licensees respectively.
- (III) No lessee or licensee shall prevent other persons duly authorised in that behalf either from cutting or removing timber or material for building or other purposes, or from searching for any mineral within the land under lease or license: Provided that nothing in this subsection shall apply to a conditional lease as regards the taking or removal of timber or other material for building purposes.

Sufficiency of
general descriptions.
Sec. 142, Act 1884.

118. For the purposes of any lease or license granted under this Act except a conditional or settlement lease it shall be sufficient if the land and the boundaries thereof be defined by a general description and no such lease or license shall be void by reason of the imperfection of any such description if the land therein described is defined with reasonable certainty.

Certification of
boundaries.
Sec. 144, Act 1884.

119. It shall be lawful for any authorised person who may have marked on the ground any boundary of a leasehold that has been accepted by the Minister, to certify by signature to any plan representing such boundary, that such representation is accurate, and such plan shall thereupon be *prima facie* evidence of such boundary.

Liability to Forfeiture.

Liability of lessees on
non-payment of rent
Sec. 96 and 136, Act
1884.

120. Every lease shall be liable to forfeiture if any rent be not paid within the prescribed period or upon breach of any condition annexed to such lease; but no forfeiture of any lease (other than an annual lease or occupation license) under this Act or the previous Acts or any repealed Act shall take effect until the expiration of thirty clear days after notification of such forfeiture in the *Gazette*. And whenever any land shall be forfeited under this Act, such land shall become Crown land, and may be dealt with as such.

Overdue Rents.

Sec. 48, Act 1895.
Sec. 126, Act 1884.

121. Any sums which shall hereafter become payable to the Crown, whether as rent or license fee or interest, shall from and after the due date for the payment thereof bear interest at the rate of ten per centum per annum, and such interest shall be considered as accruing due day by day. Nothing in this section contained shall be construed so as to prevent or to compel the enforcement of any forfeiture, or the acceptance of any overdue sums, together with interest as aforesaid. And the acceptance by or on behalf of the Crown of any interest or rent or other payment under any lease or license shall not be held to operate hereafter as a waiver by the Crown of any forfeiture accruing by reason of the breach of any condition annexed by law to the estate or interest of a lessee or licensee.

Acceptance of
interest or other
payment no waiver.

Withdrawals.

Withdrawals.

122. The Governor may withdraw from any lease or license any land required for the purposes of settlement for towns and villages, or as sites for towns and villages, or for any public purpose, and upon publication in the *Gazette* of withdrawal from any pastoral lease for towns and villages the lessee shall be entitled to such compensation, for the unexpired term of such lease, and for improvements lawfully made by such lessee upon the land so withdrawn from lease as may be determined by appraisalment.

Sec. 108 and subsec. 7, Act 1884.

Reserve from Sale not a Withdrawal.

123. Crown lands within any leasehold now or hereafter temporarily reserved from sale under the provisions of the previous Acts or any repealed Act, or this Act shall not be deemed to have been or to be withdrawn thereby from such leasehold in respect of the ordinary use of such lands for the purposes of the lease, or to be exempted from reletting on the termination of the existing lease.

Reserves from sale not to take the land out of lease.
Sec. 108, Act, 1884.

Ringbarking by Lessees.

124. Every lessee or licensee of Crown lands desiring to ringbark trees upon his leasehold land or land held under license shall obtain a permission to do so from the local land board, and in his application in the prescribed form addressed to the land agent shall describe the boundaries and area of the land upon which he proposes to ringbark.

Permission ringbark.
Secs. 93, 94, 95, Act 1884.

In regard to any land not comprised within a timber or forest reserve the board may, in their discretion, refuse or grant permission for the same, after such inquiry and upon such conditions as to them may seem necessary.

Any lessee or licensee who shall without such permission ringbark trees on a leasehold, or shall cause or knowingly permit or suffer the same to be done shall, on conviction before any two justices of the peace at the Court of Petty Sessions nearest to such leasehold, be liable for the first offence to a penalty of not less than *one* shilling nor more than *ten* shillings for each tree so ringbarked, and for a second or subsequent offence be liable to a like penalty and to the forfeiture of his lease.

Penalty for unauthorised ringbarking by lessee.

Whosoever shall ringbark trees or strip bark from trees on Crown lands without holding such permission, or in violation of any condition thereof, or without a written authority under the hand of the lessee or licensee of such Crown lands shall, on conviction as aforesaid, be liable to a penalty for each tree ringbarked or stripped of not less than *one* shilling nor more than *ten* shillings.

Unauthorised ringbarking by persons other than lessee.

Every information for an offence under this section shall be laid by some officer of police or person specially authorised by the Minister. And if at the hearing of such information any question shall arise whether any person holds a valid permission to ringbark the burden of proof thereof shall be on the person who claims to hold such permission.

Unauthorised ringbarking—proceedings before justices.

Promise of lease.

125. In any action or suit brought to recover possession or to recover damages for trespass upon or otherwise in relation to any Crown Lands of which no lease from the Crown shall have issued, it shall be lawful for any party thereto to plead and put in evidence any promise, engagement, or contract from or with the Crown, or its agents,

Right of lease may be given in evidence in actions.
Sec. 128, Act 1884.

agents, lawfully authorised in that behalf, and such promise, engagement, or contract shall as between the parties, and subject to the provisions of this Act have the same effect as if a lease from the Crown of such lands had been duly issued in pursuance of such promise, engagement, or contract to the party entitled thereunder, and any receipt by or on behalf of the Colonial Treasurer for rent of such lands for the year then current shall, according to the tenor thereof, be *prima facie* evidence that the party therein named is the holder of the lease or promise of lease thereof for the time being.

Annual Leases for Pastoral purposes.

Annual leases for pastoral purposes. Sec. 85, Act 1884, 34 and 38, Act 1899, 49, Act 1895.

123. The Governor may lease by auction, or tender, or by virtue of an application made in the prescribed manner for grazing purposes, in areas not exceeding one thousand nine hundred and twenty acres, any Crown lands not held under any lease or license, or not reserved from lease generally, or not reserved from annual lease specifically, or not reserved from license. Such leases shall be subject to the provisions following:—

- (I) Every such lease shall be for the then current year, and shall expire on the thirty-first day of December.
- (II) The right to occupy the land shall commence:—
 - In the case of a lease bought at auction, from the date of sale.
 - In the case of a lease for which tenders shall have been invited, from the date of notification in the *Gazette* of the acceptance of the tender.
 - In the case of a lease the subject of an application, from the date on which the Land Board (which Board shall have the power of modifying the land applied for) shall allot land in satisfaction of such application.
- (III) Such leases may be renewed subject to the payment of the annual rent. The Minister may at any time, upon giving three months' notice prior to the expiration of any year for which rent has been paid in advance, increase such rent by any sum not exceeding twenty-five per cent.
- (IV) The rent of all renewed leases shall be paid on or before the thirty-first day of December in each year for the ensuing year, and in the prescribed manner and time, to the Colonial Treasurer or land agent. And if such rent be not paid the lease will be liable to forfeiture and sale at auction or by tender.
- (V) Any lease offered at auction and bid for, but the price of which shall not be forthwith paid, may be again offered for sale at auction.
- (VI) A lease of any land which may have been offered for sale at auction and not bid for may be obtained on application to the land agent of the district and payment of the upset price, or may be again submitted to auction, unless the land shall have been previously otherwise dealt with.
- (VII) Crown lands may be put up to lease at auction at the lands office of the district or let by tender, either on application or otherwise, but no such sale of leases or letting by tender shall take place without one month's notice thereof having been given in the *Gazette*.
- (VIII) A lease under this section shall not exempt the land leased from sale or homestead selection or special or conditional or other lease.

No application for an annual lease made after any of the land applied for shall have been notified in the *Gazette* for lease by auction or tender shall prevent the land from being let as so notified.

Any

Any application under this section for an annual lease may be refused by the Minister in any case where the granting of such lease appears to him to be contrary to the public or general interest. Amendment of the law as to annual leases.

The rent for an annual lease shall commence from the first day of the month succeeding the date of the notification in the *Gazette*.

Of the Minister's approval thereof, or.

Acceptance of the tender for the same, or.

In the case of an annual lease sold at auction, from the first day of the month succeeding the date of such sale.

The first year of the lease shall expire on the thirty-first day of December then succeeding; and the rent for the first year shall be proportionate to the number of months between the commencement of the lease and the said thirty-first day of December.

The Minister may at any time cancel any annual lease by giving not less than three months' notice in the *Gazette* or otherwise of his intention to do so, such notice to terminate at the end of the then current year. Annual leases.

Trespass and Impounding on Annual Leases.

127. No person occupying land under annual lease shall—

(a) bring an action for trespass committed by stock upon the said land, whether before or after the commencement of this Act; Trespass by stock on unfenced lands. Sec. 55, Act 1895.

or

(b) impound any stock trespassing upon the said land— unless the said land or the portion thereof trespassed upon was, at the date of the trespass, enclosed with a fence reasonably sufficient to keep out stock :

Provided always that nothing in this section contained shall apply to any trespass wilfully caused.

Artesian Well Leases.

128. Upon application in the prescribed manner (accompanied by a deposit of ten pounds to cover the expenses in dealing therewith) for permission to bore and search for water in any land in the Western Division, held by the applicant under occupation license or annual lease, the Minister may, by notice in the *Gazette*, set apart an area not exceeding ten thousand two hundred and forty acres in one block on the resumed area. Protection of artesian wells. Sec. 45, Act 1889.

Upon publication of such notice the land therein described shall be held to be temporarily exempt from sale or lease under this Act to other than the applicant, but shall not be withdrawn from the occupation license or annual lease.

Within sixty days after such notice the applicant shall commence to bore and search for water on such land, and shall forward to the Chairman of the land board by registered letter notice verified by statutory declaration of his having done so.

The work of boring and searching as aforesaid shall be continued until water be found, or until it appear to the Minister that the work cannot be pursued with reasonable hope of success or profit.

Within fourteen days after the discovery of water, the licensee or lessee shall, by registered letter, notify the fact to the Chairman of the local land board, and the said licensee or lessee shall, on approval by the Governor, become entitled to a lease for such a term as may be determined, not exceeding the unexpired term of the current pastoral lease of the leasehold area of the pastoral holding.

The rental of such area shall be at the rate then payable upon the land held under such occupation license or annual lease.

If the applicant shall fail to forward any prescribed notice, or
If the Minister shall consider that the application has not been made *boná fide*, or

That reasonable efforts have not been or are not being made to discover water, or

That any water discovered is not sufficiently permanent, or

That the quantity of water is not sufficiently great,

he may withdraw the notice aforesaid, or the Governor may cancel the lease, and upon publication in the *Gazette* of notice of such withdrawal, or cancellation, the temporary exemption from sale or lease of such land, and the lease thereof, shall be held to be annulled.

Not more than one such area as aforesaid shall be leased under the provision of this section out of each sixty-four thousand acres of an occupation license, and not more than three such areas shall be leased hereunder in respect of one and the same occupation license.

Tenant-right.

Sec. 7, Act 1895.

Upon the expiration by effluxion of time of the term of any artesian well lease the last holder of the lease shall have tenant-right as the same is hereinafter defined in improvements upon the lands theretofore held under the lease.

Homestead Leases.

Homestead leases in the Western Division Secs. 82, 84, 90, 118, 123, and 124, Act 1884, secs. 12, 30, 34, and 47, Act 1889, sec. 7, 4C, and 41, Act 1895.

129. In the Western Division the Governor may grant homestead leases within resumed areas or vacant lands subject to the provisions following:—

The following classes of lands shall be exempt from homestead lease:—

- (a) Lands within proclaimed cities, towns, and villages, and the defined limits of suburban lands to be attached thereto.
- (b) Lands under lease or lawful occupation for mining purposes.
- (c) Lands dedicated to any public purpose.
- (d) Lands temporarily reserved from sale for commonage.
- (e) Lands reserved from lease under any repealed Act until the reservation thereof shall have been revoked under the provisions of this Act.
- (f) Lands reserved from lease generally or reserved specifically from homestead lease.

What leases not to be held in combination.

130. No holder of a pastoral lease shall during the currency thereof hold or cause to be held on his behalf or in his interest a homestead lease, nor shall the holder of a homestead lease during the currency thereof hold or cause to be held on his behalf or in his interest a pastoral lease, nor shall any person hold or cause to be held on his behalf or in his interest more than one homestead lease, under penalty in every such case of forfeiture of every lease held by him or on his behalf or in his interest and any rent paid thereon. And for the purpose of this section every owner or part owner of any lease shall be deemed to be a holder thereof: Provided that any *boná fide* mortgagee for value may, on application to the Minister, be registered as the holder of more than one homestead lease, subject to such regulations as may be made in that behalf, although such mortgagee is the registered holder of one or more pastoral leases.

Applications for homestead leases.

131. Applications for homestead leases may be made in the prescribed manner upon any land office day, and with such application there shall be lodged a sum equal to one penny per acre for the area proposed to be leased.

Area

Area of homestead leases.

132. The area which may be granted and held under a homestead lease shall not, except as provided in section one hundred and eighty-two hereof, exceed ten thousand two hundred and forty acres, and shall not, subject to the provisions hereinafter contained, be less than two thousand five hundred and sixty acres.

Area which may be held under homestead lease.

Any applicant for or holder of a homestead lease, whether applied for before or after the commencement of this Act, may, in virtue thereof, obtain additional homestead leases adjoining the land comprised in the original or any prior additional homestead lease, provided that the total area of such original and additional leases shall not exceed ten thousand two hundred and forty acres.

An application for an additional homestead lease shall not be received for less than two thousand five hundred and sixty acres, unless such an area is not available, or cannot be taken up without causing the aforesaid maximum area of ten thousand two hundred and forty acres to be exceeded; but in no case, shall an application for an additional homestead lease be received for an area less than six hundred and forty acres.

No additional homestead lease shall be granted in virtue of an original homestead lease which, if applied for before the commencement of this Act, has not been granted subject to or brought under the provisions of the Crown Lands Act of 1889.

Where more than one applicant shall apply for the same land, or for any portion thereof, on the same day, the right of lease shall be determined in the manner prescribed by section forty of this Act.

Term of homestead lease.

133. Every homestead lease granted before or after the commencement of this Act shall have a term of twenty-eight years, and the term shall be divided for the purpose of the appraisalment of the rate of rent into four periods each of seven years, and a separate appraisalment shall be made of the rate of rent payable for each of such periods, if the same be a period commencing after the first day of June, in the year one thousand eight hundred and ninety-five or after the commencement of this Act.

Term of lease.

Provided always that—

- (a) In the case of a homestead lease granted before the first day of December, in the year one thousand eight hundred and eighty-nine, and not brought under the provisions of section twenty-nine of the Crown Lands Act of 1889, the rate of rent from time to time payable under the Crown Lands Act of 1884 shall be paid until the expiration of such seven-year period of the term of the lease as may have been current on the first day of June, in the year one thousand eight hundred and ninety-five.
- (b) Nothing contained in this section shall prevent or affect the reappraisalment of the rent of a homestead lease in pursuance of section nine of the "Crown Lands Act of 1895," or the coming into operation of any rent so reappraised.

Effect of homestead lease application, &c.

134. The title to any homestead lease applied for after the commencement of this Act shall commence from the date of application therefor, if valid, and any such application shall withdraw such of the lands therein described as may be available for the purpose from any annual lease or occupation license under which they may be held.

Applications for conditional purchase, conditional lease, or homestead lease.

The

The land agent shall, within one week of the receipt of any such application, notify the same through the post to the holder of any annual lease or occupation license within which the land applied for, or any part thereof, may be situated.

Any application for a homestead lease may, after report by the land board, be refused or the position and boundaries of the land may be altered, varied, or modified.

If land be allotted in satisfaction thereof of a less area than, or in a different position from, that applied for, such of the land described as may not be allotted, or if the application be withdrawn, the whole of the lands described therein, shall revert to the lease or license on notification in the *Gazette* of the approval of such lease, or of the acceptance of the applicant's refusal thereof.

Any allotted lands which are not described in the original application shall, for the purposes of withdrawal from lease or license, be deemed to have been applied for on the date of notification in the *Gazette* of approval of the lease.

Non-acceptance of homestead lease.

Non-acceptance of lease.

135. Should the Minister recommend the issue of a lease in a form other than as applied for, the applicant may, within ninety days after the notification in the *Gazette* of the approval of the issue of a lease, notify in writing to the local land board his intention of not accepting it, and he shall thereupon be entitled to a refund of the deposit paid; but in default of any notice of such intention, or of occupation within the time specified for either purpose, the deposit shall be forfeited.

Notice by an applicant of his non-acceptance of any homestead lease applied for before or after the commencement of this Act shall not entitle him to a refund of deposit, unless, in the opinion of the Minister, the land approved to be leased differs materially in form or situation from that applied for.

If the applicant shall have occupied or made use of any land by virtue of his application, the Minister may refuse to accept any such notice of non-acceptance.

The acceptance by the Minister of any such notice of non-acceptance shall take effect on notification in the *Gazette*.

In the event of the non-acceptance of the lease, the land shall revert to the holding from which it was taken.

Survey of homestead lease.

Survey of lease.

136. The Minister may direct a survey of the boundaries of any homestead lease, and upon such survey being made may demand from the lessee towards defraying the cost of such survey, payment of any sum not exceeding twenty shillings for each linear mile of the boundary so surveyed, and in default of payment of such sum within sixty days after notification of the demand in the *Gazette*, the lease shall be liable to forfeiture.

Trespass and impounding on homestead lease.

Sec. 55, Act 1865.

137. No person occupying land under a homestead lease, or in virtue of an application for a homestead lease shall—

(a) bring an action for trespass committed by stock upon the said land, whether before or after the commencement of this Act; or

(b) impound any stock trespassing upon the said land—
unless the said land or the portion thereof trespassed upon was, at the date of the trespass, enclosed with a fence reasonably sufficient to keep out stock:

Provided always that nothing in this section contained shall apply to any trespass wilfully caused.

Conditions

Conditions of homestead leases.

138. Every applicant for a homestead lease shall, after the survey of the land subject to the provisions of section one hundred and thirty-six, and to the payment in the prescribed manner of the value of the improvements upon the land to be determined by the local land board, enter into occupation thereof within ninety days after the notification in the *Gazette* of the approval of the issue of a lease, and shall reside continuously on the leased land for six months of each year of the prescribed term of residence, and such term shall expire five years after the date of application for the lease.

Prior to the date of commencement of residence during any year the lessee shall notify the local land board to that effect; and such notice shall specify the date from which he intends to reside.

Within two years after such entry into occupation the lessee shall fence the outside boundaries of such land with a fence of such a character as may be prescribed by the land board. But for sufficient cause shown the time for completing such fencing may be extended by the land board or Chairman of such board.

The land board or Chairman may grant an exemption from fencing any natural or other boundary of the land held under lease.

Any original and additional homestead leases may, for all purposes of residence and fencing, be held to be one homestead lease.

The rents of homestead leases shall be paid annually in advance not later than one day prior to a date corresponding to the date of application. Rent shall be charged from the date of application, and pending determination a provisional rent of one penny per acre shall be payable.

Any homestead lease may be surrendered on giving the Minister not less than twelve months notice.

The term and periods of any additional homestead lease shall determine at the same respective dates as the term and periods of the original homestead lease, and the surrender or the forfeiture (otherwise than for non-payment of rent) of the original homestead lease shall involve the forfeiture or surrender of all additional leases.

The provisions of section eighty-two of this Act with respect to the suspension of conditions of a conditional purchase or conditional lease shall apply also to homestead leases.

Upon the application of any homestead lessee the Minister shall cause to be issued to him a lease for the land held by him, which lease shall be in the form prescribed and shall be subject to a fee of twenty shillings.

Transfer and subletting of homestead leases.

139. The holder of a homestead lease may transfer his right of lease in the prescribed manner, but shall have no power to transfer the same until he shall have fulfilled the condition of residence, but no additional homestead lease shall be transferred apart from the original, or *vice versa*, unless and until the prescribed condition of residence has been fulfilled. Nothing in this or the previous Acts shall prevent any homestead lease being transferred by way of mortgage or security, at the risk of the transferee, before the expiration of the prescribed term of residence subject to the conditions of the lease being fulfilled by the owner, subject to such mortgage or security.

140. All agreements for the subletting of a homestead lease shall be in writing, and a copy of every such agreement shall be verified and sent to the chairman of the local land board in the prescribed manner. Any subletting which is not effected by an agreement in writing, or in respect of which a copy of the agreement is not verified and sent as aforesaid, may, in the absence of any sufficient explanation, be taken to be evidence that the homestead lease is not held or used for the exclusive benefit of the lessee or apparent owner thereof.

Miscellaneous provisions re Homestead leases.

141. If any rent due on a homestead lease be not paid within the prescribed time, or if any condition attaching thereto be not fulfilled, the lease shall be liable to forfeiture, and forfeiture shall take effect thirty days after notification thereof in the *Gazette*.

Tenant right in improvements.

142. Upon the expiration by effluxion of time of the term of any homestead lease, the last holder of the lease shall have tenant right (as the same is hereinafter defined) in improvements upon the lands theretofore held under the lease

143. On any determination of any homestead lease, the land comprised therein may be leased as a homestead lease by auction or tender, or otherwise disposed of, in accordance with the provisions of this Act.

Cases of death, lunacy, insolvency, or judgment debt of conditional purchaser.

144. If the holder of any homestead lease applied before or after the commencement of this Act shall die or be declared a lunatic, or become an insane patient within the meaning of the Lunacy Act of 1878 and the Acts amending the same, before the fulfilment of the prescribed conditions of residence and fencing his lease, may be held by his representatives or their assigns subject to the fulfilment by them of all unfulfilled conditions except the condition of residence, but in trust for and for the benefit of the persons rightfully entitled. And any sale, transfer, or other disposition whatsoever of the estate, right, title, or interest of any homestead leaseholder by an official assignee or other lawful authority upon the insolvency of such lessee, or by a sheriff or registrar of a district court or any other person by virtue of or under the authority of any writ of execution or other process of any court, or by the trustees of any deed of assignment for the benefit of creditors, or by any person under any decree or order of any court shall pass to a purchaser or to any other person only such estate, right, title, or interest as the lessee himself was entitled to at the date of sequestration, writ, process, decree, order, or assignment respectively, and subject to all conditions remaining unfulfilled at such date.

145. The holder of any homestead lease whether granted before or after the commencement of this Act may, subject to the provisions of section one hundred and sixty-seven of this Act, apply during the last year of the term of the lease for a portion of the leasehold as a homestead selection, such portion not exceeding six hundred and forty acres in area.

Improvement Leases.

Improvement leases. Sec. 26, Act 1895.

146. The Governor may, under this section, grant leases of Crown lands, which, by reason of inferior quality, heavy timber, scrub, noxious animals, undergrowth, marshes, swamps, or other similar cause, are not suitable for settlement until improved, and can only be rendered suitable by the expenditure of large sums in the improvement thereof. The granting of the leases shall be subject to the provisions hereunder contained:—

- (I) The term of the lease shall not exceed twenty-eight years, and shall commence from the date of the execution of the lease.
- (II) The area included in the lease shall not exceed twenty thousand four hundred and eighty acres.
- (III) The amount bid at a sale by public auction of the lease, or offered by an accepted tender, shall be the yearly rent of the lease; but an upset rent may be placed upon any such lease if offered by auction, and the Governor shall not be bound to accept any tender.
- (IV) The lease may contain such covenants and provisions as to the Governor may seem expedient according to the circumstances of each case, and all such covenants and provisions shall

shall be notified in the *Gazette* and in a local newspaper before the lease is offered for sale or tenders called for. The lease shall contain covenants and provisions for the improvement of the land leased and for the expenditure of money thereon, for the payment of rent, and for the determination of the lease upon any breach by the lessee of the covenants and provisions thereof.

- (v) Upon the expiration of the term of the lease by effluxion of time the lessee shall have tenant-right (as the same is hereinafter defined) in improvements.
- (vi) The holder of the lease may, subject to the provisions of section one hundred and sixty-seven of this Act, apply during the last year of the term of the lease for a portion of the leasehold as a homestead selection, such portion not exceeding an area of six hundred and forty acres.

Inferior Lands.

147. The Minister may, after report by the local land board, lease by auction or tender for a period not exceeding twenty years such vacant lands in the Eastern, Western, or Central Division as in consequence of their inferior character, or isolated positions may not have been held under any tenure, or having been held have been abandoned, subject to the following provisions—

Leases of inferior lands.
Sec. 37, Act 1889.

- (I) Such leases shall be subject to such conditions as may be specified in the *Gazette* notice offering the land on lease.
- (II) No such lease shall be sold by auction, nor shall any tender be accepted until after the expiration of thirty days from the date of such notice, but when sold or granted shall commence from the date of sale or notification of acceptance of tender as the case may be.
- (III) The upset rental shall be determined by the Minister after report by the local land board.
- (IV) The amount bid at auction, or offered by an accepted tender, shall be the annual rental of the lease; and shall be paid, if the lease be sold at auction at the time of such sale, but if upon tender, within sixty days after the notification in the *Gazette* requiring payment thereof. If the rent be not paid within the time allowed, the lease and any amounts paid may be forfeited by notice in the *Gazette*. And any lease sold at auction, the price bid for which shall not forthwith be paid, may there and then be reoffered for sale.
- (v) Tenders shall be made in the form prescribed; and shall describe the land applied for in terms of the notice calling for tenders; and shall be accompanied by a receipt showing that a sum of two pounds has been paid to the land agent or Treasury as a deposit thereon. Such deposit paid by a person, whose tender may be accepted, shall be credited on account of the first year's rent, and the rent for the ensuing year shall in all cases be paid on or before a date corresponding to the date of commencement of the lease.
- (vi) A lease of any such land which may have been offered at auction, and not bid for, may be obtained on application to the land agent, and upon payment of the required upset rent, in accordance with subsection (III) of this section; or the lease may be again submitted to auction unless the land shall have been previously otherwise dealt with.
- (vii) Upon application being made by any person for the submission of land to lease under this section the Minister may demand such amounts as may seem necessary to cover the expenses of report in connection therewith.

(VIII)

- (VIII) If the Minister shall be satisfied, after inspection by an authorised officer and report by the local land board, that the holder of any such lease has failed, or is failing to fulfil any condition of his lease, such lease, together with any amounts paid, may, by notification in the *Gazette*, be forfeited.
- (IX) The Governor may, on application as prescribed, extend the term of any inferior land lease granted under the previous Acts to a term not exceeding twenty-eight years, on such terms and conditions as he may think fit, but such term shall be computed from the commencement of such lease under those Acts, and may grant to the last holder thereof tenant-right as defined in this Act.
- (X) The holder of any lease of inferior lands may, subject to the provisions of section one hundred and sixty-seven of this Act, apply during the last year of the term of the lease for a portion of the leasehold as a homestead selection, such portion not exceeding an area of six hundred and forty acres.

Lands exempt from Pastoral Lease in Central or Western Division.

148. The following classes of lands shall continue to be exempt from any pastoral lease in the Central or Western Division :—
- Exemption from pastoral or homestead lease. Sec. 99, Act 1884; 30, Act 1889.
- (a) Lands within proclaimed cities, towns, and villages, or within the defined limits of suburban lands to be attached thereto.
- (b) Lands under lease or lawful occupation for mining purposes.
- (c) Lands dedicated to any public purpose.
- (d) Lands temporarily reserved from sale for commonage.
- (e) Lands reserved from lease under any repealed Act, until the reservation thereof shall have been revoked under the provisions of this Act.

Pastoral Leases in the Central Division.

149. Every pastoral lease of a leasehold area in the Central Division in existence at the commencement of this Act may be held for the balance of such term or extended term as may have been approved or granted before or for any extended period which may be granted after the commencement of this Act, subject to the following provisions :—
- Pastoral leases in Central Division.
- (I) Rent at the rate per acre as determined and payable before the commencement of this Act shall continue to be payable annually in advance on or before the recurring date of commencement of the lease.
- S. 80, Act 1884. (II) A pastoral lease in the Central Division may be subdivided upon application by the lessee to the Minister, who may approve of the line of subdivision, or may himself determine such line: Provided that the provisions of this subsection shall not conflict or interfere with the provisions of section one hundred and fifty of this Act.
- S. 31, Act 1889. (III) The holder of a pastoral lease in the Central Division may surrender his lease after having given the Minister not less than twelve months notice of his intention so to do, and such notice shall specify the date on which the surrender is intended to take effect.
- S. 43, Act 1889. (IV) Lands held under any pastoral lease in the Central Division which may have been or which may be forfeited or surrendered may be relet under pastoral lease by auction or tender, for the unexpired portion of the forfeited or surrendered term, upon such conditions as to the periods of appraisalment

appraisement of rent or otherwise as may be determined by the Minister, or may be offered by auction or tender under occupation license, or otherwise dealt with as vacant lands.

After forfeiture or surrender of any pastoral lease as aforesaid, the land shall not be deemed to be Crown Lands, and shall not be available as such until after notification in the *Gazette* that the same may be so dealt with.

- (v) After the expiration of the term or extended term of a S. 5, Act 1895. pastoral lease in the Central Division the lands theretofore subject to such lease shall become a resumed area on notification in the *Gazette* to that effect, and on such notification, and not before, shall cease to be a leasehold area within the meaning of this Act.

Upon the expiration of the term, or extended term, of any pastoral lease in the Central Division, the lands comprised thereunder, if not subject to and applied for under preferential occupation license, may be offered by auction or tender under occupation license, or otherwise dealt with as vacant lands.

- (vi) Upon the determination, by effluxion of time, of the extended term of a pastoral lease in the Central Division, and of all periods (if any) added thereto, the holder of the lease shall, if not less than two months prior to such determination he shall have paid a license fee as prescribed, be entitled to occupy the lands theretofore held under such lease under a preferential occupation license, which shall be subject to all the provisions of this Act in respect of occupation licenses, qualified as hereunder:—

Conversion of
pastoral lease into
occupation license,
S. 4, Act 1895.

- (a) The license fee payable in respect of the land held under the preferential occupation license shall be at the same rate as is payable in respect of the resumed area, unless the Minister shall direct an appraisement thereof to be made; or, if there be no resumed area, or if the resumed area be not held under occupation license, then at a rate to be appraised, and, until such appraisement, and subject to an adjustment of accounts thereupon, at a provisional rate of two pounds per section of six hundred and forty acres.
- (b) The Governor may, giving not less than three months' notice in the *Gazette*, refuse a renewal of the preferential occupation license; and in such case the preferential occupation license shall determine at the end of the then current year.

The provisions of these subsections (a) and (b) shall apply to the preferential occupation license of any lands withdrawn from pastoral lease under the power conferred by section one hundred and fifty of this Act.

- (vii) Improvements made after the first day of June, in the year S. 5, Act 1895. one thousand eight hundred and ninety-five, or after the commencement of this Act, being made with the consent of the Crown, upon any lands within the Central Division, which, at the date of the making of the said improvements, are held under pastoral lease, shall upon the said lands ceasing to be the subject of the pastoral lease, and becoming the subject of a preferential occupation license, be taken to be the property of the licensee for all purposes of section one hundred and seventy-nine of this Act, but if made without the consent of the Crown shall be the property of the Crown. The consent of the Crown to the making of improvements may be given by such authorities, and shall be evidenced in such manner as may be prescribed.

- (viii) Upon the application of any pastoral lessee the Minister shall cause to be issued to him a lease for the land held by him, which lease shall be in the form prescribed and shall be subject to a fee of twenty shillings.

Power of withdrawal from Central Division Pastoral Leases.

Withdrawal from
pastoral leases for
settlement purposes,
S. 3, Act 1895.

150. The Governor shall have power to withdraw from pastoral lease in the Central Division any lands held thereunder, whenever he shall deem it expedient so to do for the purpose of providing for settlement by other holdings :

Provided that prior to any such withdrawal being notified as hereinafter provided, the local land board shall make inquiry and report to the Minister with respect to the expediency of the proposed withdrawal, and the portion of the lease to be withdrawn, and, upon such inquiry, the lessee may be a party, without any right of appeal to the Land Court :

Provided further that the leasehold area shall be divided by the Minister into two parts as nearly equal in area as practicable, and the part from which withdrawals may be made shall be defined, and notice thereof given to the lessee.

The area withdrawn under one exercise of this power shall be in as compact a form as practicable, and the first withdrawal shall not be less than one-fourth, and the aggregate areas to be withdrawn under this power shall not exceed one-half of the area held under such lease at the commencement of this Act.

Every such withdrawal shall be notified in the *Gazette* and some newspaper published in the district, and shall take effect four months after the date thereof or at such later date as may be specified for that purpose in the notification ; and copies of such notifications, together with the reasons for the withdrawals therein notified, shall be laid upon the tables of both Houses of Parliament forthwith if Parliament be sitting, and if not, then within eight days after the commencement of the next session.

Upon any such withdrawal taking effect the pastoral lease shall cease to include the lands so withdrawn, but shall otherwise continue in full force and effect except as hereinafter provided.

The power of withdrawal conferred by this section shall be in addition to, and not in substitution for, the power of withdrawal conferred by section one hundred and twenty-two of this Act.

In compensation for a withdrawal under the power conferred by this section ;—

- (a) a period shall be added to the term of the pastoral lease ; and
- (b) the lands withdrawn may, upon payment of the license fee as prescribed, continue to be occupied in virtue of a preferential occupation license ; and
- (c) the rent for the succeeding years of the pastoral lease shall be reduced in proportion to the area withdrawn ; and
- (d) a proportionate amount of any rent paid in advance shall be credited on account of the first year's license fee for the withdrawn area, or refunded at the request of the lessee.

The period to be added to the term of a pastoral lease in consideration of a withdrawal shall be computed so that the added period shall bear the same ratio to the unexpired period as the area withdrawn bears to the area left.

The method of ascertaining the added period shall be by multiplying together the unexpired period and the area withdrawn, and dividing the product by the area left. And in the foregoing formula —

“Unexpired period” means the number of months which the lease has to run, reckoning from the date of the withdrawal up to the date at which the lease (including all periods previously added) would have expired.

“ Added

“Added period” means the number of months by which the term of a pastoral lease is to be extended in consideration for such withdrawal.

“Area withdrawn” means the number of acres included in such withdrawal.

“Area left” means the number of acres left under the pastoral lease at the date of withdrawal.

For the purposes of computation any fractional part of a month shall be reckoned as one month, and any fractional part of an acre shall be disregarded :

Provided always that upon application by the lessee within the time and in the manner prescribed, the rent of the area left shall be reappraised.

The Governor shall notify in the *Gazette* the length of the period to be added to the term of a pastoral lease in consideration of a withdrawal, and the date at which such added period will expire; and the added period shall determine upon the date so notified; and the Governor shall likewise notify the rate of the rent of the pastoral lease in any case where the rate has been varied, and the rate so notified shall be deemed to have been payable as from the date of withdrawal.

The period added to the term of a pastoral lease in consideration of a withdrawal shall be affixed to the extension (if any) of such lease under section forty-three of the “Crown Lands Act of 1889,” and the conditions of the lease during any such added period shall be the same as immediately prior to the commencement of such period.

Pastoral Leases in the Western Division.

151. Every pastoral lease in the Western Division shall have a term of twenty-eight years, and such term (which shall be deemed to have commenced when the term, as existing before the first day of June, in the year one thousand eight hundred and ninety-five, commenced) shall be divided for the purpose of the appraisalment of the rate of rent into four periods each of seven years and a separate appraisalment shall be made of the rate of rent payable for each of such periods as may have commenced after the first day of June, in the year one thousand eight hundred and ninety-five, or may commence after the commencement of this Act :

Pastoral and home-
stead leases in the
Western Division.
S. 7, Act 1895.

Provided always that—

(a) In the case of a pastoral lease granted before the first day of December, in the year one thousand eight hundred and eighty-nine, and not brought under the provisions of section twenty-nine of the “Crown Lands Act of 1889,” the rate of rent from time to time payable under the “Crown Lands Act of 1884” shall be paid until the expiration of such seven-year period of the term of the lease as may have been current on the first day of June, one thousand eight hundred and ninety-five.

(b) Nothing contained in this section shall prevent or affect the reappraisalment of the rent of a pastoral lease in pursuance of section nine of the “Crown Lands Act of 1895,” or the coming into operation of any rent so reappraised.

(II) A pastoral lease in the Western Division may be subdivided upon application by the lessee to the Minister, who may approve of the line of subdivision, or may himself determine such line: Provided that such subdivision shall not conflict or interfere with the provisions of section one hundred and fifty-three of this Act.

S. 80, Act 1884.

(III)

S. 31, Act 1889.

(III) The holder of a pastoral lease in the Western Division may surrender his lease after having given the Minister not less than twelve months notice of his intention so to do, and such notice shall specify the date on which the surrender is intended to take effect.

S. 43, Act 1889.

(IV) Lands held under any pastoral lease in the Western Division which may have been or which may be forfeited or surrendered may be relet under pastoral lease by auction or tender, for the unexpired portion of the forfeited or surrendered term, upon such conditions as to the periods of appraisalment of rent or otherwise as may be determined by the Minister, or may be offered by auction or tender under occupation license, or otherwise dealt with as vacant lands.

After forfeiture or surrender of any pastoral lease as aforesaid, the land shall not be deemed to be Crown Lands, and shall not be available as such until after notification in the *Gazette* that the same may be so dealt with.

Upon the expiration of the term, or extended term, of any pastoral lease in the Western Division, the lands comprised thereunder may be offered by auction or tender under occupation license, or otherwise dealt with as vacant lands.

Tenant right in improvements.
S. 7, Act 1895.

(v) Upon the expiration by effluxion of time of the term of any pastoral lease in the Western Division the last holder of the lease shall have tenant right (as the same is hereinafter defined) in improvements upon the lands theretofore held under the lease.

(vi) The holder of a pastoral lease in the Western Division may, subject to the provisions of section one hundred and sixty-seven of this Act, apply during the last year of the term of the lease for a portion of the leasehold as a homestead selection, such portion not exceeding six hundred and forty acres.

(vii) Upon the application of any pastoral lessee the Minister shall cause to be issued to him a lease for the land held by him, which lease shall be in the form prescribed and shall be subject to a fee of twenty shillings.

Attachment of Resumed Area to Leasehold Area in Western Division.

Attachment of resumed area to leasehold area.
S. 8, Act 1895.

152. In any case in which—

(a) the Minister, after inquiry by the local land board, is satisfied that any resumed area in the Western Division (not being within the land districts of Brewarrina, Hay North, or Walgett North) is not, and is not likely to be, required for purposes of settlement before the expiration of the pastoral lease of the leasehold area; and

(b) the occupation license or annual lease, if any, of the resumed area is not held by a person other than the holder of the pastoral lease of the household area

the Minister may, with the consent of the holder of the pastoral lease by notification in the *Gazette*, declare that the resumed area shall thenceforward be held under pastoral lease; and the occupation license or annual lease, as the case may be, of the resumed area shall thereupon expire, and any artesian well lease on the resumed area, held concurrently with the pastoral lease, shall be deemed to be surrendered, but not so as in either case to thereby render the improvements on the resumed area the property of the Crown.

The resumed area, or so much thereof as may be available, shall be added to the area held under the existing pastoral lease; and the rent of the area so added shall be fixed in accordance with the following provisions:—

(i) If the Minister and the lessee so agree, such rent shall be, at the rate per acre, payable for the leasehold area.

(ii)

- (II) If the Minister and the lessee do not agree, the rent for the area so added shall be appraised by the local land board in accordance with the provisions of the Crown Lands Acts as if it were the rent for a pastoral lease of the resumed area.
- (III) Any reappraisal of the rent of the pastoral lease shall be of the rent of the lease as including the whole area.
- (IV) Upon default in the due payment for the whole area of any sum due as rent, or added to the rent, the lease of the whole area may be forfeited in accordance with the provisions of this Act.
- (V) The accounts between the lessee and the Crown shall be adjusted, and for the purposes of such adjustment any rent and license fee shall be considered as accruing due day by day.

Any resumed area added to land under pastoral lease in accordance with the provisions of this section shall be deemed to be added subject to the provision that the Governor may (by notice in the *Gazette*) withdraw, without compensation, the whole or any part or parts thereof from pastoral lease whenever he shall deem it necessary or expedient to make the land available under any provisions of this Act. Upon such withdrawal (which shall not take effect until the expiration of six months from the date of notice thereof) the lessee shall (on application within the prescribed time and payment of license fee as prescribed) be entitled to hold the withdrawn area under preferential occupation license; and any improvements upon the withdrawn area (not forfeited or forfeitable to or vested in the Crown) shall be taken to be the property of the lessee for all purposes and subject to the provisions of section one hundred and seventy-nine of this Act.

Power of Withdrawal from Western Division Pastoral Leases.

153. The Governor shall have the same power of withdrawing land from a pastoral lease in the Western Division as by this Act is conferred upon him in respect of pastoral leases in the Central Division, except that:—

Withdrawal for extra-urban settlement in the Western Division.
S. C. Act 1895.

- (a) The area withdrawn under one exercise of the power shall not be less than one-sixteenth, and the aggregate areas to be withdrawn under this power shall not exceed one-eighth of the area held under the lease, and this power shall only be exercised to withdraw land within ten miles of the boundary of a town containing at least fifty inhabitants; and
- (b) Any period to be added to the term of a pastoral lease in consideration of a withdrawal shall be affixed to the term of the lease as extended by this Act.

The lessee shall have compensation upon any such withdrawal in the like manner as is hereinbefore provided upon a withdrawal from a pastoral lease in the Central Division, and shall have tenant right in improvements as the same is hereinafter defined upon the land so withdrawn.

Transfers of Pastoral Leases.

154. The holder of any pastoral lease may transfer his right of lease in the prescribed manner. S. 118, Act 1884.

Occupation Licenses.

155. Subject to the provisions hereinafter contained the Governor may issue Occupation Licenses. And such licenses shall entitle the licensees to occupy for grazing purposes a resumed area or vacant lands or any portion thereof:—

Occupation Licenses.
S. 81, Act 1884.

- (i) The right to occupation licenses for any portions of resumed areas or vacant lands which were not applied for by the runholder under the previous Acts, or which have been forfeited

- forfeited or surrendered, may be disposed of by auction or tender in the prescribed manner.
- (II) All occupation licenses or preferential occupation licenses in existence at the commencement of this Act may remain in force up to the thirty-first day of December, one thousand eight hundred and ninety- And the rate of license fee payable at such commencement shall, subject to the provisions here following, remain unaltered ;
- (III) nothing in this section shall prevent the taking effect of any appraisement directed or applied for before the commencement of this Act ;
- (IV) the Minister may at any time direct a fresh appraisement to be made of any occupation license or preferential occupation license in any Division, and may require the licensee to pay his annual license fee on the basis of such fresh appraisement after the expiration of any current year during the continuance of the license ;
- (V) licenses shall be in force from the first day of January to the thirty-first day of December in each year, and the rates of license fee shall be published in the *Gazette*, and if within sixty days thereafter such fees be not paid into the Treasury by the licensee, the license shall after the thirty-first day of December be treated as forfeited (without any notification to that effect) unless the Minister shall renew such license.
- (VI) Where on the expiration of the term or extended term of any pastoral lease in the Central Division, or where on the withdrawal of land from pastoral lease in the Central or Western Division the land shall be held under preferential occupation license, the license fee payable in respect of the land held under the preferential occupation license shall be at the same rate as is payable in respect of the resumed area, unless the Minister shall direct an appraisement thereof to be made ; or, if there be no resumed area, or if the resumed area be not held under occupation license, then at a rate to be appraised, and, until such appraisement, and subject to an adjustment of accounts thereupon, at a provisional rate of two pounds per section of six hundred and forty acres.
- (VII) Improvements made with the consent of the Crown upon any lands within the Central Division which, at the date of the making of the said improvements are held under preferential occupation license, shall be taken to be the property of the licensee for all purposes of section one hundred and seventy-nine of this Act. Improvements made after the first day of June, one thousand eight hundred and ninety-five, or after the commencement of this Act upon lands within the Central Division, which, at the date of the making of the said improvements are held under preferential occupation license, shall, if made without the consent of the Crown, be the property of the Crown. The consent of the Crown to the making of improvements may be given by such authorities, and shall be evidenced in such manner as may be prescribed.
- (VIII) The Governor may, giving not less than three months' notice in the *Gazette*, refuse a renewal of any preferential occupation license in the Central or Western Division, and in such case the preferential occupation license shall determine at the end of the then current year, and if the Governor refuse to renew any such preferential occupation license of lands containing improvements, the last holder of the license shall have tenant right (as the same is hereinafter defined) in such of the improvements as were made with the consent of the Crown after the first day of June one thousand eight hundred and ninety-five or after the commencement of this Act.

- (IX) Upon the granting of any lease or the sale of any land under occupation license the licensee's right of occupation to the extent of such portion shall thereupon cease, but he shall be entitled to a refund of so much of the license fee paid in advance and to reduction in future rent as shall be proportionate to the area so withdrawn and from the date of withdrawal, and shall be entitled to be paid such compensation for improvements on any portion so withdrawn as may be determined after appraisalment by the Local Land Board.

Survey of Leasehold and Resumed Areas, &c.

156. The Minister may direct the survey of the boundaries or portions of the boundaries of any land held under pastoral lease or occupation license.

Survey of leasehold and resumed area and settlement of disputed boundaries. Sec. 143, Act 1884; 52, Act 1889.

If such survey be made at the request of the lessee or licensee the Minister may demand from the lessee or licensee the whole or any part of the cost thereof, but if otherwise, any sum not exceeding twenty shillings for each linear mile of the boundary so surveyed, and, in default of payment of such sum within sixty days after notification of the demand in the Gazette, such lessee or licensee shall become liable to the same penalties as attach to non-payment of his rent or license fee.

If at any inquiry or proceeding before a local land board concerning any application to purchase or lease Crown Lands, any question or dispute shall arise as to the extent or boundary or boundaries of any land comprised in any lease or license, it shall be competent for such board thereupon to inquire into the matter and recommend for the approval of the Minister (subject to appeal) any adjustment of such boundary or boundaries which may appear reasonable; or such adjustment of boundaries may, subject to the ultimate approval of the Minister, be determined by agreement between the parties; and for this purpose the description of any land applied for as aforesaid may be modified to conform with the boundary or boundaries so determined; and any such boundary or boundaries approved by the Minister as aforesaid shall, for the purposes of the previous Acts or this Act or any repealed Act, be held to be the boundary or boundaries of such pastoral lease or occupation license or other lands applied for.

The Minister may refer to the local land board for inquiry any question or dispute which may have arisen or may arise in respect of the boundaries of any land held under lease or license, and the board shall in due course deal therewith: Provided that in any case the board make such order as it may deem fit touching the cost of such inquiry, and of any survey which may be deemed necessary, which shall be borne by such persons and in such proportions as the board may direct.

Residential Leases.

157. It shall be lawful for the Governor, on the recommendation of the Warden of any gold-field, to grant leases for periods not exceeding fifteen years of areas not exceeding twenty acres of Crown Land within gold and mineral fields to any holder of a miner's right or mineral license for the purpose of *bona fide* residence, upon such terms and conditions as to rent, cost of survey, term of lease, erection of fences and buildings, and upon such other provisions for the protection of the public interest as may be prescribed.

Residential lease may be granted to holder of miner's right or mineral license. Sec. 48, Act 1889; 50, Act 1895.

All holders of residential leases, whether granted before or after the commencement of this Act, shall have tenant right in improvements as herein defined.

Scrub

Scrub Leases.

Scrub-lands may be declared and leased. Secs. 35, Act 1880; 26, Act 1895.

158. The Minister may, upon the recommendation of the local land board, declare by notification in the *Gazette*, any Crown lands wholly or partly covered by scrub or noxious undergrowth to be scrub-lands; and may, on the recommendation of the local land board (and notwithstanding anything in the "Prickly-pear Act" contained), grant leases of such lands on application, or sell the same by auction or tender at such times and places and under such conditions and for such terms not exceeding twenty-one years as he may deem desirable.

Lands so declared to be scrub-lands shall not until leased in accordance with this section be withdrawn from any lease or license under which they may at the time be held.

No scrub-lease of lands within the outside boundaries of land held under pastoral lease or homestead lease shall be granted to any person but the holder of such pastoral or homestead lease, in which case such scrub-lease shall not be for a longer term than the unexpired term of such pastoral or homestead lease.

The term of a scrub-lease may be divided into such periods as the Minister shall fix, and the rent for the second or any succeeding period shall be determined in accordance with section twenty-five of this Act.

Notwithstanding anything in this Act or in the previous Acts contained, the Minister may, on the recommendation of the local land board, either before or after granting any such scrub-lease, cause the rental of the remainder of the land held under pastoral or homestead lease to be reappraised and redetermined.

No pastoral or homestead lessee shall hold or cause to be held on his behalf, or in his interest, any scrub-lease, except within the land held under lease by himself.

The applicant for any scrub-lease shall pay the cost of survey thereof, or in the event of his withdrawing his application, all costs of survey, reports, or inquiry incurred in dealing therewith.

And all such leases of scrub-lands and any scrub-leases granted after the commencement of this Act in pursuance of applications made under the previous Acts shall be subject to the general provisions here following—

- (I) Every such lease shall, if granted in pursuance of an application or by tender, commence from the date of the notification in the *Gazette* of the Minister's approval of the application or acceptance of the tender; and, if sold at auction, shall commence from the date of sale. And the land held thereunder shall (subject to the provision for withdrawal contained in section one hundred and twenty-two of this Act, during the whole currency thereof be unavailable for purchase or lease.
- (II) Rent for the first year of the lease shall together with the cost of survey, be paid within one month from the date of the notice in the *Gazette* specifying the amount thereof; and the rent shall for succeeding years be paid annually in advance on or before the last day of the current year of the lease.
- (III) Every holder of a scrub-lease shall, as conditions of his lease, be required to take all such steps as the local land board shall from time to time, subject to appeal, direct, for the purpose of destroying such scrub as may be specified in his lease or promise of lease, in and upon the land under scrub-lease, or in and upon any land within the boundaries of the lease, or in and upon any reserves or roads within such boundaries; and when so destroyed to keep such land free from the same; and shall commence to destroy the same within three months after the commencement of the lease.

And

And if rent thereon shall not be paid within the time allowed, or if in the opinion of the Minister, after report by the local land board, subject to appeal, the holder shall have failed to comply with any condition of his lease, the Minister may, by notification in the *Gazette*, declare such lease to be forfeited; and all improvements on such lands shall be the property of the Crown.

- (iv) Any land held under scrub-lease shall, on the forfeiture or surrender thereof, be added to the lands held under lease or license within the boundaries of which it may be situated, and rent therefor shall be payable at such rate per acre as may be determined by the local land board, and shall form part of the rent payable for such lease or license, which shall be liable to forfeiture if the rent for the added lands be not paid as prescribed.
- (v) If a pastoral lease or homestead lease be held in conjunction with a scrub-lease, neither of such leases shall be transferred separately.
- (vi) The Governor may, on application as prescribed, extend the term of any scrub-lease granted under the previous Acts or this Act to a term not exceeding twenty-eight years on such terms and conditions as he may think fit, but such term shall be computed from the commencement of such lease under those Acts.
- (vii) The Governor may grant to the last holder of any scrub-lease tenant-right as defined in this Act.

The holder of any scrub-lease not being within a pastoral or homestead lease, whether granted before or after the commencement of this Act, may, at any time during the last year of the term of the lease, apply, subject to the provisions of section one hundred and sixty-seven of this Act for a portion of the leasehold as a homestead selection, such portion not exceeding six hundred and forty acres in area.

Settlement Leases.

Settlement Leases for Agriculture and Grazing.

159. The Governor may, subject to the provisions of and under the power conferred by section twenty-six of this Act set apart any tract of Crown lands to be disposed of by leases under the provisions hereinafter contained.

Settlement lease
areas.
Sec. 24, Act 1895.

Any tract which has been so set apart shall be dealt with as follows:—

- (i) A subdivision shall be made thereof into farms, which in cases where the land appears suitable for agriculture, shall not contain more than one thousand two hundred and eighty acres; and in cases where the land appears suitable chiefly for grazing shall not be more than ten thousand two hundred and forty acres in area; and the standard to be adopted in regulating the extent of each such farm shall be that the lessee thereof may be able to establish and maintain a home thereon by the use of the land.
- (ii) A valuation of the said farms shall be made according to the capabilities and situation of the farm, and in making such valuation, due regard shall be paid to the term and conditions of a settlement lease, and to the intention of these provisions that the lessee may be enabled to establish and maintain his home thereon.

- (III) The value, to an incoming tenant, of any improvements on any such farm may be appraised by the Minister after inquiry and report by the Local Land Board in the prescribed manner, and such appraisal shall, as between the Crown or the owner of the improvements, as the case may be, and any person taking such farm, be conclusive evidence of the value of the improvements at the date of the appraisal.
- (IV) A notification shall be published in the *Gazette* and in a local newspaper, giving particulars of the areas, values and qualities of the said farms, and of the appraised value of any improvements thereon, and specifying a date from and after which leases of the said farms may be applied for; the area and value of any farm as stated in the said notification shall be taken to be the area and capital value thereof for the purposes of the provisions hereinafter contained.
- (V) From and after the date so specified, any person not disqualified by this Act may apply to the Land Agent for any farm notified as aforesaid. The application shall be made in the prescribed manner, and shall be accompanied by one half years rent in advance, and by a survey fee upon the prescribed scale.
- (VI) The applicant shall satisfy the Local Land Board that he is qualified to make the application, and that the same has been made in accordance with the provisions of this Act. The Local Land Board shall confirm the application, if so satisfied, unless it permits the applicant to withdraw the same; if not so satisfied, it shall disallow the application.
- (VII) The title to any settlement lease applied for after the commencement of this Act shall commence from the date of application therefor, if valid, and any such application shall withdraw such of the land therein described as may be available for the purpose from any annual lease or occupation license under which it may be held: Provided that the land agent shall, within one week of the receipt of any such application, notify the same through the post to the holder of any annual lease or occupation license within which the land applied for, or any part thereof, may be situated.

160. The concluding part of subsection (v) and the whole of subsection (vi) of section forty-one of this Act shall, as far as applicable apply to this section.

Settlement Leases.

Settlement leases.

Sec. 25, Act 1895.

Sec. 2, 59 Vic. No. 26.

161. The Governor may grant to an applicant whose application has been confirmed by the Local Land Board a settlement lease of the farm applied for.

The term of the lease shall be twenty-eight years, and the lease shall be in the prescribed form, and shall contain provisions to secure:—

- (a) That the lessee shall pay an annual rent of one and one quarter per centum on the capital value of the farm as fixed under this Act, and such rent shall be charged from the date of the application for the lease;
- (b) that the lessee shall pay the value of the improvements as appraised, and interest on such value at the rate of four pounds per centum per annum, the payment being made in one instalment, or, at his option, in three equal yearly instalments, at the dates and in the manner prescribed;
- (c) that the lessee shall commence to reside on the farm within three months after the date of issue of the lease and shall thereafter continue to reside on the farm and make it his *bonâ fide*

- vide* residence during the whole term, or if the lease have been transferred by way of *bonâ fide* mortgage, then that the owner, subject to such mortgage shall so reside;
- (d) that the lessee shall fence the farm within five years from the date of issue of the lease;
- (e) That the lessee shall conform to any regulations made by the Minister relating to keeping the farm clear of rabbits and other noxious animals, and also to clearing the farm of scrub and noxious weeds;
- (f) that the lessee shall not assign or sublet without the Minister's consent;
- (g) that the Governor may forfeit the lease upon breach of any of the conditions, covenants, and provisions therein contained. The lease may also contain such additional provisions, conditions, and covenants as to the Governor may seem expedient in the public interest.

162. Upon the expiration of the full term of a settlement lease the last holder thereof shall have tenant right (as the same is hereinafter defined) in the improvements thereon.

163. The holder of a settlement lease may, subject to the provisions of section one hundred and sixty-seven of this Act apply during the last year of the term of the lease for a portion of the leasehold as a homestead selection, such portion not exceeding an area of one thousand two hundred and eighty acres.

Trespass and Impounding on Settlement Leases.

164. No person occupying land under a settlement lease shall—
- (a) bring an action for trespass committed by stock upon the said land, whether before or after the commencement of this Act; or

Trespass by stock on unfenced lands.
Sec. 55, Act 1895.

(b) impound any stock trespassing upon the said land— unless the said land or the portion thereof trespassed upon was, at the date of the trespass, enclosed with a fence reasonably sufficient to keep out stock :

Provided always that nothing in this section contained shall apply to any trespass wilfully caused.

Snow Leases.

165. The Minister may, upon the recommendation of the local land board, lease by auction any Crown lands not being under pastoral or conditional lease, which may be usually covered with snow for a part of each year and unfit for continuous use or occupation.

Lensing of snow lands.
Sec. 36, Act 1889.

Such land shall be leased in areas of not less than one thousand two hundred and eighty or more than ten thousand two hundred and forty acres, and during the currency of the lease shall be exempt from sale or other lease under the provisions of this Act.

Every such lease shall commence from the day of sale, and shall withdraw the land from any annual lease or license under which it may be held, and rent therefor shall be paid annually in advance not later than the last day of each year of the lease, subject in default to forfeiture, by notice in the *Gazette*.

No right of impounding any stock of the outgoing licensee or lessee shall vest in the holder of a lease under this section until one month after the commencement of such lease.

The prescribed fee for the survey of the land and the first year's rent shall be paid by the purchaser at the time of sale, and upon default the lease may there and then be reoffered for sale.

The

The lease shall have a term of seven years, and at the expiration thereof the lessee shall have a right of extension for a term of three years, subject to the payment of such annual rental as may be determined in accordance with the provisions of this Act, provided that he shall have notified to the Minister at least twelve months prior to the expiration of such term his intention of claiming such extension.

The Minister may determine any such lease by giving the lessee notice to that effect not later than one year prior to the date on which the term shall expire.

Not more than two of any such leases shall be held by, or in the interest of, one person.

Special Leases.

Leases may be granted for special purposes.
Sec. 90, Act 1884.

166. The Governor may lease Crown Lands by auction or otherwise for a term not exceeding twenty-eight years, in areas not exceeding in any case three hundred and twenty acres, and subject to such conditions and provisions and with such reservations as he may think fit.

Land situated under the sea or under the waters of any harbour, bay, lake, river, creek, estuary, or navigable stream, shall be deemed to be Crown Lands for the purposes of this section.

Crown Lands may be leased under this section for any of the purposes hereinafter specified, that is to say for dams, tanks, irrigation works, wharfs, jetties, piers, floating docks, bridges, punt-houses, ferries, bathing-places, landing-places, saw-mills, brick-kilns, lime-kilns, slaughter-houses, tanneries, wool-washing establishments, quarries, fisheries, building or repairing ships or boats, tramway purposes, obtaining guano, shells, limestone, loam, brickearth, gravel or ballast, or for an inn, store, smithy, bakery, or mail station in sparsely populated districts, or for business purposes, or for the erection of buildings, or for any purpose declared by the Governor by proclamation in the *Gazette* to be a purpose within this section.

Leases for wharfs, jetties, &c.
Secs. 89, 90, 92, Act 1884, 46, Act 1895.

No such lease of land situated under the sea or under the waters of any harbour, bay, lake, river, creek, estuary, or navigable stream, and fronting any land held in fee-simple, shall be made, except to or with the consent of the proprietor of such land held in fee-simple.

No lease shall be made for the erection of any wharf, jetty, pier, or floating dock, which would interfere with navigation or with the rights of adjoining proprietors, and the intention to make a lease for any such purpose, or of land situated under the sea or under the waters of any harbour, bay, lake, river, creek, estuary, or navigable stream, shall be notified in the *Gazette* for four consecutive weeks, and not less than four times in some local newspaper, if any, before the lease is issued.

The Governor may determine the upset rent of any special lease if let at auction, or if let otherwise the annual rent shall be determined in accordance with section twenty-five of this Act.

If it should appear to the satisfaction of the Governor that the land comprised in any special lease, whether granted before or after the commencement of this Act, is not used and occupied *bonâ fide* for the purpose for which the same has been made, or that default has been made in any condition, he may declare such lease forfeited, together with any improvements erected on the land and any rent paid in respect thereof.

Leases for tramway and irrigation purposes.
Sec. 92, Act 1884.

Subject to such conditions as may be prescribed, the Governor may make leases of Crown Lands, not exceeding three chains in width but without limit of length, for irrigation works, or for forming and maintaining tramways and crossing, and other necessary approaches

approaches and works in connection therewith. And notice of every application for a lease of this class, and of the purposes for which it is proposed to be made, shall be published in the *Gazette* for at least four consecutive weeks before the issue of such lease.

The term of any special lease (whether applied for before or after the commencement of this Act) may be fixed for or extended to any term not exceeding twenty-eight years. Sec. 46, Act 1895.

With any application for a special lease a fee in accordance with the prescribed scale shall be tendered for the survey of the land.

Homestead Grants out of Leases.

167. The holder of any pastoral or homestead lease in the Western Division, or of any scrub lease not being within a pastoral or homestead lease, or of any lease of inferior lands, whether granted before or after the commencement of this Act, or of any improvement lease, whose dwelling-house may be erected on Crown lands, may, at any time during the last year of the term of the lease, apply for the portion of the leasehold which contains such dwelling-house not exceeding six hundred and forty acres in area, as a homestead selection, subject to the provisions hereunder contained:— Homestead grants out of certain leases. Sec. 27, Act 1895.

- (I) The area which may be so applied for shall, before the date of the application for the same, have been improved by the holder of the lease or his predecessors in title with permanent, fixed, and substantial improvements to the value of one pound per acre, and the improvements shall at the date of the application be on the land and be the property of the applicant.
- (II) The application shall be made in the prescribed manner, and the applicant shall, before the grant is issued, pay the full cost of survey.
- (III) The land shall be measured in the same form as if it were an original conditional purchase, and the measurement shall be completed before the application is confirmed, and the Local Land Board shall have the same powers of modification, allotting land, and otherwise, in respect of any such application as it has in the case of applications for conditional purchases.
- (IV) The Governor may thereafter grant to the applicant the land for which the application has been confirmed as a homestead selection, the value of which shall be determined in accordance with the provisions of section twenty-five of this Act, and be subject to reappraisal as also hereinbefore provided.
- (V) Upon the issuing of the grant the land granted shall be withdrawn from the lease, but the lease shall otherwise continue in full force and effect.

The holder of a settlement lease may make the like application for a homestead selection out of the land leased, and the foregoing provisions (other than that requiring improvements to the value of one pound per acre) shall apply in any such case, except that the maximum area which may be applied for and grant shall be one thousand two hundred and eighty acres.

Proclamation of cities, towns, villages, &c.

168. The Governor may proclaim in the *Gazette*—

- (a) any city, town, or village;
- (b) the suburban lands, or any extension of such suburban lands, to be attached to any such city, town, or village, or to any existing city, town, or village;
- (c) population areas; and such population areas may be defined with lines directed to the cardinal points; or with boundaries other than lines directed to the cardinal points; but in any case

Sec. 4, Act 1884.
Sec. 40, Act 1889.

case such boundaries or lines shall be distant not more than ten miles from the nearest boundary of the city, town, or village.

Lands in any proclaimed city, town, village, suburban boundaries, or population areas, shall be deemed to have been and to be set apart within the meaning of this Act.

Alteration of designs of cities, towns, &c.

Alteration of plan of town or village.
Sec. 107, Act 1884.
Sec. 57, Act 1895.

169. It shall be lawful for the Governor by notice in the *Gazette* to correct or alter the name, design, or plan of any city, town, or village, and the limits of any suburban lands attached thereto, or to wholly cancel any such design or plan or limits, and whether such city, town, village, or lands were dedicated or set apart under this Act or the previous Acts or any repealed Act or Orders in Council; and an abstract thereof shall be laid before Parliament within thirty days after such notification if Parliament be then in session, and if not then within thirty days after the commencement of the then next session.

Alteration of designs of cities, towns, &c.

When it is intended to alter or cancel the design or plan or limits of any city, town, or village, or suburban lands in which allotments or portions have been sold, notice of the intention and of the nature of the proposed alteration or cancellation shall be published in the *Gazette* and in some newspaper circulating in the district, and no such correction, alteration, or cancellation shall be carried into effect until the expiration of three months from the notification in the *Gazette* of such intention.

After notice in the *Gazette* of such intention as aforesaid the Local Land Board shall assess the loss (if any) of value which may be suffered by the holder of any allotment or portion if the proposed alteration or cancellation is carried into effect.

If the intention to alter or cancel the design or plan is afterwards carried into effect, the sum assessed by the Local Land Board shall be the total sum payable by way of compensation to the said holder, and all persons claiming under or through him; and such holder and all persons claiming under or through him shall be barred of any action or suit in respect of the alteration or cancellation of the design or plan or limits or the carrying out thereof other than an action for the sum so assessed as aforesaid: Provided however that compensation for loss of value shall be assessed only in cases where the alteration or cancellation of design or plan if carried into effect will deprive the said holder of access from his allotment or portion to the nearest street or road.

Reserves.

Reserves.
Secs. 101, 103, 109,
112, Act 1884;
89, Act 1889.

170. The Governor may, by notice in the *Gazette*, temporarily reserve Crown lands, whether previously reserved or not and whether held under any lease or license or not—

- (a) from sale generally;
- (b) from sale in (or except in) such particular manner or manners as may be specified in the notification;
- (c) from lease generally;
- (d) from lease in (or except in) such particular manner or manners as may be specified in the notification;
- (e) from occupation license;
- (f) from conditional sale any Crown lands within a gold-field under the meaning and operation of any Act in force for the regulation of mining on Crown lands.

Crown lands may be reserved for such public purposes as—

- (g) for commonage;
- (h)

- (h) for the passage of any stock travelling pursuant to the provisions contained in the fifteenth section of the Act forty-first Victoria number nineteen, or any Act amending the same;
- (i) for camping places for travelling stock;
- (j) for the reservation of land within one mile on either side of any railway now or hereafter to be made or projected;
- (k) for the preservation and growth of timber;
- (l) as the site for any future city, town, or village;
- (m) for any other public purpose.

Public purpose means and includes, in addition to any purpose specified in this section, any purpose for mining for or removal of minerals, and any purpose declared by the Governor by notification in the *Gazette* to be a public purpose within the meaning of this section or the previous Acts: Provided that it shall not be necessary for the validity of any reservation under this section that any purpose should be specified in the notice thereof. Sec. 4, Act 1884.

Upon notice under this section the lands therein mentioned or described shall be, and remain, reserved accordingly until the reservation shall be modified or revoked in accordance with the provisions of section one hundred and seventy-one of this Act.

Within one month after such notice should Parliament be then in session, and otherwise within one month after the commencement of the next ensuing session of Parliament, there shall be laid before both houses of Parliament an abstract of all such reservations.

No reservation from lease under this section shall of itself operate as a withdrawal from any lease current at the date of notice of reservation, nor shall any reservation from occupation license under this section of itself operate as a withdrawal from any occupation license current at the date of notice of reservation.

No travelling stock route shall exceed one mile in width, and no camping place for travelling stock shall exceed one square mile. Any such route or camping place (if within any land held under pastoral lease or occupation license) shall be determined in the first instance by the Local Land Board, and the lessee or licensee of any lands within which such routes or camping places are situate shall not be entitled to impound any travelling stock as defined in subsection (h) aforesaid, or to maintain any action for trespass in respect thereof while such stock shall keep within the boundaries of the said routes or camping places. And a reduction of the rent or license fee by reason of setting apart such routes or camping places may be made by the Minister upon the recommendation of the Local Land Board in the prescribed manner.

Revocation of reserves.

171. The Governor may, by notice in the *Gazette*, revoke wholly or in part, any population area or any reserve, of any kind whatsoever which has been made at any time before or which may be made after the commencement of this Act, whether the setting apart or reservation has been effected by notice or proclamation in the *Gazette*. Revocation shall not, in any case, take effect until the expiration of sixty days after the date of notice of such revocation, and if the revocation be of a reserve from sale the land shall not be sold until the revocation shall have taken effect. Revocation of reserves.
Secs. 102, 103, Act 1884.
Sec. 39, Act 1889.
Sec. C, 58 Vic. No. 16.

In any notice revoking the reservation of any land reserved within one mile of any railway line, or the reservation of any land within similar limits made under the repealed Acts, the Governor may prescribe the price, terms, and conditions on which such land may thereafter be sold, and the areas of the portions, and if deemed necessary may by notice vary such price, terms, conditions, and areas, the price not being less in any case than the minimum nor the area more than the maximum as fixed by this Act for town, suburban, or country land as the case may be, State

State Forests—Timber Reserves—Licenses—Permits.

State forests and
timber reserves.
Sec. 112, Act 1884.

172. It shall be lawful for the Governor, by notification in the *Gazette*, to proclaim any areas of Crown Lands therein described to be State Forests, and in like manner to reserve from sale any such areas as timber reserves, for the purpose in each case of preserving under regulations in that behalf to be made by the Governor the growth and succession of timber trees, and of preventing as far as practicable the destruction and exhaustion of such State forests.

Subdivision of State
forests.
Sec. 113, Act 1884.

173. State forests may be subdivided into such blocks as the Minister may think fit. For the purpose of carrying out such subdivision all existing forest and timber reserves may be reserved from sale, lease, or otherwise as the Minister may think proper until so subdivided.

Reserves for timber
conservation.
Sec. 114, Act 1884.

174. Any State forest or any portion thereof may by notification in the *Gazette* be dedicated or reserved for a specified period by the Governor for the conservation of timber, and upon publication of such notification such forest or portion thereof shall not during the term of reservation be open to timber or other licenses or permits under the provisions of this Act.

Regulations for
State forests and
timber reserves.
Sec. 115, Act 1884.

175. It shall be lawful for the Governor to frame regulations for the issue of licenses or rights or permits to cut and remove live or dead timber on State forests or timber or other reserves or Crown lands whether held under lease or license or not, and of licenses and permits to dig for and remove from State forests, timber reserves, or Crown lands, whether under lease or not, any gravel, stone, clay, shells, or other materials subject to the following provisions:—

- (I) The rights or licenses to cut timber on a State forest shall be for one or more specified blocks in such forest, and may be sold by auction at such place as may be determined by the Minister, or by tender as the Minister may think fit.
- (II) Such rights or licenses in State forests shall be for a term not exceeding one year, unless in special cases the Minister may think fit to extend such term, but no such extended term shall exceed three years.
- (III) The upset rent shall be not less than ten pounds per annum for each block of six hundred and forty acres, and a proportionate amount for each one hundred and sixty acres in excess of that area. And every holder of a right to cut timber shall, in addition to his rent, pay such royalty according to the class of timber cut at such times and places and subject to such conditions as may be fixed by the regulations.
- (IV) Permits to cut and remove timber on timber reserves may be issued for a year or any less term, not being less than one month, at an annual fee of not less than six pounds, and a proportionate fee for shorter terms. Such permits may also be issued for any specified number of trees at a rate to be fixed by regulations for each tree. General permits may also be issued for the supply of saw-mills for any term not exceeding one year at an annual rate of six pounds, and subject to a royalty according to the scale fixed by the regulations.
- (V) Licenses may be issued to cut piles or props to be used for mining purposes, for the erection of jetties, wharfs, and for other purposes, on such terms and conditions as may be fixed by the regulations.
- (VI) All fees or sums of money, except royalty, payable in respect of any rights to cut timber or in respect of licenses or permits shall be payable in advance.

And

And such regulations may prescribe the forms and conditions to be contained in any such right, license, or permit, and may fix the rents or fees to be payable by the holder of any license or permit where-soever the same shall not have been fixed by this Act, and may provide for the forfeiture of any rights, licenses, or permits for the enforcement of rents, royalties, or fees, for the removal of felled timber, for the licensing of sites for saw-mills and the agistment of stock, for the limitation of girth of trees to be felled, for the issue of wattle bark permits, for the marking of logs of felled trees, for the seizure and sale of timber cut without authority or upon which the royalty has not been paid, and for defining the power and privileges conferred by rights, licenses, and permits. And such regulations may also provide for the imposition of penalties and fines for the infringement or violation of any such regulation made under the authority of this Act, but no such penalty shall exceed the sum of *twenty* pounds exclusive of the value of the material taken or destroyed.

176. The breach of any condition or obligation, or the failure to perform any act or matter specified in any such right, license, or permit issued under the authority of this Act, shall have the effect of forfeiting such right, license, or permit upon a declaration of forfeiture by the Minister.

Forfeitures may be declared.
Sec. 116, Act 1884.

Crown lands may be dedicated.

177. The Governor may, by notice in the *Gazette*, dedicate Crown Lands (whether previously reserved or not) in such manner as may seem best for the public interest for any railway or railway station—public road, canal, or other means of internal communication—public quay or landing place—public reservoir, aqueduct, or watercourse—the preservation of water supply—any purpose of defence—hospital, asylum, or infirmary, public market, or slaughter-house—college, school, mechanics' institute, public library, museum, or other institution for public instruction or amusement—town-hall, court-house, or gaol—permanent common—public health or recreation convenience or enjoyment—cricket ground—or racecourse—interment of the dead—use and general purposes of pastoral and agricultural associations—public baths—or for any other public purpose.

Dedication of Crown Lands to public purposes.
Sec. 104 and 105
Act 1884, and 41 Act 1889.

Upon any such notice being published in the *Gazette* such lands shall become and be dedicated accordingly, and may at any time thereafter be granted for such purposes in fee-simple.

An abstract of any intended dedication under this section shall be laid before both Houses of Parliament one calendar month before such dedication is made.

All lands heretofore permanently reserved or dedicated or hereafter dedicated for any of the purposes aforesaid shall be deemed to be dedicated accordingly, and every conveyance, alienation, or disposition thereof, except for the purpose for which such reservation or dedication shall have been made shall be absolutely void as well against Her Majesty as all persons whomsoever; provided that in any case in which the Governor shall be of opinion that the purposes for which any permanent reservation or dedication of Crown lands heretofore or dedication of Crown lands hereafter made have failed wholly or in part, or

That there is any doubt or uncertainty as to such purposes, or
That the trusts annexed to any land dedicated or reserved under this Act or the previous Acts or any repealed Act have failed or cannot reasonably be carried out, or

That it is expedient in the public interest to resume the whole or part of the land so dedicated or reserved, or

To make an exchange of any portion of any such land for other land of equivalent value or nearly so to be dedicated or reserved on similar trusts or for like purposes,

Then and in every such case the Governor may direct a notice under the hand of the Minister to be published in the *Gazette*, which notice shall set forth the mode in which it is proposed to deal with the dedication, reservation, or land in question (hereinafter termed "Proposals"), a copy of which notice shall be laid before both Houses of Parliament within ten days of the publication thereof in the *Gazette* if Parliament be sitting, and

If not, then within ten days after the beginning of the next ensuing session. If Parliament shall within one month declare by resolution that it does not assent to the proposals set forth in such notice no further action shall be taken in the matter.

If no such resolution be passed, then after the termination of thirty clear days from the date when the notice was laid before Parliament, it shall be lawful for the Governor to direct the proposals so notified to be carried out, and the same shall be carried out accordingly, and for that purpose the Governor may revoke by proclamation in the *Gazette* any such dedication or reservation wholly or in part, and make any new dedication or reservation sanctioned by such proposals, and issue such grants and execute such exchanges, deeds, assurances, and instruments as the circumstances of each case may require.

The provisions of this section shall be held to apply and to have applied to Crown Lands which have been or shall be dedicated and granted by the Crown, and to any lands which, after grant by the Crown, shall have been or shall be resumed, purchased, or otherwise acquired by the Crown, and dedicated or granted for any purpose.

Upon revocation under the provisions of this section of any dedication, or grant and dedication, the lands shall forthwith be vested in Her Majesty, her heirs and successors, and shall become Crown Lands within the meaning of this Act.

Trustees may be appointed.

Appointment of
trustees.
Sec. 106, Act 1884.

178. The Governor may appoint trustees, not being less in any case than three in number, to be charged with the care and management of—

- lands already or hereafter dedicated,
- lands already or hereafter reserved, or
- lands already or hereafter resumed under the provisions of the
Lands for Public Purposes Acquisition Act,
- lands already or hereafter purchased or acquired by the Govern-
ment

for the recreation, convenience, health, or enjoyment of the inhabitants of any city, town, or district, or for any other public purpose whatsoever, and may confer such estate in such lands, and accompanied by such powers and with such conditions as he may think fit, and as may be included in any grant issued to such trustees.

The Governor may from time to time remove any trustee or trustees, whether appointed under this Act or otherwise, and fill an vacancies which may occur by reason of such removal, or by death or resignation.

Every such appointment shall only take effect upon notification in the *Gazette*.

The Governor may make rules and regulations enforceable by penalties not to exceed in any case *twenty* pounds for the management and control of any land reserved or dedicated or resumed for any of the
public

public purposes hereinbefore mentioned without placing such land in trust, which rules and regulations, upon notification in the *Gazette*, shall have the full force of law.

Ownership of Improvements.

179. Any improvements made upon any lands, the purchase or lease or license of which has become forfeited, surrendered, or has expired, before or after the commencement of this Act, or have been made under colour of any application which may have been or which may be forfeited, disallowed, or withdrawn, shall (except as provided in section one hundred and thirteen of this Act) be the property of the Crown; but no lease or license which may be renewed or extended shall, whilst any renewal or extension continues, be deemed to have expired within the meaning of this section.

No improvements to bar conditional purchase, lease, &c., subject to payment of their value.
Sec. 44, Act 1889.
Sec. 102, Act 1884.
Sec. 22, Act 1895.

Improvements effected subsequently to the first day of July, one thousand eight hundred and seventy-six on any land reserved from sale shall, on the revocation of such reservation or withdrawal of the land from lease, become the property of the Crown.

Improvements within the meaning of this section may include fencing, but shall be such as in the opinion of the Board are of a permanent, fixed, and substantial character, and necessary for the profitable occupation of the land.

No Crown lands shall be exempt from conditional or other purchase, or from homestead selection, or from any lease or license, by reason only that it contains improvements, but the purchaser or lessee shall pay for such improvements at their value.

Provided that when any land containing improvements shall be let under annual lease or occupation license the lessee or licensee shall not be called upon to purchase such improvements, but may be charged rent or license fee for the use thereof, to be ascertained by auction or tender, or in manner herein provided for the determination of their value.

Where the improvements belong to the Crown, their value shall be appraised by the Land Board, subject to appeal, and shall be paid for within such periods and in such amounts as such Board or the Land Appeal Court shall determine.

Where the improvements do not belong to the Crown their capital or annual value shall be paid by agreement between the parties, or failing such agreement (and on application by either party in the prescribed manner, accompanied by a deposit of ten pounds to cover the cost of dealing therewith), as appraised by the Land Board, and within such periods and in such amounts as the Board shall determine, subject to appeal under this Act.

Any appraisement of improvements made after the first day of June, one thousand eight hundred and ninety-five, or after the commencement of this Act, with the consent of the Crown, on land held under pastoral lease in the Central Division, or on land held under preferential occupation license in that division, shall be made on the bases of their value to the land taken and to an incoming tenant.

Before the determination of the value of improvements, such of them as are of a removable nature, may, with the permission of the Board, be removed by the owner, who, upon permission being granted, shall have full power by himself or his agents to enter upon the land within such period as the Board may allow, and to do all things necessary to effect their removal.

The value of any improvements on land sold at auction shall be added to the upset price, and when not the property of the Crown shall be refunded to the owner.

In

In cases where improvements may have been, or may be made through misapprehension as to the boundaries of land, or for any sufficiently reasonable cause, and the land containing them has been, or shall be purchased or held under lease or license by the owner of such improvements, it shall be lawful for the Minister, after report by the Land Board, to remit the value to such owner.

In any case in which the purchaser or lessee of land containing improvements has failed, or shall fail, to pay for them within the period allowed, his purchase or lease shall (together with all moneys paid in connection therewith) be liable to forfeiture by notice in the *Gazette*.

Nothing in this Act shall be construed to vest in the Crown any improvements upon land held under a pastoral lease in the Eastern Division, which having expired by effluxion of time has, under the provisions of section thirty-three of the Crown Lands Act of 1889, been converted into an occupation license if the said improvements shall not at the date of such expiration have been forfeited or forfeitable to or vested in the Crown.

Tenant Right in Improvements.

Tenant right in improvements.
Sec. 51, Act 1695.

180. Tenant right shall accrue upon the determination of the lease or other holding by reason of which the tenant right is expressed to be conferred, and shall entitle the person in whom for the time being the tenant right is vested to receive the value to an incoming tenant of the improvements from any persons who make a purchase, or take a lease (not being an annual lease) of the land containing the improvements. And in the event of such persons not paying the amount then due and unpaid for the value of such improvements, such amount or so much thereof as remains unpaid for the time being shall be and remain a charge upon the land containing such improvements while in the hands of a purchaser or lessee until payment thereof. The value of the improvements to an incoming tenant shall be appraised by the local land board in the manner prescribed by section twenty-five of this Act, but shall be calculated on the basis of the value of such improvements to the land purchased or leased, and the payment of the value shall be made by such instalments, and at such dates, as may be prescribed.

The improvements, in respect of which tenant right is conferred by this Act, shall in all cases be—

- (a) of a permanent, fixed, and substantial character, and necessary for the profitable occupation of the land; and
- (b) the property of the person claiming to have tenant right in respect thereof;

and improvements which were forfeited or forfeitable to, or vested in, the Crown immediately prior to the accruing of the tenant right shall not be included:

Provided always that—

- (a) the tenant right shall lapse after the expiration of twelve years from the date of its first accruing, and thereafter the improvements shall be the property of the Crown; but such lapsing shall not affect any agreement, appraisalment, or order for payment previously made; and
- (b) the holder of the purchase or lease of the land containing the improvements shall be liable to pay any instalments of the value thereof, as appraised by the local land board, which shall accrue due during his holding; and
- (c) the value of any successful and useful well or bore for artesian water shall not be taken to exceed the first cost thereof, and no allowance shall be made for any unsuccessful or useless well or bore.

Forfeited

Forfeited Lands containing improvements subject to tenant right or ownership.

181. Where a purchaser or lessee of land shall have paid to the person having tenant right or ownership in improvements part of the value of the improvements, and the purchase or lease is forfeited, such share of the value of the improvements as is represented by the amount so paid at the time of the forfeiture shall vest in the Crown, and the remaining share of the improvements, or in the case of no such payment having been made, then the whole of the improvements shall continue to belong to the person having tenant right or ownership, and shall be subject to tenant right or ownership as defined by this Act; Provided that if the land be purchased or leased after the forfeiture fresh appraisalment shall thereupon be made of such share of the value of the improvements as are vested in the person having tenant right or ownership.

Forfeited lands containing improvements subject to tenant right or ownership.
Sec. 52, Act 1895.

Reverters.

182. Upon the forfeiture of any conditional or other purchase, or forfeiture or surrender of any homestead selection or of any conditional or other lease, or upon the revocation of any reserve from lease or license situated wholly or in part within the external boundaries of any pastoral or homestead lease or occupation license, so much of the forfeited or surrendered land comprised within such external boundaries shall (subject to the power of the Governor or the Minister to waive or reverse such forfeiture, or to cancel or modify such revocation) be added to the land under lease or license, and be included under such lease or license, and from the date of forfeiture taking effect or the notification in the *Gazette* of the revocation of the reserve, rent or license fee shall be payable for such unimproved lands at the same rate per acre as for the rest of the lease or license; and in respect of any land which may contain improvements the rent or license fee shall be determined in accordance with the provisions of section twenty-five of this Act.

Reverters.
Sec. 32, Act 1889.
Sec. 45, Act 1895.
Sec. 22, Act 1895.

So much of any such forfeited or surrendered lands, situated within the external boundaries of any reserve from sale, or lease or license, or reserve from conditional purchase, or of any population area, or special area, or suburban lands, or gold-field, or area set apart or classified under the provisions of section twenty-six of this Act or section ten of the Crown Lands Act of 1895, shall be added to and form part of the same whether held under lease or license or not; and no specific notification of such reservation or addition as aforesaid shall be held to be necessary under this Act: Provided that where lands reserved or set apart as aforesaid are held under lease or license, any lands so added shall be also included under the lease or license, subject to payment as hereinbefore provided. The non-payment within the prescribed time of any sums due as aforesaid shall involve the forfeiture of the lease or license.

For the purposes of section thirty-two of the "Crown Lands Act of 1889," and of this section:—

(a) The external boundaries of any pastoral lease or occupation license are hereby declared to be and to have been so much of the external boundaries of the pastoral holding duly defined under authority or recognised by the Lands Department as together with the dividing line determined under section seventy-six of the "Crown Lands Act of 1884" form the ambit within which the pastoral lease or occupation license is situated:

(b) The external boundaries of any reserve from sale or lease, or license, or reserve from conditional purchase, or of any population area, or special area, or homestead selection area,

or

or settlement lease area, or suburban lands or gold-field, are hereby declared to have been and to be the boundaries as described in the *Gazette* :

Provided always that nothing contained in this section shall affect any conditional purchase or conditional or other lease for which the application has been confirmed, approved, or granted before the first day of June, one thousand eight hundred and ninety-five.

Validation of Purchases and Leases.

Provision for validation or avoidance of purchases and leases generally.
Sec. 44, Act 1895.

183. Any purchase, homestead selection, or lease of Crown lands purporting to have been heretofore made or granted under the provisions of this Act or the previous Acts, or any repealed Act shall not be held to be void by reason of any breach or non-observance of the provisions of the said Acts, but every such breach or non-observance as aforesaid (if of a nature to affect the validity of the purchase, selection, or lease) shall render the same voidable only at the instance of the Crown.

If any such purchase, selection, or lease as aforesaid appears to be voidable at the instance of the Crown, the Minister may, in pursuance of section seventeen of this Act, refer the case to the Local Land Board, which shall investigate the matter and find whether or not the said purchase, selection, or lease be voidable; and where the said purchase, selection, or lease is found to be voidable, the Governor may, by notification in the *Gazette*, declare the same to be void, and the same shall thereupon become void to all intents and purposes: Provided always that if the application for such purchase or lease has been confirmed by a Local Land Board, the Minister may, in manner provided in section twenty-three of this Act, refer to the Land Appeal Court the decision of the Local Land Board confirming the same.

If the Crown elects to sustain any such purchase, selection, or lease as aforesaid, the Governor may, by notification in the *Gazette*, declare that the purchase or lease shall cease to be voidable by reason of any breach or non-observance of statutory provisions which may be specified in such notification, and the same shall become valid so far as regards the ground of objection so specified.

Nothing in this section contained shall affect—

- (a) any right accrued prior to the date of such purchase, selection, or lease;
- (b) any application for a conditional purchase or lease made before the thirteenth day of September, one thousand eight hundred and ninety-four, in reliance on the fact that the questioned purchase or lease was void;
- (c) any proceedings pending on the beforementioned day;
- (d) any remedy by writ of *scire facias* where a grant has been or shall have been issued for any such purpose as aforesaid.

The provisions of this section shall apply in like manner to purchases, selections, or leases purporting to be made or granted after the commencement of this Act; but the Governor shall not, in any such case, declare that the purchase, selection, or lease shall cease to be voidable, unless notice of the intention to make such declaration shall have lain before both Houses of Parliament for not less than ninety days, without being objected to by specific resolution.

Reversal of Forfeitures.

Validity and effect of reversals of forfeiture.
65 Vic. No. 1.
Sec. 22, Act 1895.

184. Subject to the provisions hereinafter contained, the Minister shall have power to reverse, whether provisionally or otherwise, any forfeiture which has heretofore been, or may hereafter be

be notified, declared, or otherwise asserted or enforced, under this Act or the previous Acts or any repealed Act, and for the purposes of this section and the three next succeeding sections, "forfeiture" includes the lapse or voidance of any contract with the Crown under any of such Acts for the purchase, selection, or leasing of Crown lands:—

- (I) A provisional reversal hereafter to be made of a forfeiture shall be deemed to have suspended, or shall suspend, as the case may be, the operation of the forfeiture, as from the date when such forfeiture has been or shall be notified, declared, or otherwise asserted or enforced; in any case, where such provisional reversal shall afterwards be revoked, such revocation shall have the same effect as if the provisional reversal so revoked had never been made.
- (II) Any absolute reversal of a forfeiture shall be deemed to have related back or shall relate back, as the case may be, to the date when such forfeiture has been or shall be notified, declared, or otherwise asserted or enforced, and shall be deemed to have had or shall have the same effect as if the forfeiture so reversed had never been notified, declared, or otherwise asserted or enforced.
- (III) In any case where a forfeiture has been or may hereafter be duly notified or declared for any cause other than the non-payment of money the Minister shall, before absolutely reversing such forfeiture, refer to the Local Land Board for inquiry and report as to any fact or circumstance in virtue of which he proposes to make such absolute reversal as aforesaid. And such Board, or the Land Appeal Court, upon an appeal or reference shall inquire into such fact or circumstance and make a report and recommendation thereon to the Minister: Provided that should the Minister decide in any case contrary to the recommendation of the Land Board or Land Appeal Court, as the case may be, he shall, on the day of so deciding, record in writing in the Lands Department his reasons for so doing; and the Minister shall, as soon as practicable, lay upon the table of the Legislative Council and the Legislative Assembly a copy of his decision, together with such reasons as aforesaid.
- (IV) Any reversal of a forfeiture hereafter to be made shall, as soon as practicable, be notified in the *Gazette*, but the date of such reversal shall be the date of the Ministers approval thereof.

And no provisional or absolute reversal hereafter to be made of any forfeiture shall defeat any valid application for a conditional purchase, homestead selection, or conditional or homestead lease, which shall have been lodged before the receipt by, or on behalf of, the Minister of a request in writing for such reversal, unless the applicant shall consent in writing to such reversal.

Waiver of forfeiture.

185. In any case in which a purchase, homestead selection, lease, or license has or shall become liable to forfeiture by reason of the non-fulfilment of any condition annexed by law to such purchase, selection, lease, or license, but in which the Minister shall be satisfied that such non-fulfilment has been caused by accident, error, mistake, inadvertence, or other innocent cause, and that such forfeiture ought therefore to be waived, it shall be lawful for the Minister to declare that such forfeiture is waived, either absolutely or upon such conditions as he may see fit to declare, and the forfeiture shall thereupon be waived accordingly; and

Waiver of
forfeitures.
55 Vic. No. 1.
Sec. 22, Act 1895.

and when the forfeiture of any conditional purchase, homestead selection, or conditional lease shall have been waived, and the conditions, if any, of such waiver shall have been performed, the holder of any such conditional purchase or homestead selection shall, if otherwise entitled thereto, be entitled to receive a certificate of conformity in respect of the same, notwithstanding that such certificate may have previously been applied for and refused, and the holder of any such conditional lease shall be entitled to make additional conditional purchases of the land comprised within such lease as if no forfeiture thereof had been incurred.

Boundary Fences.

Contributories to cost of fencing and maintenance.
Sec. 141, Act 1884.
Sec. 22, Act 1895.

186. Fencing within the meaning of this Act shall be deemed an improvement common to the land on either side of the line of such fencing.

The side of a reserved, intended, proclaimed, or other road shall not be held to form or be a common boundary-line within the meaning of this section.

Owners of fences made before the commencement of the Principal Act may claim contribution in respect thereto.
Sec. 10, 52 Vic. No. 7.

For the purposes of this section fencing shall be held to mean or include fencing, whether erected before or after the first day of January, in the year one thousand eight hundred and eighty-five, or after the commencement of this Act, and whether prescribed by the local land board or not, provided it is, in the opinion of such board, of a sufficiently useful and substantial kind, and to fences which may under sections eleven or fourteen of the "Crown Lands Act Further Amendment Act" or section seventy-eight of this Act have been or may be made or treated as boundary fences.

Whenever land adjoining that which forms a conditional purchase or lease, or a homestead selection (before issue of the grant of such homestead selection), or a homestead lease, has been or shall be alienated or leased by the Crown, conditionally or otherwise, the person who shall fence his land may demand and enforce from the purchaser or homestead selector or lessee of such adjoining land or his alienee a contribution towards the cost of such fencing to the extent of one half of the appraised value thereof, but so far only as such fencing marks a common boundary-line.

And while such fencing is maintained in good repair and condition by such person, every owner, lessee, or occupant of adjoining lands shall be and remain liable as a contributory towards the cost of so maintaining such fence to the extent of one half of the estimated cost thereof.

No holder of an annual lease under this Act, and no holder of any lease having less than five years to run, shall be liable as a contributory under this section towards the original cost of fencing, but shall be liable as a contributory towards the cost of maintaining such fencing.

Fencing between adjoining or adjacent holdings.
Sec. 23, Act 1889.

And in all cases of dispute in reference to the erection, completion, or repair of fencing, or to contributions towards the cost or maintenance of fencing upon or between adjoining lands or lands on opposite sides of roads or creeks, the board shall on application as prescribed by any party concerned, determine, subject to appeal, all questions in dispute, appraise all values, estimate all costs, determine the kinds of fencing to be erected within the meaning and for the purposes of this section, and make any order necessary or incident to the settlement thereof; and any such order shall be a sufficient authority and justification for entering upon any of the said lands, and doing such acts as may be necessary for carrying the same into effect.

Removal

Removal of Trespassers.

187. On information in writing preferred in that behalf by any person duly authorised to any justice of the peace, setting forth that any person is in the unlawful occupation or use of any Crown land, or in the occupation or use of any Crown land in virtue or under colour of any purchase, lease, or license, although such purchase, lease, or license shall have been forfeited or otherwise made void, or although the conditions thereof shall have been broken or unfulfilled, or although such lease or license shall have expired, such justice shall issue his summons for the appearance of the person so informed against before two or more justices of the peace, at the nearest court of petty sessions to such Crown land, at a time to be specified in such summons. And at such time and place such Court, on the appearance of such person, or on due proof of the service of such summons on him, or at his usual or last known place of abode or business, shall hear and inquire into the subject matter of such information. And on being satisfied of the truth thereof, either by the admission of the person informed against, or on other sufficient evidence, such justices shall issue their warrant addressed to any officer duly authorised in that behalf, requiring him forthwith to dispossess and remove such person or any buildings from such land, and to take possession of the same on behalf of Her Majesty, and the person to whom such warrant is addressed shall forthwith carry the same into execution.

Sec. 131, Act 1884.

Penalties for destroying Improvements.

188. If any person wilfully destroys or damages any dam, tank, well, excavation, boring, or other work lawfully constructed, sunk, or made, or in course of lawful construction, sinking, or making for the purpose of impounding or supplying water on any land, whether alienated by or under lease or license from the Crown under this Act or the previous Acts or any repealed Act, such person shall be guilty of felony and be liable to penal servitude for any term not exceeding *ten* years, or to imprisonment with or without hard labour for any term not exceeding *three* years. And if any person wilfully destroys or damages any fencing or improvement other than those before mentioned, lawfully constructed, or made by any holder of a conditional purchase, lease, or license, whether under this Act or the previous Acts, or any repealed Act (which lawfulness the Court shall have power to determine), such person shall be liable to a penalty not exceeding *fifty* pounds, or to be imprisoned with or without hard labour for any term not exceeding *six* months, and to pay in addition such fine by way of compensation to the person injured as the Court may order.

Penalties on destroying improvements.
Sec. 132, Act 1884.

Penalties for Trespass.

189. Any person unless lawfully claiming under any subsisting lease or license, or otherwise under this Act, or the previous Acts, or any repealed Act, or under any Act in force for the regulation of mining, who shall be found occupying or using any Crown land or land granted, reserved, or dedicated for public purposes, either by residing, or by erecting any hut or building or other structure thereon, or depasturing stock thereon, or by clearing, digging up, or enclosing or cultivating any part thereof, or by cutting or removing timber other than firewood not for sale thereon, or by obtaining stone therefrom, or driving piles or otherwise, or who shall strip or remove or cause to be stripped or removed the bark of any tree thereon, shall be liable on conviction to a penalty not exceeding *five* pounds for the first offence, and not exceeding *ten* pounds for the second offence, and not exceeding *twenty* pounds

Penalties for trespass or for unauthorised cutting or stripping bark on Crown lands.
Sec. 133, Act 1884.
Sec. 58, Act 1895.

pounds for the third or any subsequent offence: Provided that it shall not be lawful for the holder of any leasehold under this Act or the previous Acts to obstruct any Government surveyor or other authorised person from entering upon such leasehold whenever such surveyor or other authorised person may require to do so.

Removal of Boundary Marks.

Removal of
boundary mark to be
a misdemeanour.
Sec. 134, Act 1884.

190. If any person shall unlawfully and wilfully obliterate, remove, or deface any boundary or survey mark, or any land mark or beacon, made or erected by the authority of the Surveyor-General, or by or under the direction of any authorised Government officer, such person shall be guilty of a misdemeanour.

Recovery of Penalties.

Procedure for
recovery of
penalties, &c.
Sec. 139, Act 1884.

191. Whenever by any section of this Act, or by any regulation made thereunder, any person is made liable to a penalty or to pay any sum of money, whether as compensation or in any other way, and the mode of recovering such penalty or sum is not therein described, such penalty or sum may be recovered before any two or more justices of the peace in petty sessions in accordance with the Acts in force for the time being regulating summary proceedings before justices. And all sums of money ordered by any such Court to be paid, and all costs and expenses awarded by such Court, may be recovered and enforced by distress and sale of the goods and chattels of the person ordered to pay the same; and in default of sufficient distress, such person shall be liable to be imprisoned with or without hard labour for any term not exceeding *three* months, unless such money, costs, or expenses be sooner paid.

Resumption for Canal, &c.

Resumption for
road.
Sec. 42, Act 1882.

192. If at any time it shall be deemed expedient to open a canal, or cutting for irrigation purposes, through any land conditionally purchased or conditionally or otherwise leased or held in fee simple, or under homestead selection, it shall be lawful for the Governor by notification in the *Gazette* to resume so much of the land as may be required for the purpose, and in the like manner to at any time proclaim the same.

No such resumption shall be made until the expiration of one month from notice in the *Gazette* and in one or more newspapers published or circulated in the Land District wherein is situated the land as well as notice by letter to the reputed proprietors or occupiers of the said land, addressed to their last known abode or place of business of the intention to resume, during which time any person feeling aggrieved may address to the Minister any objection he may have thereto.

Subject to the provisions herein contained, a refund shall be granted of any moneys paid on account of the land so resumed; but in any case where the resumed land shall have been held in fee simple, or be a conditional purchase or conditional lease, the value thereof shall be appraised by the local land board, subject to appeal and the provisions of the twenty-fifth section hereof; and such value, or if any land shall be granted in part satisfaction as herein provided, the difference between such value and the value of the granted land to be appraised in the like manner shall be paid by the Crown.

An area of adjoining Crown land equivalent to the area resumed, if available, may be leased or granted to such owner in lieu of the area resumed.

No

No land shall be resumed under the provisions of this section which may be situated within two hundred yards of any dwelling-house if attached thereto and used in connection therewith, as a yard, garden, orchard, plantation, park, or avenue, unless the owner of such lands consent to the same being so resumed, or the purposes of the resumption cannot be otherwise secured. Any surveyor or other person duly authorised in that behalf may, for all purposes of this section, enter upon any lands proposed or liable to be resumed thereunder, and do all things necessary thereon without obstruction or resistance.

Roads of Access.

193. Every purchaser of Crown lands and every holder of a lease or license shall be entitled to a road of access, and also to free ingress and egress thereby to and from the lands held by him to the nearest reserved or proclaimed road through and over any Crown lands whether under lease or not if no access to the lands held by him by means of a reserved or proclaimed road or track shall be provided. And such road shall not interfere with any buildings, garden, stock, or drafting yards belonging to such lessee or licensee, and shall in every case follow such a direction, and be so marked as to occasion as little damage or inconvenience to the lessee as may be possible. And the Minister shall have power to close any such road upon giving three months notice to that effect in the *Gazette*.

Road of access through leased land. Sec. 111, Act 1884.

Acts of Surveyor-General,

194. When in this or the previous Acts or any other Act it is provided that certain acts or things shall or may be done, or directions shall or may be given by the Surveyor-General, such acts or things may be done and such directions may be given by any officer duly authorised by the Minister in that behalf.

Acts of Surveyor-General to be done by officer authorised in that behalf. Sec. 50, Act 1889.

Copies of Documents to be evidence.

195. A copy of any application, letter, document, or instrument of any kind whatsoever relating to any purchase, reservation, dedication, lease, plan, or right to or disposition of land under any repealed Act, or this Act, or the previous Acts, and whether of the original or of any press copy thereof, and of any indorsement or memorandum upon the same certified by the officer having the custody thereof to be correct, shall be admissible in evidence in every case in which the original would be admissible, and without proof that the person so certifying is the officer having the custody thereof if he shall state in his certificate that he has such custody.

Copies of documents to be evidence. Sec. 127, Act 1884.

Limitation of Actions.

196. All actions or other proceedings against any officer acting under the provisions of this Act for anything wrongfully done under or against the provisions of this Act, or the previous Acts, or any repealed Act, shall be commenced within twelve months after the matter complained of was committed, and not otherwise. And notice in writing of any such action and of the cause thereof shall be given to the defendant one month at least before the commencement of the proceeding. And in every such proceeding the defendant may plead the general issue, and give this Act and the special matter in evidence at any trial to be had thereupon. And no plaintiff shall recover in any such proceeding if tender of sufficient amends shall have been made

Limitation of actions. Sec. 129, Act 1884.

made before the same was commenced, or if a sufficient sum of money shall have been paid into court after such commencement by or on behalf of the defendant, together with costs incurred up to that time. And if a verdict shall pass for the defendant, or the plaintiff shall become nonsuit or discontinue such proceeding, or if upon demurrer or otherwise judgment shall be given against the plaintiff, the defendant shall recover his costs and have the like remedy for the same as any defendant has by law in other cases.

Royalty on Coal from Mineral Leases.

Provision for obtaining royalty on coal from mineral leases.
Sec. 91, Act 1884.

197. The Governor shall, notwithstanding the provisions of the "Mining Act of 1874," impose a royalty of not less than sixpence per ton on coal raised from land which may be hereafter leased. And such royalty shall be in addition to or in substitution of any rent payable by such lessee under the said Act, but shall not affect or prejudice any other condition of the lease. And for the purpose of giving effect to the provisions of this section the Governor may make regulations prescribing the time and manner of payment of such royalty, and the manner of enforcing such payment.

Suits by the Crown.

Suits by the Crown for recovery of rents, &c.
Sec. 49, Act 1889.

198. It shall be lawful for the Minister for Lands to bring under that name, and as nominal plaintiff on behalf of the Crown, any suit or action for the recovery of arrears of rent or of any other sums which, under any repealed Act or the previous Acts or this Act, may be due to the Crown. And no such suit or action shall be prejudiced, or abate, or require amendment merely because after the commencement thereof the Minister who brought the same may have gone out of office, or because another Minister may have been appointed, or the office may for the time being be vacant: Provided that costs may be given for or against such plaintiff in the same way as in any ordinary suit or action. And it shall be lawful for the Minister, for the purpose of recovering arrears of rent due to the Crown, to exercise by any duly authorised agent such powers of distress as are now given by law to any landlord.

Regulations.

Power to make regulations and rules.
Sec. 145, Act 1884;
53, Act 1889; 61,
Act 1895.

199. Whenever in this Act the word "prescribed" is used in connection with any matter referred to in the context, and whenever, in any section of this Act, "regulations" are mentioned in connection with any such matter the Governor may in every such case frame regulations for the purpose of giving effect to the provisions of such section. And, for the purpose of carrying this Act into full effect generally, the Governor may make regulations, which shall, upon being published in the *Gazette*, be good and valid in law; and for the purpose of regulating proceedings before the Land Appeal Court, it shall be lawful for the Governor to make rules for the time and mode of procedure, and for the general practice of such Court, which shall, upon being published in the *Gazette*, be binding upon such Court, and upon the parties to any proceedings therein as the rules of the Court of Equity are binding upon that Court and the parties suing therein: Provided that a copy of all such regulations and rules shall be laid before both Houses of Parliament within fourteen days from the publication thereof if Parliament be then in Session, or otherwise within fourteen days after the commencement of the next ensuing Session.

SCHEDULES.

FIRST SCHEDULE.

BOUNDARIES OF DIVISIONS.

EASTERN DIVISION.

That portion of the Colony of New South Wales within the following boundaries :— Commencing at Point Danger ; and bounded on the east by the waters of the South Pacific Ocean southerly to Cape Howe ; thence on the south by the boundary dividing the Colonies of New South Wales and Victoria westerly to a point on the Murray or Hume River at the eastern boundary of the Land District of Corowa, as proclaimed in the Supplement to the New South Wales *Government Gazette* of the 2nd of January, 1885, No. 4 ; thence on the west by the boundary dividing the Land District of Corowa aforesaid and the amended boundaries of the Land Districts of Urana, Wagga Wagga, Grenfell, Forbes, Parkes, and Dubbo, as proclaimed this day in *Government Gazette* ; the Land District of Coonabarabran, as proclaimed 2nd January, 1885, and the amended boundaries of the Land Districts of Gunnedah, Narrabri, Bingera, and Warialda, as proclaimed this day, from the amended boundaries of the Land District of Albury, as proclaimed this day ; the Land Districts of Tumut and Gundagai, as proclaimed 2nd January, 1885 ; the amended boundaries of the Land Districts of Cootamundry, Young, Cowra, and Molong, as proclaimed this day ; the Land Districts of Wellington and Cassilis, as proclaimed 2nd January, 1885 ; and the amended boundaries of the Land Districts of Murrurundi, Tamworth, and Inverell, as proclaimed this day, northerly to the Dumaresq River ; thence on the north by the boundary dividing the Colonies of New South Wales and Queensland easterly to Point Danger aforesaid at the point of commencement.

CENTRAL DIVISION.

That portion of the Colony of New South Wales within the following boundaries :— Commencing on the boundary between the Colonies of New South Wales and Queensland, at a point on the Dumaresq River where the eastern boundary of the Land District of Warialda, as amended by proclamation in the *Government Gazette* this day, meets that river ; and bounded thence on the east by the boundary dividing the Land District of Warialda aforesaid, the amended boundaries of the Land Districts of Bingera, Narrabri, and Gunnedah, as proclaimed this day ; the Land District of Coonabarabran, as proclaimed in Supplement to the New South Wales *Government Gazette* of 2nd January, 1885, No. 4, and the amended boundaries of the Land Districts of Dubbo, Parkes, Forbes, Grenfell, Wagga Wagga, and Urana, as proclaimed this day ; and the Land District of Corowa, as proclaimed 2nd January, 1885, from the amended boundaries of the Land Districts of Inverell, Tamworth, and Murrurundi, as proclaimed this day ; the Land Districts of Cassilis and Wellington, as proclaimed 2nd January, 1885, and the amended boundaries of the Land Districts of Molong, Cowra, Young, and Cootamundry, as proclaimed this day ; the Land Districts of Gundagai and Tumut, as proclaimed 2nd January, 1885, and the amended boundaries of the Land District of Albury, as proclaimed this day, southerly to the Murray or Hume River ; thence on the south by the boundary dividing the Colonies of New South Wales and Victoria westerly to the confluence of the Murray or Hume and Wakool Rivers, and by that river upwards to the south-west corner of portion No. 5, parish of Tararie, county of Caira ; thence by the south boundary of that portion bearing east to its south-east corner ; thence by the east boundaries of that portion and portions Nos. 3 and 4 bearing north to the north-east corner of the latter portion ; thence by part of the north boundary of that portion bearing west to a point south of the south-east corner of Canally Pastoral Holding ; thence by a line bearing north to that corner ; thence by the fenced boundary dividing Canally and Yanga Pastoral Holdings, being lines bearing northerly to the south boundary of Yanga South Run ; thence westerly to the south-west corner of that run, and thence northerly to the Murrumbidgee River ; thence by that river upwards to the Lachlan River ; and thence by that river upwards to its eastern and western branches at the north-east corner of J. Tyson's portion, No. 15, of 236 acres, parish of Tyson, county of Caira ; thence by the boundary dividing the Juanbung and Moon-mooncurra Runs, bearing north 33 degrees east to the Lachlan River, and thence again by that river upwards to the confluence of the Kalingalungaguy Creek ; thence on the west by a marked line bearing north 20 degrees west, being the western boundaries of the Kyargathur, North Kyargathur, Flanagan's Swamp, East Palisthan No. 2, Mombill, Wicklow block K, Wicklow block II, New Babinda, Hermitage Plains block A2, and Hermitage Plains block M Runs, to the western corner of the last-named run ; thence again on the north-west by a marked line bearing north 28 degrees east, being the north-western boundaries of Hermitage Plains block M, Hermitage Plains block K, and Hermitage Plains block I Runs to the most northern corner of the last-mentioned run ; thence by the south-western, south-eastern, and north-eastern boundaries of Glenariff block C Run bearing respectively south 46 degrees east, north 28 degrees east, and

and north 46 degrees west, to the most southern corner of West Bogan No. 10 Run ; thence by the south-western and north-western boundaries of that run bearing respectively north 22 degrees 30 minutes west 5 miles and north 70 degrees east 15 miles to the Bogan River ; thence by that river upwards to the fenced boundary dividing Colonel and Duck Creek No. 16 Runs ; thence by that boundary bearing easterly to Duck Creek ; thence by that creek upwards to the most southerly corner of Colonel Run ; thence by the south-eastern boundary of that run bearing north-easterly to the southernmost corner of Morbella West Run ; thence by the south-western and north-western boundaries of that run bearing north-westerly and north-easterly to the most easterly corner of Cookamunboin Run ; thence by the north-eastern boundaries of that run and East Bogan, No. 9 Run, bearing north-westerly to the south-western corner of Hermidon Run ; thence by the western and northern boundaries of that run bearing respectively north 10 degrees west about $5\frac{3}{4}$ miles and east about 5 miles to Marra Creek ; thence by that creek downwards to the south-east corner of Thuara West Run ; thence by the south, the south-western, and the north boundaries of that run, bearing respectively west, north-westerly, and east to Marra Creek aforesaid ; thence by that creek downwards to the Darling or Barwon River, and again on the north-west by that river and the Macintyre River upwards, to the point of commencement.

WESTERN DIVISION.

That portion of the Colony of New South Wales within the following boundaries:— Commencing on the boundary between the Colonies of New South Wales and Queensland at the intersection of the twenty-ninth parallel of south latitude with the Macintyre River ; and bounded thence on the south-east by that river and the Darling or Barwon River downwards to the confluence of the Marra Creek ; thence on the east by that creek upwards to the north-east corner of Thuara West Run ; thence by the north, the south-western, and the south boundaries of that run bearing respectively west, south-easterly, and east to Marra Creek aforesaid ; thence by that creek upwards to the north-eastern corner of Hermidon Run ; thence by the northern and the western boundaries of that run bearing respectively west about 5 miles and south 10 degrees east about $5\frac{3}{4}$ miles to the north-eastern corner of East Bogan No. 9 Run ; thence by the north-eastern boundaries of that run and Cookamunboin Run bearing south-easterly to the most easterly corner of the latter run ; thence by the south-eastern boundaries of that run and Eulagilma Run bearing south-westerly to the most western corner of Morbella West Run ; thence by the south-west boundary of that run bearing south-easterly to the most eastern corner of Colonel Run ; thence by the south-east boundary of that run bearing south-westerly to Duck Creek ; thence by that creek downwards to the fenced boundary dividing Colonel and Duck Creek No. 16 Runs ; thence by that run boundary westerly to the Bogan River ; thence by that river downwards to the north-eastern corner of West Bogan No. 10 Run ; thence by the north-western boundary of that run bearing south 70 degrees west 15 miles to the north-west corner of the run ; thence by the south-western boundary of that run bearing south 22 degrees 30 minutes east 5 miles to the most northern corner of Glenariff block C Run ; thence by the eastern, south eastern, and western boundaries of that run bearing respectively south-easterly, south-westerly, and north-westerly to the most western corner of the run ; thence again on the south-east by a marked line bearing south 28 degrees west, being the north-western boundaries of Hermitage Plains block I, Hermitage Plains block K, and Hermitage Plains block M Runs to the western corner of the last-mentioned run ; thence again on the east by a marked line bearing south 20 degrees east being the western boundaries of Hermitage Plains M, Hermitage Plains-block A2, New Babinda, Wicklow block H, Wicklow block K, Mombill, Palisthan No. 2, Flanagan's Swamp East, North Kyargathur, and Kyargathur Runs to the confluence of Kalingalungaguy Creek with the Lachlan River ; thence by that river downwards to the boundary dividing Juanbung and Moon-mooncurra Runs ; thence by that boundary bearing south 33 degrees west to the junction of the eastern and western branches of the Lachlan River, at the north-east corner of J. Tyson's portion No. 15 of 236 acres, parish of Tyson, county of Caira ; thence again by the Lachlan River to the Murrumbidgee River ; and again on the south-east by that river downwards to the north-eastern corner of Benongal Run ; thence by the fenced boundary dividing the Canally and Yanga Pastoral Holdings, being lines bearing southerly to the south-west corner of South Yanga Run easterly to the north-west corner of Burrawang Run ; and again southerly to the north boundary of portion No. 4, parish of Tararie, county of Caira ; thence by part of the north boundary of that portion bearing east to its north-east corner ; thence by the eastern boundaries of that portion and portions Nos. 3 and 5 bearing south to the south-east corner of the latter portion ; thence by the south boundary of the last-named portion bearing west to the Wakool River ; thence by that river downwards to its confluence with the Murray or Hume River ; thence on the south by the boundary dividing the Colonies of New South Wales and Victoria to its intersection with the one hundred and forty-first meridian of east longitude, being the boundary between the Colonies of New South Wales and South Australia ; thence on the west by that boundary northerly to its intersection with the twenty-ninth parallel of south latitude, being part of the boundary between the Colonies of New South Wales and Queensland ; thence on the north by that boundary easterly to the Macintyre River, at the point of commencement.

Crown Lands Consolidation.

95

SECOND SCHEDULE.

In the Land Court of New South Wales.

To the Sheriff of New South Wales, his deputy and assistants, and to all officers of the Police force of New South Wales [and to the keeper of the gaol, prison, or lock-up at _____].

It having this day appeared to the Land Court sitting at _____ that A.B. of _____ having been duly served with a subpoena or summons to attend and give evidence before the said Court in the matter of [here state the nature of the proceedings], and having had tender or payment of his reasonable expenses duly made to him has failed to appear when called. These are therefore to command you forthwith to apprehend the said A.B., and to detain him in custody; and to bring him before the said Court to abide the further order of the said Court.

Given under my hand this _____ day of _____ at _____ aforesaid.

C.D., President.

(or) E.F., Acting-President.

(or) It having this day appeared to the Land Court sitting at _____ that A.B. of _____ has on the hearing of a certain matter [here state the nature of the proceedings] refused to make oath or affirmation before the said Court (or) to answer a certain question (or) to produce a certain document within his possession or control (or) to sign his examination reduced into writing (or) &c., &c., being lawfully required by the said Court so to do, and such refusal being without lawful cause or excuse (or) that A.B. of _____ has obstructed the business of the said Court (or) has committed a contempt in face of the said Court (or) &c., &c. These are therefore to command you the said Sheriff and all the said officers as aforesaid to apprehend the said A.B., and to detain and convey him to the said gaol, &c., and to deliver him to the said keeper thereof, together with this warrant; and you the said keeper to receive him into your custody in the said gaol, &c., and him there safely to keep until the said A.B. shall have signified to the Land Court his submission to make the said oath or affirmation (or) &c., and the further order of the said Court in the premises shall have been made known to you under my hand (or) until the term of _____ days from the date hereof shall have expired (or) until a fine of £ _____ shall have been paid (or) until the said A.B. shall have been otherwise discharged in due course of law.

Given under my hand this _____ day of _____ at _____ aforesaid.

C.D., President.

(or) E.F., Acting-President.

THIRD SCHEDULE.

(A.)

In the matter of the "Crown Lands Act of 1884" and the "Crown Lands Act of 1889." To the Sheriff of New South Wales, his deputy and assistants, and to all officers of the Police Force of New South Wales, and to the keeper of the gaol, prison, or lock-up at _____

These are to command you the said Sheriff and all officers as aforesaid to apprehend A.B. of _____ and to convey him to the said gaol, &c., and to deliver him to the said keeper, together with this warrant; and you the said keeper to receive him into your custody in the said gaol, &c., and him there safely to keep for the term of _____ [or unless the sum of _____ shall be sooner paid], I, the undersigned, Chairman of the Local Land Board, sitting at _____, having now here adjudged the said A.B. [to pay a fine of _____ and in default of immediate payment thereof] to be imprisoned for the said term, for that he the said A.B. [here state the offence to the following effect as the case may require] having been duly served with a summons or subpoena to attend and give evidence before the said Board in the matter of [here state the nature of the proceedings], and having had payment or tender of his reasonable expenses duly made to him has neglected to appear, such neglect having been without just cause or reasonable excuse (or) having been duly summoned or subpoenaed (or) examined as a witness on the hearing of a certain matter [here state the nature of the proceedings] has refused to make oath, affirmation, promise, or declaration in lieu of an oath before the said Board (or) has refused to answer a certain lawful question, that is to say [here state the nature of the question] (or) has refused to produce a certain document within his possession or control, that is to say [here state the nature of the document] (or) to sign his examination reduced into writing, &c., &c., being lawfully required by me the said Chairman so to do, and such refusal being without lawful cause or excuse (or) has prevaricated in his evidence.

Given under my hand this _____ day of _____ 18 _____ at _____ aforesaid.

C.D., Chairman of the _____ Local Land Board.

(B.)

(B.)

In the matter of the "Crown Lands Act of 1884" and the "Crown Lands Act of 1889." To the Sheriff of New South Wales, his deputy and assistants, and to all officers of the Police Force of New South Wales.

WHEREAS it has this day appeared to me, the Chairman of the Local Land Board, sitting at that A.B. of having been duly served with a subpoena or summons to attend and give evidence before the said Board in the matter of [*here state the nature of the proceedings*], and having had tender or payment of his reasonable expenses duly made to him has failed to appear when called, these are to command you forthwith to apprehend the said A.B. and to detain him in custody and bring him before the said Board to give evidence in the said matter.

Given under my hand this day of at aforesaid.
C.D., Chairman of the Local Land Board.

1896.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

CROWN LANDS.

(DECISION OF MINISTER FOR LANDS IN THE MATTER OF THE FORFEITURE OF CONDITIONAL PURCHASE 90-49, DUBBO, NOW NYNGAN, CONDITIONAL LEASE 15,833, BY HENRY NEWELL, AND THE REPORTS AND RECOMMENDATIONS OF THE LOCAL LAND BOARD AND LAND APPEAL COURT THEREON.)

Printed under No. 20 Report from Printing Committee, 1 October, 1896.

COPY of principal documents relative to the forfeiture of the conditional purchase No. 90-49 Dubbo, now Nyngan, and conditional lease No. 15,833, by H. Newell, and transferred to Adam Rae, together with the Minister's reasons for not carrying out the recommendations of the Land Board and Land Appeal Court, as required by sub-section (v) of section 3 of the Act 55 Victoria No. 1.

Decision of Minister for Lands in the matter of the forfeiture of conditional purchase 90-49, Dubbo, now Nyngan, conditional lease 15,833, by Henry Newell, afterwards transferred to Adam Rae, and the reports and recommendations of the Local Land Board and Land Appeal Court thereon.

I SEE no sufficient evidence to support the reports and recommendations of the Land Board and Land Appeal Court, or to remove the grave doubts created in my mind as to the *bona fides* of the selectors, and for those reasons, and for other reasons disclosed on the papers, I decide that the forfeiture incurred be not reversed.
J.H.C., 27/7/96.

. Crown Lands Act of 1884—(Part II, section 14, sub-section 4.)

Decision of Local Land Board.

Inquiry under section 20, C.P. 90-49, and C.L. 15,833; Dubbo, now Nyngan.

New South Wales, }
to wit. }

WHEREAS on the 19th, 20th, and 22nd days of March, 1894, it became a matter for investigation before us whether the conditions had been fulfilled in connection with conditional purchase 90-49, of 640 acres, and conditional lease 15,833, of 1,920 acres, county Gregory, parish Gerard, Henry Newell now Adam Rae; and having taken evidence and inquired into the said matter, we find that Mr. Booth, solicitor, acting under instructions from Messrs. Creagh and Williams, solicitors, of Sydney, appears on behalf of the alienee, Adam Rae, who is not present. He has, therefore, not afforded us the opportunity of hearing him in evidence, but as the complaint is that the condition of residence and fencing has not been complied with, it appears to us that by the transfer only the right, title, or interest of the original conditional purchaser has passed to the alienee, and that section 26 of the Act of 1884, referring to notice or knowledge, does not apply, as there is no allegation of false declaration.

That the conditional purchase was confirmed to Henry Newell on 7th October, 1890; that Mr. Inspector Sim visited the land on 21st June, 1892, and again on the 1st August, 1893, on which latter date Newell was not residing, and had made default in the condition of fencing. By the evidence of the witness Davies, Newell left the conditional purchase about the end of 1892, and has not been on the land since.

That a writ of summons was issued against Newell on 13th January, 1893, when he could not be found.

That a writ of foreign attachment was issued by the Supreme Court on the 18th October, 1893, and that in pursuance of that writ the land was sold by the Sheriff to Adam Rae on the 19th December, 1893.

That

That on and before the date of the writ of attachment the conditions of residence and fencing were not complied with, therefore, we are of opinion the attachment does not protect the land from forfeiture, and we recommend that the conditional purchase with its dependent conditional lease be forfeited for that the conditions of residence and fencing have not been complied with.

Given under our hands at the Court-house, at Nyngan, this 22nd March, 1894,—

W. C. CARDEW, J.P., Chairman.
DAVID BELL, J.P. } Members of Local
DANIEL SOANE, J.P. } Land Board.

Now forwarded to the Under Secretary for Lands, in view of Board's recommendation hereon.—
W. C. CARDEW, Chairman, 5/4/94.

Official Memorandum.

Dubbo, now Nyngan.—C.P. 90-49, 640 acres, 20th February, 1890; confirmed 7th October, 1890;
Henry Newell; transferred by the Sheriff to Adam Rae, 19th December, 1893.

THE facts in connection with this case are to a certain date set out in the *précis* of 14th March, 1894, 94-5,729, Dep.

On the 22nd March last the Board, at an inquiry held subject to the 20th section, found that the conditions of residence and fencing were not complied with by the original selector—Henry Newell—and recommended forfeiture of the conditional purchase.

Notice of appeal was lodged against the Board's decision, and the matter came before the Land Appeal Court on 27th June last, when the appeal was dismissed, but the Minister was recommended under the circumstances to waive the forfeiture incurred.

The recommendation of the Land Appeal Court is submitted for consideration.

A.S., 9/8/94.

The case is submitted for consideration by the Minister as the Land Appeal Court has recommended waiver of forfeiture.—W.H.C., 15/8/94. F.H.W. (for U.S.), 16/8/94.

I have carefully gone through these papers, and I cannot see any features in the case which would warrant me in waiving the forfeiture incurred. The residential conditions were not fulfilled by Newell, nor does Rae appear to show any circumstances warranting a special consideration of his position. But, before coming to a final decision, I should like to have an inquiry held by the Land Board as to Rae's *bona fides*, and as to the manner in which he has fulfilled the conditions since the date of the transfer to him on 19th December, 1893.—J.H.C., 24/8/94.

Crown Lands Act of 1884—(Part II, section 14, sub-section 4).

Decision of Local Land Board.

New South Wales, }
to wit. } Inquiry—C.P. 90-49; C.L. 15,833.

WHEREAS on the 7th day of March, 1895, it became a matter for us to receive evidence as to the *bona fides* of Adam Rae, and as to the manner in which he has fulfilled the conditions since the date of the transfer to the said Adam Rae of conditional purchase 90-49, of 640 acres, and conditional lease 15,833, of 1,920 acres, county Gregory, parish Gerar; and having taken evidence and inquired into the said matter, we find that Mr. Booth appears for the selector, and produces a medical certificate as to illness of selector, and applied for an adjournment, which we refuse, seeing that we have twice granted adjournments in this matter.

Having taken evidence, we forward the same for the information of the Honorable Mr. Carruthers, Minister for Lands.

Given under our hands, at the Court-house, Nyngan, this 7th day of March, 1895,—

W. C. CARDEW, J.P., Chairman.
DANIEL SOANE, J.P. } Members.
HENRY O. CERRICK. }

Forwarded for the Minister's information, in view of Board's decision hereon.—C.J. (for Chairman), 11/3/95. The Under Secretary for Lands.

Crown Lands Act of 1884—(Part II, section 14, sub-section 4).

Decision of Local Land Board.

New South Wales. } Inquiry, section 3, sub-section (v), 55 Vic. No. 1, C.P. 90-49, and C.L. 15,833;
to wit. } Dubbo, now Nyngan.

WHEREAS on the 18th and 19th days of December, 1895, it became a matter for investigation before us under section 3, sub-section (v), of 55 Vic. No. 1, to inquire into the circumstances and merits of an application made by the Assets Realization and General Finance Company for the absolute reversal of forfeiture of conditional purchase 90-49, of 640 acres, and conditional lease 15,833, of 1,920 acres, county Gregory, parish Gerar; and having taken evidence and inquired into the said matter, we find that Mr. Booth appears for the company, who sent a former clerk, whose present whereabouts is not known, to Dubbo with instructions to purchase at Sheriff's sale this conditional purchase and lease for the late Adam Rae, at or under a certain price; that they were wholly unprepared for any objections, and apparently gave no instructions to the clerk as to how to act in the event of such being raised at the sale. We allow what Mr. Booth urges that when the letter of the witness Wilkinson was read, setting forth that there had been a default in the residence of the previous holder, there was no time for the clerk to inquire into the truth of the allegation, and that he had no time to come to any other decision than to implicitly carry out his instructions to purchase. We believe the company, who were then the mortgagees, are legally involved in the action of their clerk, but, as a matter of fact, it appears that the company, in the person of their secretary, Mr. Roberts, knew nothing of the objection raised until long after the land was purchased, and in view of this circumstance, and of their being induced to advance further

further large sum of money for fencing the land, on the Land Appeal Court's recommendation of waiver of forfeiture, together with the long delay in finally dealing with this matter, also in view of the whole evidence generally, we believe it would be very serious to enforce forfeiture at this stage, for the company have no doubt *bona fide* expended a large sum of money on the land.

We therefore recommend that the reversal of forfeiture be made absolute.

Given under our hands at Dubbo, in the Colony of New South Wales, this 19th day of December, 1895,—

W. C. CARDEW, J.P., Chairman.
DANIEL SOANE, J.P. } Members.
J. O. MACHATTE. }

Now forwarded for action.—H. ROXBURGH (for Chairman), B.C., 20/12/95. The Under Secretary for Lands.

Notice of Appeal to the Land Appeal Court from decision of Local Land Board.

WHEREAS on the 18th and 19th days of December, 1895, a certain matter, wherein an inquiry directed by the Honorable the Minister for Lands as to whether the Assets Realization and General Finance Company (Limited) had notice directly, or through Adam Rae or otherwise, of Henry Newell's default in fulfilment of conditions in respect of conditional purchase of 640 acres, No. 90-49, county of Gregory, parish of Gerar, district of Nyngan, together with conditional lease of 1,920 acres, No. 15,833, taken up in virtue thereof, forfeited 31st July, 1895, and as to the truth of the statements contained in a letter written by the secretary of the said company to the said Honorable the Minister for Lands on or about the 27th day of September last, and generally in respect to the said conditional purchase and conditional lease, came before the Local Land Board at Dubbo, in New South Wales for recommendation. And whereas the said Board on the said 19th day of December, 1895, recommended that the reversal of forfeiture be made absolute, as more fully appears by the decision of the Board hereunto annexed. And whereas I am aggrieved by such decision, and desire to appeal therefrom to the Land Appeal Court: these are, therefore, to give you notice that I appeal as aforesaid, and that I deposit the sum of £5 as security for the costs of such appeal. The grounds of such appeal are set out below. I desire that this appeal shall be heard in Sydney.

Signed this 15th day of January, 1896,—

To the Chairman, Local Land Board, Dubbo.

E. D. JONES,
Nyngan.

Received the sum of £5 referred to above. Land Board Office, Dubbo, 16th January, 1896, 10:30 a.m.

C. JOHNSON,
(For Chairman).

Grounds of Appeal.

1. That the Board should have allowed me to be a party to the inquiry.
2. That the recommendation of the Board was against the evidence and the weight of evidence.
3. That the Board refused to accept certain documentary evidence of previous transactions between Adam Rae and the Assets Realization and General Finance Company (Limited) (referred to in their Secretary's, Jeremiah Roberts', evidence), tendered by witness D. E. Burns.
4. That the Board refused to hear the evidence of one Henry Freeman with regard to the fencing of the selection.
5. That the Assets Realization and General Finance Company (Limited) advanced moneys to Adam Rae to purchase the selection under inquiry before taking any security from him, and that the security taken was given for £500 and further advances, whereas the amount advanced at the time was only £206 5s., which in itself was suspicious and proof that the sale and mortgage were not *bona fide*.
6. That the provisional reversal of forfeiture was in itself an act beyond the power of the Minister at the date the said provisional reversal was made and notified.
7. That the subsequent advances made by the said company were made by it with the knowledge that the title was bad.
8. That the inquiry was directed by the Crown, but the Crown was not represented, neither were the witnesses examined in any way by the Crown, nor any facts brought out except what were tendered voluntarily.
9. That Rae had at the time of the Sheriff's sale actual notice that the conditions required by him had not been fulfilled by Newell.
10. That Rae had at the time of sale by the Sheriff constructive notice that the conditions required by law had not been fulfilled by Newell.
11. That the said Assets Company at the time of the sale by the Sheriff had actual notice that the conditions required by law had not been fulfilled by Newell.
12. That the said Assets Company at the time of the sale by the Sheriff had constructive notice that the conditions required by law had not been fulfilled by Newell.
13. That the evidence all leads to the conclusion that Rae was not seeking to acquire the land *bona fide* and for his own use and benefit, but was merely to occupy the land and fulfil the necessary conditions so that the same might be secured by the station holder.

THIS deponent, Jeremiah Roberts, of Sydney, being duly sworn, maketh oath and saith as follows:—

By Mr. Booth: I am the Secretary of the Assets Realization and General Finance Company (Limited); I knew Adam Rae in his lifetime; the forfeiture of conditional purchase 90-49 and conditional lease held in virtue of it was provisionally reversed on my application, which provisional reversal was gazetted on 24th September, 1895; the letter of 27th September, 1895, to the Minister for Lands, Exhibit A. applying for provisional reversal, was written by me, now produced on the paper handed to me; I notice the Minister's minute referring my application to Board for inquiry; I first had business with Adam Exhibit B. Rae on 7th September, 1892; on 16th December, 1893, we first had dealings with him in connection with conditional

Exhibit C.

Exhibit D.

Exhibit E.

conditional purchase 90-49; we advanced him £206 5s. for the purpose of buying the selection in question; £200 purchase money, 4s. exchange, and £6 1s. travelling expenses to our clerk, who purchased; he had paid off a previous debt, and with this money conditional purchase 90-49 and conditional lease 15,833 were purchased at the Sheriff's sale about 16th December, 1893; inquiries had been made by me just previous to this about this conditional purchase; the inquiries were satisfactory in pursuance of this sale; the Sheriff transferred the land to Adam Rae; when Rae purchased a mortgage was prepared between Rae and the company; it is dated 29th December, 1893, and is from Rae to the company to secure £500 and further advances; it is registered 18th January, 1894, No. 748, book 529; there is a promissory note attached; further advances were made to Rae from this up to June last; at this latter date Rae was indebted to the company to the amount of £651 9s. 3d.; the ledger account produced shows the whole of the transactions between Rae and the Company in connection with this conditional purchase, and one held previously by him; this amount of £651 9s. 3d. is still owing to us under the mortgage; some of the further advances were made for fencing purposes; to the best of my knowledge the two amounts of £129 13s. 6d. and £69 7s. 6d. were advanced for fencing purposes; they are dated respectively 23rd April and 4th June, 1895; after the sale by the Sheriff, and after the mortgage, from hearsay, I heard that Rae had been ill; to the best of my knowledge he never informed us; I heard from a Government official from inquiries made that Rae was dead; at the time Rae bought the land from the Sheriff I was secretary to the company, and have been since its inception; at the date of the advance of £200 to Rae I had no knowledge of the alleged non-fulfilment of conditions by Newell; after the transfer to Rae I was aware of the inquiry by the Board as to fulfilment of conditions by Newell; I knew of the appeal against Board's decision to the Appeal Court; I was aware the Appeal Court recommended the forfeiture of the conditional purchase, as against Rae, should be waived; it was after this recommendation we made further advances to Rae; I am quite sure these further advances would not have been made to Rae but for the recommendation of the Appeal Court; the delay by the company in preventing forfeiture was owing to my absence in Queensland; on my return my attention was drawn to the *Gazette*; I have paid the instalments on conditional purchase and rents on conditional lease; the last payment was made in February last; all the statements contained in my letter of the 27th September, 1895, to the Minister are true and correct.

Marked A.

By Chairman: The Sheriff's sale was held at Dubbo; we sent an officer from Sydney to purchase for Adam Rae.

By Mr. Booth: We sent an officer to purchase at Rae's request; the officer was the accountant in our office at that time; I do not know where he is now; his instructions were to purchase, provided he secured it for £500 or under; £500 was the amount we agreed to advance him in the first instance; our instructions to the clerk were to bid to that amount.

Sworn at Dubbo, this 18th December, 1895,—

J. ROBERTS.

W. C. CARDEW, Chairman.
DANIEL SOANE, J.P. } Members.
J. O. MACHATTIE. }

THIS deponent, *John Thomas Steel*, of Dubbo, Sheriff's officer, being duly sworn, maketh oath and saith as follows:—

To the Board: On 14th December, 1893, at the Court-house, Dubbo, I sold, by virtue of a warrant of *feri facias*, issued at the suit of one William Alison *versus* Henry Newell; I sold all the defendant Henry Newell's right, title, and interest in conditional purchase of 640 acres, situated in parish of Gerar, county of Gregory, No. 90-49, and conditional lease 90-42, of 1,920 acres, same parish and county, to Herbert Stapley, of 70, Pitt-street, Sydney, accountant, as agent for Adam Rae, of 70, Pitt-street, Sydney, grazier, for the sum of £200; before offering the land I read a letter signed "W. B. Wilkinson."

[Mr. Booth objected to the production of this letter, on the grounds that it was not evidence as against the Assets Realization Company on their statements contained in the letter of the 27th September, 1895 (*Exhibit A*), as the clerk, Stapley, had no opportunity of inquiring into the truth of the allegations contained in Wilkinson's letter.

Board, by majority, overruled the objection. Mr. Soane dissenting.]

Witness continuing: Wilkinson's letter was addressed to the Sheriff, and I read it at the sale for what it was worth, not answering for its correctness or otherwise, that being a matter for consideration of intending purchasers; I produce the letter.

Exhibit F.

By Mr. Booth: At the sale I read the note in the margin; a Sheriff's sale always takes place at noon; I am bound to sell on that day at noon; Sheriff's sales are also for cash, which the purchaser has to pay on the fall of the hammer; the sale lasted from three to five minutes, including the reading of that document and the advertisement; I read the advertisement first, then the terms of conditions and sale, then the letter, and then offered the land immediately afterwards, about one minute elapsing from time of reading letter to knocking down the land; the purchase money was paid about five minutes after; Stapley had no time between my reading the letter to knocking down the land to inquire into truth or otherwise of allegations in the letter.

JOHN T. STEEL.

Sworn by John T. Steel, at Dubbo, this 18th December, 1895,—

W. C. CARDEW, Chairman.
DANIEL SOANE, J.P. } Members.
J. O. MACHATTIE. }

THIS deponent, *William Boyce Wilkinson*, of Dubbo, agent, being duly sworn, maketh oath and saith as follows:—

To the Board: A sale was advertised by the Sheriff to take place on 14th December, 1893, of some land known as Newell's selection, in parish Gerar; on the 11th December, I wrote to the Sheriff of New South Wales; I was present at the sale on the 14th; the Sheriff's officer (Mr. Steel) offered this selection for sale; prior to offering it he read a notice, which was a notice from me to the Sheriff; I there and then made a statement which I prepared before, and read from the written statement at the sale

(now

On the 19th September, 1895, the Minister decided the matters should stand over for fourteen days, to enable the Company to furnish any further information on the merits of the case, and on the same date, 19th September, to prevent conflicting application, he decided to provisionally reverse the forfeiture. (*Vide* conditional sales 95-21,204 Dep.)

This provisional reversal of forfeiture was gazetted on 24th September, 1895.

On the 27th September, 1895 (*vide* conditional sales 95-6,441 Cor.), the Assets Realization Company wrote giving their reasons fully for claiming absolute reversal of forfeiture, and on the 2nd October the Minister approved of an inquiry by the Board under subsection v of section 3 of the Act of 1891, 55 Vic. No. 1. (*Vide* conditional sales, 95-22,189 Dep.)

On the 18th and 19th December, 1895, the Land Board at Dubbo held the inquiry as directed, and after taking evidence of the Secretary of the Assets Realization Company, the Sheriff's officer, W. B. Wilkinson, and others, decided to recommend, in view of all the circumstances set out in their finding (conditional sale 95-27,882 Dep.), that the provisional reversal of the forfeiture should be made absolute.

Against this finding and recommendation of the Board an appeal was lodged by one E. D. Jones, who, on 5th December, 1895 (*i.e.*, one day after the receipt of the letter from the Assets Realization Company asking for reversal of forfeiture), applied for the land as conditional purchase 95-6, Nyngan.

The Court, in the course of a long judgment, in which it is pointed out that the reference by the Minister under subsection v of section 3 of the Act of 1891 was not in accordance with the law, found that Jones had no *locus standi*, and could not be heard on the appeal, but with the concurrence of counsel the Court postponed its ruling on that point and proceeded to hear the case on its merits, with the result that the appeal by Jones was dismissed, and the recommendation of the Board as to making absolute the reversal of forfeiture was sustained.

Jones's application has not yet been dealt with, and it will rest with the Land Board, subject to appeal to the Land Court, to dispose of it. However, that is a question that need not now be considered, the point at issue at the present time being whether the waiver of forfeiture of Rae's conditional purchase is to be made absolute, or whether the provisional reversal is to be cancelled.

The writ of *fi. fa.* under which the right, title, and interest of the original selector (Newell) was sold by the Sheriff was on the suit of William Alison, the owner of the holding on which the land is situated. This holding (Canonbar) is now held under mortgage by Goldsbrough, Mort, & Co., and having in view the position taken by the Assets Realization and General Agency Company in the "Mercadool cases," it is submitted that the strict letter of the law should be enforced in this case.

As throwing some light on the question of Rae's *bona-fides*, it is pointed out that in 1887 he took up the following conditional purchase on Canonbar Holding, and later on an additional was made in virtue thereof:—

Conditional purchase 87-4, Dubbo, 607½ acres, 6th January, 1887, made by Adam Rae; transferred to the Assets Realization and General Finance Company on 28th July, 1892; to Goldsbrough, Mort, & Co. on 14th December, 1893.

Additional conditional purchase 93-3, Dubbo, 130 acres, 19th January, 1893, made by the Assets Realization and General Agency Company; transferred to Goldsbrough, Mort, & Co. on 14th December, 1893.

There seems to be very grave suspicion that the subject conditional purchase, 90-49, was made by Newell in the interest of the station, and that it is more than probable if the forfeiture is absolutely reversed the land will very soon become part of the station property.

In view of all the circumstances it is submitted that sufficient proof has not been brought forward by the holders of the conditional purchase as to their *bona-fides* in the transactions to warrant absolute reversal of forfeiture, and that the provisional reversal be now cancelled.

ALFRED SALWEY,

Head of Conditional Sales Branch, 17 June, 1896.

Sir,

Sydney, 4 September, 1895.

I have the honor to request that you will be good enough to withdraw from forfeiture, pending further action being taken, conditional purchase No. 49-90, in the name of Adam Rae, but selected by Henry Newell.

Prior to this, Mr. Robert Booth, solicitor, of Dubbo, has attended to the matter for us, but he advises me now that the selection has been gazetted for forfeiture, and that our only course to save forfeiture is to appeal for the temporary withdrawal as above.

Our position in the matter is that we advanced Rae (who has since died, and whose long illness was the cause of all the trouble) £200 to buy the selection at a Sheriff's sale, in addition to which we have advanced over £300 for fencing and other improvements. We hold a mortgage over the property to cover us for these advances, and trust that under the circumstances you will withhold the forfeiture till further inquiry is made.

I have, &c.,

J. ROBERTS,

Secretary.

The Under Secretary for Lands, Sydney.

The conditional purchase was declared forfeited on 31st July last for non-residence, and the writer now asks that the forfeiture be temporarily withdrawn, pending further inquiry. The papers are now with the District Surveyor, Dubbo.—J.R.Y., 5/9/95.

District Surveyor asked by wire to return papers.—J.R.Y., 5/9/95.

The papers in this case are with the District Surveyor. The case is one in which the Land Appeal Court recommended the Minister to waive the forfeiture (L.C. Reports, vol. 4, page 133), but after due consideration forfeiture was decided upon. The writer may, it is submitted, be informed that it is now found that no action towards consideration of the question of reversal of forfeiture will be taken until the papers are received from the District Surveyor.—ALFRED SALWEY, head of Conditional Sales Branch, 5/9/95.

Inform.—W.H., 5/9/95.

Secretary, A.R. & G.F. Co., informed, 5/9/95.

Office Memorandum.

Dubbo, now Nyngan.—C.P. 90-49; 640 acres; 20 Feb., 1890; confirmed, 7 Oct., 1890; Henry Newell; transferred by the Sheriff to Adam Rae, 19 December, 1893.

THIS conditional purchase was gazetted forfeited on 31st July last, after special consideration of the question whether Adam Rae was aware of the fact that the original selector, Newell, did not comply with the residence condition. (*Vide* C.S. 95-7,878, Dep. herewith.)

Application was made on the 4th instant by the Assets Realization and General Finance Co. to have the forfeiture revoked, pending further action.

In view of the facts it is submitted that the application be refused.

ALFRED SALWEY,

Head of C.S. Branch, 9 Sept., 1895.

For refusal of the application of the 4th instant by Mr. Roberts, Secretary of the Assets Realization and General Finance Company (Limited), as the Company's monetary transactions with Rae is not in itself a circumstance that would justify the department in taking special action in the case.—W. H. CARRER, in charge, Sales Division, 10/9/95.

Submitted for approval of above memo.—W. HOUSTON, Under Secretary, 11/9/95. I am willing to let the matter stand over for fourteen days to permit the Assets Realization Company to furnish any further information on the merits of the case.—J.H.C., 19/9/95. To prevent conflicting interests arising, it is presumed that forfeiture may be provisionally reversed.—W. H. CARRER, in charge, Sales Division. Submitted.—W.H., 19/9/95. Approved.—J.H.C., 19/9/95.

Special.

Assets Realization and General Finance Co. (Ltd).

Additional information as to merits of application for reversal of forfeiture, 90-49, Dubbo.

Sir,

Sydney, 27 September, 1895.

In reply to No. 95-21,204, Adam Rae, I have the honor to acknowledge receipt of your letter of the 20th instant, intimating that you had been good enough to provisionally reverse the forfeiture of conditional purchase 90-49, in the name of Adam Rae, in order to enable us to furnish you with additional information as to the merits of our application for a reversal of the forfeiture of the selection.

In the first place, I think it would be as well that you should know our interests in the land referred to.

The late Adam Rae, with whom we had previously done business, applied to us in December, 1893, for an advance not exceeding £500 for the purpose of enabling him to purchase Henry Newell's conditional purchase 49-90, of 640 acres, and conditional lease 15,833, of 1,920 acres, taken up at Dubbo on 20th February, 1890, and which was to be offered for sale at auction by the Sheriff at Dubbo.

Having made necessary inquiries, which resulted satisfactorily, it was agreed to make him the advance for the purpose named.

With this object in view, I sent one of the Company's clerks—Herbert Stapley—to Dubbo, with the result that he purchased the land on behalf of Adam Rae for £200.

Upon payment by us of the said amount a transfer was given by the Sheriff to the late Adam Rae, and was duly registered and accepted by the department.

To secure this Company, I took a mortgage over the lands to cover the amount of purchase money and further advances.

Later on we found that the fencing conditions had not been completed, and consequently we made the owner of the selection further advances to complete the same.

Subsequent to the purchase of these lands Mr. Rae was taken seriously ill, and was unable to permanently reside upon the selection, as he was under the doctor's treatment at Nyngan. He was consequently quite unable to attend the Land Board inquiries relating to his land, otherwise he could have satisfied the authorities of his *bona-fides* in the business.

I was totally ignorant of the non-fulfilment of the residence conditions by Newell, the original selector, at the time the advance was made to the late Adam Rae, and from the Land Court's recommendation it is very evident that Mr. Rae was also unaware of it.

This Company would never have lent the late Adam Rae further sums for the completion of fencing upon the lands in question were it not for the recommendation of the Land Court to the Minister to confirm the transfer from the Sheriff to the late Adam Rae, and which advice they relied upon the Minister accepting.

The late Adam Rae's estate is now indebted to this Company in the sum of £651, and we have nothing to look to for its return but the security, the subject of this letter.

Respecting the delay in taking action to prevent forfeiture, I can only repeat my somnolence arose from the belief that after the recommendation of the Land Court all further objection would be withdrawn. I certainly never anticipated that the department would go to the extreme of forfeiture. I had been absent in Queensland, and upon my return the *Gazette* notice was pointed out to me, whereupon I took immediate action to obtain the provisional reversal since granted.

I hope, therefore, that after considering all the circumstances you will take a sufficiently liberal view of the case as will relieve us, mortgagees in good faith, from what must otherwise be a serious loss.

I have, &c.,

J. ROBERTS,

Secretary.

The Under Secretary for Lands, Lands Department, Sydney.

I would further point out that up to the 20th February last the Treasury accepted the instalment of conditional purchase and rent on conditional lease in the name of Adam Rae without any demur or protest.—J.R.

Office

Office Memorandum.

Dubbo, now Nyngan.—C.P. 90-49; 640 acres; 20th February, 1890; confirmed; 7th October, 1890; Henry Newell; transferred by the Sheriff to Adam Rae, 19th December, 1893.

THIS conditional purchase was gazetted forfeited on 31st July last, but the forfeiture was provisionally reversed on the 19th instant—gazetted 24th instant—to enable the Assets Realization and General Finance Company (Limited)—which Company claims to have advanced money to Rae to purchase the land—to furnish any information on the merits of the case.

The facts in connection with the case are fully set out in the statements C.S. 95-7,878 Dep., 94-18,875 Dep., and 94-5,729 Dep.

From the evidence of J. T. Steel, the Sheriff's officer, who sold the land, there seems to be no doubt that the officer of the Assets Company must have been aware that there was some doubt at least as to the fulfilment of the condition of residence by the original selector.

Mr. Wilkinson in his letter of 10th June, 1894, conditional lease 94-3,831, Cor., states that before the sale by the Sheriff, Messrs. Creagh and Williams, solicitors for Adam Rae, threatened him (Mr. Wilkinson) with an action should he slander the title at the Sheriff's sale.

It seems to me, in view of the facts, that the case is not one in which the Assets Realization and General Finance Company has made out a case strong enough to warrant an absolute reversal of forfeiture. If this view be taken, the provisional reversal should be cancelled in the usual manner.

ALFRED SALWEY,

Head of C.S. Branch, 30th Sept., 1895.

As provided in section 3, sub-section v, of the Crown Lands Act Amendment Act of 1891, it is submitted that an inquiry be instituted, and a report by the Land Board be furnished with the circumstances detailed in the communication of the 27th ultimo.—W. H. CAPPER, in charge Sales Division, 1/10/95.

For approval of inquiry under Act 55 Vic. No. 1.—WM. HORSTON, Under Secretary. Approved.—J.H.C., 2/10/95.

Exhibit "B"—Evidence of J. Roberts—Chairman, W. C. Cardew.

Exhibit "F"—Evidence of J. T. Steel—Chairman, W. C. Cardew, 18/12/95—Papers, L.B.D., Chairman.

To the Sheriff, New South Wales,—

Sir,

Dubbo, 4 December, 1893.

According to advertisement your officer here will cause to be sold here on the 14th, at the suit of W. Alison, all H. Newell's interest to a certain conditional purchase and conditional lease, parish Gerar, Gregory. I wish you to point out that the said selection has been abandoned by Newell, and has practically become forfeited, and is now set down for inquiry before the Local Land Board here on the 25th instant, and that you will instruct your deputy here to point out that there is no title, in order that the Crown Lands Act may not be prostituted. I am endeavouring to get this land thrown open at once for conditional purchase.

Yours, &c.,

W. B. WILKINSON,

Land Agent.

See previous paper. To be read at sale for what it is worth, the office not answering for its correctness or otherwise, that being a matter for consideration of intending purchasers.—13/12/93. The Sheriff for appl.—C.L., 13/12/93. The Officers, Dubbo. This letter read at sale for what it is worth, &c.—J. T. STEEL, S.O., 14/12/93.

This letter was put in as an exhibit at the Nyngan sitting of the Dubbo Land Board, on the 7th March, 1895, when I was giving my evidence. It appears it afterwards went before the Minister for Lands, and returned to me this 22nd day of August, 1895.—J. T. STEEL, 22/8/95.

In the Land Appeal Court of New South Wales.

Noted, 6/7/94.

APPEAL to be heard at Session to be held at Sydney, commencing on the 27th day of June, 1894.

Name and address of appellant—Adam Rae.

Nature of appeal—Against the finding of the Board in respect of his (formerly Henry Newell's) conditional purchase No. 90-49, and conditional lease No. 15,833, Dubbo, now Nyngan.

Names and addresses of any other parties interested—Adam Rae, care of Creagh and Williams, Sydney.

Now forwarded to the Minister for Lands, the case having been brought before the Land Appeal Court, sitting as above, on the 27th day of June, 1894.

A copy of the order of the Court will be found on the third page hereof.

J. KEATING,

Registrar.

To the Under Secretary for Lands, 2nd July, 1894.

Land Court No., 3,035.

Copy of Order of Court.

APPEAL dismissed, but the Minister is recommended, under the circumstances, to waive forfeiture. Deposit to be refunded.

Reserved Judgment, given 20th May, 1896.

No. 3,870, Ernest D. Jones.

THIS is an appeal against the recommendation of the Dubbo Local Land Board, upon an inquiry directed by the Minister, and purporting to be made under section 3, sub-section v, of the Act 55 No. 1, "into the circumstances" detailed in a certain communication bearing date 27th September, 1895, and addressed by the Secretary of the Assets Realization and General Finance Company (Ltd.) to the Under Secretary for Lands. That communication is, in brief, an application for the absolute reversal of the forfeiture of

conditional purchase 90-49 (640 acres) and its associated conditional lease 15,833 of 1,920 acres, county Gregory, parish Gerar. The Board, regarding this inquiry as an inquiry into the circumstances and merits of the said application for reversal of forfeiture, recommended that the provisional reversal of forfeiture of the subject lands should be made absolute. To understand that recommendation the previous history of the case may be briefly stated, partly from the papers in the case and partly from the report of the appeal *in re* Rae, 4 L.C.C., p. 133, in which appeal the fulfilment of conditions in respect of the same conditional purchase, which has become the subject of the subsequent proceedings, was brought up for review before this Court.

Sometime in 1890, one Newell took up a conditional purchase, 90-49, of 640 acres, and a dependent conditional lease of 1,920 acres on the resumed area of Canonbar (Nyngan), and the conditional purchase was confirmed in October of the same year. Subsequently, as the result of an inquiry under section 20 of the Act of 1884, held 19-22 March, 1894, the conditional purchase was by the Local Land Board recommended for forfeiture for non-fulfilment of the conditions of residence and fencing.

Before the last-mentioned date, *i.e.*, on 19th December, 1893, the Sheriff, pursuant to a *fi. fa.* under a writ of foreign attachment, sold the subject conditional purchase to one Adam Rae.

From the finding and recommendation of the said Board, Adam Rae appealed to this Court, which, however, on 27th June, 1894, dismissed the appeal, but with a recommendation to the Minister to waive forfeiture.

The Minister did not think fit to give effect to the Court's recommendation, his reasons being contained in a minute dated 24th August, 1894, in these terms: "I have carefully gone through these papers, and I cannot see any features in the case which would warrant me in waiving the forfeiture incurred. The residential conditions were not fulfilled by Newell, nor does Rae appear to show any circumstances warranting a special consideration of his position. But before coming to a final decision I should like to have an inquiry held by the Land Board as to Rae's *bona-fides*, and as to the manner in which he has fulfilled the conditions since the date of the transfer to him on 19th December, 1893."

Accordingly, the Board held such an inquiry, and adjourned the hearing on several occasions in consequence of Rae's absence through alleged illness, and ultimately took the evidence of the Sheriff's officer, the Conditional Purchase Inspector, and Mr. W. B. Wilkinson, agent, of Dubbo, and forwarded such evidence to the Minister, without any finding, for his information. The result was that the subject conditional purchase was gazetted forfeited on 31st July, 1895, but in consequence, it would appear, of representations made to the Minister by the Secretary of the Assets Realization Company (the mortgagees of the land), and following on the receipt by the Minister on 4th September, 1895, of a letter from the said company, asking him to withdraw the forfeiture, such forfeiture was on the 19th September, 1895, provisionally reversed, and the reversal gazetted on the 24th of the same month, to allow the company an opportunity of furnishing any information on the merits of the case. Such information was furnished by letter of the Secretary to the company, dated 27th September, 1895. In the meantime, *i.e.*, on the 5th September of the same year (1895), the present appellant lodged his application to conditionally purchase the land the subject of the forfeiture.

The next stage in the case is an inquiry directed to be made by the Local Land Board, pursuant to the Act 55 Vic. No. 1, into the statements made in the letter referred to, and the Company's application to make absolute the provisional reversal of forfeiture. This last inquiry was held as directed, and on the 19th December, 1895, the Local Land Board found and recommended as follows:—

"We find that Mr. Booth appears for the company, who sent a former clerk, whose present whereabouts is not known, to Dubbo, with instructions to purchase at Sheriff's sale this conditional purchase lease for the late Adam Rae at or under a certain price. That they were wholly unprepared for any objections, and apparently gave no instructions to the clerk as to how to act in the event of such being raised at the sale. We allow what Mr. Booth urges that when the letter of the witness Wilkinson was read, setting forth that there had been a default in the residence of the previous holder, there was no time for the clerk to inquire into the truth of the allegation, and that he had no time to come to any other decision than to implicitly carry out his instructions to purchase. We believe the company, who were then the mortgagees, are legally involved in the action of their clerk, but as a matter of fact it appears that the company, in the person of their Secretary, Mr. Roberts, knew nothing of the objection raised until long after the land was purchased, and in view of this circumstance, and of their being induced to advance a further large sum of money for fencing the land, on the Land Appeal Court's recommendation of waiver of forfeiture, together with the long delay in finally dealing with this matter, also in view of the whole evidence generally, we believe it would be very serious to enforce forfeiture at this stage, for the company have no doubt *bonâ fide* expended a large sum of money on the land.

"We, therefore, recommend that the reversal of forfeiture be made absolute."

This finding and recommendation are the subject of the present appeal upon the grounds following, though appellant's counsel abandoned the fourth and sixth grounds at the hearing:—

1. That the Board should have allowed me to be a party to the inquiry.
2. That the recommendation of the Board was against the evidence and the weight of evidence.
3. That the Board refused to accept certain documentary evidence of previous transactions between Adam Rae and the Assets Realization and General Finance Company (Limited), referred to in their Secretary's (Jeremiah Roberts's) evidence, tendered by witness D. E. Burns,
4. That the Board refused to hear the evidence of one Henry Freeman with regard to the fencing of the selection.
5. That the Assets Realization and General Finance Company (Limited) advanced money to Adam Rae to purchase the selection under inquiry before taking any security from him, and that the security taken was given for £500 and further advances, whereas the amount advanced at the time was only £206 5s., which in itself was suspicious, and proof that the sale and mortgage were not *bonâ fide*.
6. That the provisional reversal of forfeiture was in itself an act beyond the power of the Minister at the date the said provisional reversal was made and notified.
7. That the subsequent advances made by the said company were made by it, with the knowledge that the title was bad.

8. That the inquiry was directed by the Crown, but the Crown was not represented, neither were the witnesses examined in any way by the Crown, nor any facts brought out except what were tendered voluntarily.
- 9 That Rae had at the time of the Sheriff's sale actual notice that the conditions required by law had not been fulfilled by Newell.
10. That Rae had at the time of sale by the Sheriff constructive notice that the conditions required by law had not been fulfilled by Newell.
11. That the said Assets Company at the time of the sale by the Sheriff had actual notice that the conditions required by law had not been fulfilled by Newell.
12. That the said Assets Company at the time of the sale by the Sheriff had constructive notice that the conditions required by law had not been fulfilled by Newell.
13. That the evidence all leads to the conclusion that Rae was not seeking to acquire the land *bonâ fide*, and for his own use and benefit, but was merely to occupy the land and fulfil the necessary conditions, so that the same might be secured by the station-holder.

It will be sufficient, however, to consider the arguments advanced for and against the *locus standi* of the appellant, and that which dealt with the question of notice, actual or imputed, and whether on the part of the mortgagor Rae or the mortgagee company. But before doing so it may be well to draw attention to the terms of the Minister's reference of 2nd October, 1895, considered in connection with the sub-section of 55 Vic. No. 1, section 3, under which alone it could have been made, and with the Minister's minute of 24th August, 1894, set out above. That minute manifestly indicates on the part of the Minister a disinclination to absolutely reverse the gazetted forfeiture, whereas sub-section (v) of the section just cited appears to provide for an inquiry by a Board only where the Minister "proposes to make absolute" the provisional reversal of a forfeiture. The material words are: "In any case where a forfeiture has been or may hereafter be duly notified or declared for any cause other than the non-payment of money, the Minister shall, before absolutely reversing such forfeiture, refer to the Local Land Board for inquiry and report as to any fact or circumstance in virtue of which he proposes to make such absolute reversal as aforesaid, &c., &c." It will be seen, on looking at the Minister's reference, that "no fact or circumstance in virtue of which he proposed to make such absolute reversal" has been mentioned; but the subject of inquiry is simply described as "the circumstances detailed in the communication of the 27th ultimo, i.e., 27th September, 1895," that being an application made by the Assets Realization and General Finance Company (Limited) for the absolute reversal of forfeiture of the subject land, such absolute reversal not being proposed by the Minister, but by the company. The Minister had power to revoke the provisional reversal without reference to the Local Land Board. Reference to the Board is only required where the Minister himself proposes to reverse absolutely, and in that case the cited sub-section makes it compulsory on the Minister to direct a Board inquiry, and obtain a report before making a reversal absolute.

Then the terms of the reference itself can hardly be regarded as a sufficient compliance with the requirements of the Act 55 Vic. No. 1. The Minister, by sub-section v of section 3 of that Act, must refer to the Board for inquiry and report "as to any fact or circumstance" in virtue of which he proposes to make absolute a provisional reversal. Can it be said that "the circumstances detailed" in a letter are a "fact or circumstance" within the meaning of this sub-section? What circumstances so detailed are meant, for the letter details many "circumstances" which the Board evidently thought to be outside the scope of the inquiry, and do not appear to have investigated. On the other hand, the Board have investigated circumstances not detailed in that letter.

Our doubts, however, of the validity of the present reference on the grounds above indicated are not strong enough to require us to throw out the appeal; and the incongruity of the terms of the reference with the statutory authority, as also the insufficiency of the reference itself, are only pointed out now in order that a different course may be pursued in future.

Moreover, we are of opinion that the inquiry held by the Local Land Board, pursuant to the Minister's reference, did substantially raise the material question upon which the Minister ought to have been informed before making the provisional reversal of forfeiture absolute or revoking it, that question being: Did the Assets Realization Company take whatever interest it claims in the subject land with that notice (actual, constructive, or imputed) of the defect in their transferor's or mortgagor's title, which in a Court of Equity would (to use Lord Hardwicke's words) make that company a "*mala-fide* purchaser or mortgagee?"

We may therefore proceed to consider the arguments addressed to the Court at the hearing of the appeal, and we must begin with the preliminary objection to the *locus standi* of the appellant Jones, which was the subject of elaborate argument, but as to which the Court postponed its decision until the appeal had been heard on its merits, and apart from the technical objection to appellant's competency as a party. It was contended by respondent's counsel that Jones had been properly held by the Board to be incompetent as a party to the reference, and was also incompetent as a party to the present appeal, principally on the ground that—(1) The only parties before the Board for the purposes of the reference were the Crown and the Assets Realization Company; and also (2) because the effect of the application of that company for a provisional reversal of forfeiture (which application appears to have been received by the Minister on the 4th September, 1895) was, having regard to the concluding enactment in section 4 of the Act 55 Vic. No. 1, to defeat Jones's application for a conditional purchase bearing date the 5th September, 1895. On the other hand, it was contended by appellant's counsel that the subject land having been gazetted forfeited on 31st July, 1895, it became Crown lands open to conditional purchase thirty days after the *Gazette* notification, and inasmuch as the appellant lodged the application to conditionally purchase such land on 5th September of that year, and after the expiration of thirty days from gazetting of forfeiture, and when the land was Crown land open to conditional purchase, his title cannot be questioned or his right to appear before the Board and this Court as a party having a *locus standi*.

The Court holds that Jones, the present appellant, has no *locus standi*, and ought not to be heard on this appeal any more than on the proceedings before the Board. The concluding part of section 4 of the Act 55 Vic. No. 1 enacts that "no provisional or absolute reversal hereafter to be made of any forfeiture shall defeat any valid application for a conditional purchase or conditional or homestead lease which shall have been lodged before the receipt by or on behalf of the Minister of a request in writing for such reversal unless the applicant shall consent in writing to such reversal."

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This must be taken to imply that if there has been a receipt by the Minister of such a request for reversal, then a provisional reversal will operate to defeat such an application. In the present case the Minister was, on the 4th September, 1895, in receipt of such a request in writing, so that the conditional purchase application of the appellant lodged the day after must be postponed by the operation of the provisional reversal of forfeiture. The operation of sub-section (11) of section 3 of the cited Act was in terms of that sub-section to suspend from the date of the notification of forfeiture the operation of such forfeiture, and to remit, as it would seem to follow, the holder of the forfeited land to his original title at least pending the further and final decision of the Minister either to revoke "the provisional reversal or to make it absolute."

We have considered very carefully the Supreme Court case of *in re Flood*, reported 15 N.S.W.R., p. 330, but there is nothing, so far as we understand that case, in the judgment of His Honor the Chief Justice, which should prevent us from interpreting the proviso to the 4th section of the Act under consideration as we have done, but, on the contrary, there appears, in a question put by the Chief Justice to the respondent's leading counsel, to be some countenance given to the view which this Court has taken of the effect of a provisional reversal of forfeiture. His Honor asked, "If the person who took up this land originally had the fee-simple vested in him during the suspension of the forfeiture, what estate had J.C. when she made the application?" The legitimate inference from the question so expressed is that suspension of forfeiture revives the original title during such suspension. If that inference be correct, then the title that was revived during the operation of the provisional reversal of the forfeiture in this case was the title of Newell that had been transmitted to Rae by the Sheriff's sale, and by Rae to the Assets Company. Inasmuch then as such provisional reversal was in operation when Jones lodged his application to conditionally purchase on the 5th September, 1895, by relation back to the date of notification of forfeiture, 31st July, 1895, Jones's title succumbs to the original title. Of course if Jones had lodged his application before the Assets Company had lodged with the Minister their request for provisional reversal, the result might have been different. As he lodged it after, he is postponed, and is without any interest in the subject land other than that of a bare subsequent applicant seeking to attack the original title.

With the concurrence of counsel, and to save time, the Court postponed its ruling on the competency of the appellant as a party, and proceeded to hear the case on its merits, and apart from the legal objection taken by respondent's counsel. The question of notice was argued at great length, and it remains for the Court to consider and decide how far the plea of innocent mortgagee for value answers appellant's contention.

Mr. Heydon contended that the letter or statement written by Mr. W. B. Wilkinson, land agent, of Dubbo, and read by the Sheriff's officer at the sale of Newell's right, title, and interest in the subject land, to the officer of the Assets Realization Company, as agent for Adam Rae, fixed Adam Rae with at least constructive notice of Newell's defective title, and that as the company can only stand in Adam Rae's shoes by virtue of the mortgage to them, their title has the same taint on it as the title of the mortgagor. The letter referred to was addressed to the Sheriff, and was by him read out, as he says in his evidence, "for what it was worth," about a minute elapsing from the time of reading the letter to the knocking down of the land to the agent of Adam Rae. The purchase-money, £200, appears to have been paid to the Sheriff's officer about five minutes after the land was so knocked down. The letter or statement read out by the Sheriff's officer is in these terms:—

"Statement made at Sheriff's Sale, 14 December, 1895.—H. Newell's conditional purchase.

"I give notice that this selection has been abandoned; that an adjourned inquiry is now before the Land Board; that the conditional purchase inspector has reported the holder Newell as non-resident; that his letters have been returned; and the police have reported that Newell has left the district.

"W. B. WILKINSON.

"I do this in the interest of people awaiting the forfeiture of the land who are anxious to avail themselves of the privileges of the Lands Acts.—W.B.W."

If the notice which a Court of Equity will presume to have come to the knowledge of a person, that is to say, constructive notice, is governed by the same rule as actual notice, so far as its binding effect on the conscience of a purchaser is concerned, some person interested in the property affected by the notice must give that notice, and during the negotiations for the purchase. This seems to be clearly established by the Privy Council's decision in *Barnhart v. Greenshields*, 9 Moore's P.C. cases, 18. What then was the nature of Mr. Wilkinson's interest in Newell's selection, even assuming that the reference in his "statement" to "H. Newell's conditional purchase," was a reference to H. Newell's conditional purchase of 640 acres. No. 90-49, county of Gregory, parish of Gerar, district of Nyngan, which it must be admitted is an assumption that might be repudiated by both purchaser and mortgagee. The interest of the writer of that statement in the subject land can best be ascertained by a perusal of his own sworn evidence before the Board taken for the purposes of the Minister's reference.

"I had been writing" (he states) "to different people about this selection, *i.e.* Newell's. I may have written to Goldsbrough and Company; I never wrote to Goldsbrough, Mort, & Co. that if they did not give me £50 that I would report it; I wrote to them demanding £50 they owed me; Mr. O'Connor, land agent here, made an agreement with me, which he made me reduce to writing, that I would not put anyone on to certain land on Canonbar, but to give them one Thursday's grace; I gave him the Thursday's grace; Mr. O'Connor came to me on Thursday evening, and said that through misquoting the basal conditional purchase to Goldsbrough, Mort they were unable to take up the land on Thursday, and asked me for another week, and if I would draw out the applications, so that there should be no mistake; I drew them out, and they were forwarded to Goldsbrough, Mort, & Co. on the following Thursday. . . . I discovered a flaw in applications for some of their land; this refers to part of it; the £50 was for myself; I was to get £50 for not taking advantage of this flaw; this transaction, I think, took place before the sale to Rae; I do not consider it blackmailing, because the information was worth far more to me than this for the public; I may have written to Goldsbrough, Mort, & Co. I think it will be some day to your interest to settle the £50 matter. . . . One of the flaws I discovered was that an agent had appointed another agent to take up a conditional purchase; I still think it to be to their interest to pay me the £50."

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The conclusion that any reasonable and unprejudiced person would be justified in coming to on the evidence quoted above is, we think, that Wilkinson's interest in Newell's selection was the interest of a man who meant to use his knowledge of a supposed flaw in the holder's or vendor's title for his own pecuniary advantage rather than "in the interest of people awaiting forfeiture of the land who are anxious to avail themselves of the privilege of the Lands Acts;" but whatever the nature or peculiarities of that interest might be, we cannot think it such an interest as was considered necessary by the Privy Council in the cited case to give a binding effect to a notice emanating from the possessor of such interest. Some persons might not hesitate to pronounce the transaction, so naively described by Wilkinson, as "blackmailing" pure and simple. But this Court is loth to employ an expression which conveys so odious an imputation and suggests so disreputable a practice. It is sufficient for the Court to express the opinion that a flaw in title reported by the writer of that statement, in view of his own evidence, ought not to count for much at a Sheriff's sale, especially when we have a clear and express statement on oath by the secretary of the Assets Company that he had no knowledge whatever of the defect referred to when his company advanced the purchase money to Rae. In other words, the Court is distinctly of opinion that Wilkinson's "statement" was not one which should put an intending purchaser or mortgagee to inquiry as to the existence of the defect intended to be disclosed. If the law were otherwise, then any unscrupulous volunteer who might be possessed by a grudge or by a wanton spirit of doing mischief could effectually put a stop to any public sale of property the title to which he might choose to slander, and, if a man of straw, do so with perfect impunity.

Mr. Heydon contended that the subject matter of the Minister's reference was not whether the Assets Company had notice of the non-fulfilment by Newell of his condition of residence, but whether Adam Rae was fixed with such notice. In our judgment, neither was Adam Rae fixed with such notice nor was the Assets Company, and further, we are of opinion, following such authorities as we have been able to consult, that even if Adam Rae took with notice of such non-fulfilment of residence by Newell, the Assets Company, Rae's mortgagees, are not affected by such notice. [See Story's Equity Jurisprudence, 13th edition, vol. I, s. 490 and 416; also the well-known leading case of *Jones v. Smith*, 1 Hare, 43, affirmed on appeal 1, Phillips 244, where Wigram, V. C., laid it down that "If there is not actual notice that the property is in some way affected, and no fraudulent turning away from a knowledge of the facts which the *res gestæ* would suggest to a prudent mind, if mere want of caution as distinguished from fraudulent and wilful blindness is all that can be imputed to the purchaser, then the doctrine of constructive notice will not apply, then the purchaser will in Equity be considered, as in fact he is, a *bonâ fide* purchaser without notice."]

In *re Butler*, 15 N.S.W.R., the Chief Justice said, at page 93:—"Forfeiture is odious to the law, and, in constructing an Act of Parliament, it cannot be assumed that the Legislature intended forfeiture, especially against an innocent purchaser, unless the Legislature has used express words for the purpose. The liability to forfeiture is, in my opinion, confined to the original conditional purchaser, and does not apply to an innocent purchaser from the Sheriff." The present case differs from *in re Butler* in this very important feature, that here we have at most a liability to forfeiture for non-fulfilment of a condition subsequent. In *Butler's* case, the liability to forfeiture arose from a fraud on the Act, *i.e.*, a false declaration of the conditional purchaser, and fraud, it is well known, vitiates in a far different degree from default, so that the principle laid down in *Butler's* case applies with greater force to such a case as the present.

Mr. Heydon, towards the close of his argument, suggested that the Court, as an alternative, might send the case back to the Board for further investigation, so that the appellant Jones might have an opportunity of giving evidence. In answer to that suggestion, it is sufficient to say that the view we take of Jones' status does not allow us to adopt the suggestion. And, in the next place, we hold that the evidence before the Court is sufficient to enable the Court to arrive at a conclusion upon the recommendation made by the Local Land Board on the question of notice. For these reasons we must decline to send the case back for further evidence.

Dealing then with the appeal on the evidence before us, and after the best consideration we can give to the law as applicable to that evidence, we dismiss the appeal, and sustain the recommendation of the Local Land Board, appealed from, but the deposit will be refunded.

Mr. Heydon asked for extended time to appeal. The Court allowed six weeks from this date within which to lodge notice of appeal.

Dubbo, now Nyngan.—C.P. 90-49; 640 acres; 20th February, 1890; confirmed, 7th October, 1890; Henry Newell, transferred by the Sheriff to Adam Rae; 19th December, 1893.

THE conditions of residence and fencing were not carried out, consequently forfeiture was incurred, duly approved by the Minister, and notified on the 31st July last.

However, on the 24th September last, provisional reversal of forfeiture took place, and the Board was, in view of a communication dated the 27th September last, authorised under sub-section (v) of section 3 of the Act of 1891, 55 Vic., No. 1, to inquire into the circumstances detailed therein.

The Board, upon the evidence given by Mr. Roberts, Secretary to the Assets Realization and General Finance Company (Limited), Mr. Steel, Sheriff's Officer, and Mr. W. B. Wilkinson, report "that the purchase from the Sheriff was practically without notice of the non-fulfilment of the conditions of selection, and in view of this circumstance, and of the company being induced to advance a further large sum of money for fencing the land on the Land Appeal Court's recommendation of waiver of forfeiture—together with the long delay in finally dealing with this matter, also in view of the whole evidence generally, they believe it would be very serious to enforce forfeiture at this stage, for the company have, no doubt, *bonâ fide* expended a large sum of money on the land," and at the same time they "recommend that the reversal of forfeiture be made absolute."

The company, of course, did not appeal against this recommendation, but one E. D. Jones, who applied to conditionally purchase the land in question on the 5th September last, and was refused a hearing by the Board at the last inquiry, lodged an appeal on various (thirteen) grounds against the Board's recommendation.

The Land Appeal Court held that Jones had no *locus standi*, and ought not to be heard on the appeal any more than on the proceedings before the Board, but, with the concurrence of counsel, postponed its ruling on the competency of the appellant as a party, and proceeded to hear the case on its merits, and apart from the legal objection taken by respondent's counsel. The

The question of notice, referred to on page 11 of the judgment of the Appeal Court, was argued at great length. The Court was distinctly of opinion that Wilkinson's "statement" was not one which would put an intending purchaser or mortgagee to inquiry as to the existence of the defect intended to be disclosed, and after the best consideration was given to the law as applicable to the evidence, the appeal was dismissed, the Court sustaining the recommendation of the Local Land Board appealed from, but authorising the deposit to be refunded.

The question of "purchase without notice" is the one now calling for consideration, as although the Court may be credited with disposing of Mr. Wilkinson's "statement," the evidence given by Mr. Roberts, secretary to the company, indicates a class of business that carries with it a certain amount of suspicion, and the Board would have been justified in putting the witness to the most searching cross-examination.

This was not, however, done, and the Department is at a disadvantage in now disposing of the claim, as it seems that, although the forfeiture originally notified was apparently just, the whole facts were not at the more recent inquiries brought before the Land Board.

There appears to be no means available of bringing about a thorough investigation in this matter except by thrusting on the company the responsibility of initiating proceedings in the Supreme Court.

To give the company the opportunity of taking this case to the Supreme Court, and at the same time dealing with it as under all the circumstances it seems to deserve, it is submitted that the provisional reversal of forfeiture of the conditional purchase and dependent conditional lease, approved on the 8th April, 1895, and notified in the *Gazette* of the 24th September last, be revoked.

If the Minister decide upon the course suggested, it will be necessary for him, as such is contrary to the recommendation of the Land Board, to record, as provided by sub-section (v), section 13, 55 Vic. No. 1, his reasons for so doing. And the section further provides that "the Minister shall, as soon as practicable, lay upon the Table of the Legislative Council and that of the Legislative Assembly a copy of his decision, together with such reasons."

W. H. CAPPER,

In charge, Sales Division, 22/6/96.

The salient features of this case are fully set out in the reports herewith of Messrs. Capper and Salway. Although the case is evidently tainted with the strongest suspicion of bad faith, the fact of Rae having become the purchaser of the land in question at the Sheriff's sale without any notice of any defect in the title cannot, in view of the Supreme Court decision *in re Butler* (N.S.W.L.R., vol. 15, p. 87), be disregarded. Notwithstanding the decision of the Land Appeal Court on the question of notice to Rae, the proceedings so strongly resemble certain features of the Mercadool cases that further investigation would be very desirable, and I would suggest that counsel's advice be taken as to the best procedure that can be adopted to vindicate the law and to defeat proceedings which on their face bear evidence of *mala fides*. I would point out in this connection that while section 26 of the Act of 1884 provides for the protection of an innocent purchaser in a case of fraud, it omits any reference to a case where the conditions of the conditional purchase have not been fulfilled.—W. HOUSROX, Under Secretary, 30/6/96.

Appd. for counsel to advise.—J.H.C., 30/6/96. Crown Solicitor with papers, 1/7/96.

Sir,

Crown Solicitor's Office, Sydney, 9 July, 1896.

In compliance with the request contained in your letter of the 1st instant, I have obtained Mr. Canaway's opinion with respect to the course to be taken with regard to conditional purchase 90-49, Nyngan, Henry Newell (now Adam Rae), and now have the honor to forward herewith a copy of his advising thereon, together with the papers numbered as in margin.

I have, &c.,

GEO. COLQUHOUN,

Crown Solicitor.

The opinion of Mr. Canaway, obtained in accordance with the decision on C.S. 96-16,608, Dep., is now submitted.—ALFRED SALWEX, Head of C. S. Branch, 10/7/96.

[Enclosure.]

Re Newell's (now Rae's) C.P.—Mr. Canaway's Opinion.

THE fact (if it were the fact) that Rae purchased Newell's conditional purchase without notice of the breach of conditions by Newell did not, in my opinion, prevent the forfeitures declared on 21st July, 1895, operating against him. Section 29 of the Act of 1884 gives an unqualified power of forfeiture if the conditions are not fulfilled; and in this respect it differs from section 26 of the same Act—the section in question *in re Butler*, 15 N.S.W. L.R. 87. The Court in that case held that under section 29 the penalty of forfeiture was something personal to the maker of the conditional purchase; not an incidental attaching to the conditional purchase. Section 29 makes the Minister's power of forfeiture an incident of the conditional purchase itself, and there is no restriction as to the persons against whom it may be exercised. By section 125 of the same Act Rae is declared to have taken only Newell's interest in the land; that is to say, an interest liable to be defeated when the Crown discovered and enforced the forfeiture. Forfeiture having once been declared, the question really becomes one as to the effect of the provisional reversal, made on 24th September, 1895; and it is plain from section 3 (1) of 55 Victoria No. 1 that the Crown retains the power to revoke the provisional reversal, and that this revocation would have the same effect as if the reversal had never been made.

Whether or not this power of revoking the reversal should be exercised is a question of policy with which I have nothing to do. The Local Land Board on 19th December, 1895, and the Land Appeal Court on 30th May, 1896, have recommended that the reversal should be made absolute; and these recommendations appear to have been based on Mr. Roberts' evidence that he had no knowledge whatever of the breach of conditions by Newell. The Crown was not represented either before the Board or the Court; and it seems to have been assumed that this want of knowledge was of the kind which calls for the clemency of the Crown. I am, however, struck by certain facts on looking through the papers. On 21st September, 1893, the Minister authorised an inquiry as to the fulfilments of the conditions by Newell. The case came before the Board on 19th November, 1893, when the Board, at the request of Mr. Robert Booth, adjourned the inquiry till 20th December. On 19th December, 1893, the Sheriff's sale took place, and Mr. Booth was present. [See his deposition on 4th February, 1894.] Next day, when the case came on before the Board, Mr. Booth appeared for Adam Rae, and obtained an adjournment on the ground that Rae had not received notice. It is not stated for whom Mr. Booth appeared on 19th November; but he, at any rate, must have known that an inquiry was pending. On 4th September, 1895, Mr. Roberts writes: "Prior to this Mr. Robert Booth, of Dubbo, has attended to the matter for us." It is, therefore, evident, that in Mr. Booth Mr. Roberts had a person from whom knowledge of the pendency of the inquiry could have been obtained before the Sheriff's sale or even at the sale. Short of a searching inquiry into the business of the Assets Company itself, it is not easy to suggest any method by which the underlying facts can be got at. The Minister's reference of 24th August, 1894, did not result in any finding by the Board; and following *re Black*, 12 N.S.W. L.R. 37, it might be renewed, being so framed as to bring before the Board the question whether Rae was the real purchaser at the Sheriff's

Sheriff's sale. Rae is, however, dead, and his evidence being lost, the attempt to get at the real facts—difficult in any case—might easily be defeated; and the more so as the Local Land Board has already recommended that the reversal of the forfeiture be made absolute.

Another possible course is to refer to the Land Appeal Court the Board's decision of 19th December, 1895, on the ground that the matter has been insufficiently considered; but seeing that the Land Appeal Court had the whole of the evidence before it on Jones' appeal, refused to send the case back to the Board, and expressed itself as doubtful of the validity of the Minister's reference to the Board, I do not advise that this course be adopted. If the Minister's power to refer is doubtful, then the power of the Board to enforce production of documents, &c., is subject to the same doubt, and therefore, not likely to be exercised.

A. P. CANAWAY,
Denman Chambers, 7 July, 1896.

Dubbo, now Nyngan—C.P. 90-49; 640 acres; H. Newell, now Adam Rae.

In accordance with the Minister's instructions of the 30th June, the case was referred to counsel for advice.

Mr. Canaway's opinion is now herewith, and the Crown Solicitor also furnishes some extracts from certain letters between D. G. Peele and the Assets Company, which clearly shows that the Assets Company was the nominal mortgagee, Peele finding the money.

In view of Mr. Canaway's advice, it seems that the best course to take in the matter is to cancel the provisional reversal of forfeiture.

ALFRED SALWEY,
Head of C.S. Branch, 17/7/96.

For approval that the provisional reversal of forfeiture, decided on the 8th April, 1895, and notified in the *Gazette* of the 24th September last, be revoked, for the reasons that the evidence produced, and the reports by the Land Board, and the decision of the Land Court, are not sufficiently convincing that the conditions of selection were carried out as contemplated by the law.—W. H. CAPPER, in charge Sales Division, 17/7/96.

There is at least a strong presumption that this case is one which deserves to be classed with the Mercadool cases, as regards the methods of manipulation practised by the persons concerned. There is, however, apparently nothing sufficiently tangible at present to warrant extreme proceedings, nevertheless certain possible courses are indicated in counsel's opinion of the 7th instant, herewith, which deserve consideration. A fresh reference, under section 20, might be made, but the fact of the selector being deceased would no doubt be a serious stumbling block to an inquiry designed to prove the case in all its parts. On the whole, I am inclined to question the expediency of further proceedings in this direction, and would suggest rather that the Minister, notwithstanding the finding of the Land Board and Land Appeal Court, take into consideration his power of revoking the notice of provisional reversal of the forfeiture of the 24th September, 1895. The revocation would have the effect of revesting the land in the Crown, and would perhaps be the most effective course, and certainly the speediest in the circumstances. If this be carried into effect it will be necessary, under 55 Vic. No. 1, to lay a copy of the decision, together with the reasons for overruling the findings of the Land Court and Land Board on the Table of the Legislative Council and Legislative Assembly.—W. HOUSTON, Under Secretary, 24/7/96.

Appd. to carry out this course.—J.H.C., 27/7/96. Provisional reversal of forfeiture (gazetted 24th September, 1895) revoked (*vide Gazette*, 10/8/96). Representatives of late A. Rae, Agent, Treasury, and Chairman informed, 18/8/96. These papers are now forwarded to the Registrar of the Land Appeal Court.—H. CURRY, Acting Under Secretary (*per E.F.W.*), B.C., 18/8/96.

1896.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

REPORT FROM THE SELECT COMMITTEE

ON

ANNUAL LEASES OF OWEN MCCOSKER, COPE'S CREEK;

TOGETHER WITH THE

PROCEEDINGS OF THE COMMITTEE

AND

MINUTES OF EVIDENCE.

Printed under No. 25 Report from Printing Committee, 5 November, 1896.

SYDNEY: WILLIAM APPLGATE GULLICK, GOVERNMENT PRINTER.

1896.

1896.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF THE
LEGISLATIVE ASSEMBLY.

VOTES, No. 28. TUESDAY, 14 JULY, 1896.

10. ANNUAL LEASES OF OWEN McCOSKER, COPE'S CREEK :—Mr. Moore moved, pursuant to Notice,—
- (1.) That a Select Committee be appointed to inquire into and report upon the granting to Owen McCosker of annual leases Nos. 12,238 and 12,244.
- (2.) That such Committee consist of Mr. Carruthers, Mr. Copeland, Mr. Hayes, Mr. Ashton, Mr. Thomas Brown, Mr. W. H. B. Piddington, Mr. Cruickshank, Mr. Macdonald, Mr. Waddell, and the Mover.
- (3.) That the Return to an Order, "Cope's Creek Preferential Occupation License," laid upon the Table of this House on 25th June, 1896, be referred to such Committee.
- Debate ensued.
- Question put and passed.
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VOTES, No. 75. THURSDAY, 29 OCTOBER, 1896.

11. ANNUAL LEASES OF OWEN McCOSKER, COPE'S CREEK :—Mr. Moore, as Chairman, brought up the Report from, and laid upon the Table the Minutes of Proceedings of, and Evidence taken before, the Select Committee for whose consideration and report this subject was referred on 14th July, 1896.
- Referred by Sessional Order to the Printing Committee.
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1896.

ANNUAL LEASES OF OWEN McCOSKER, COPE'S CREEK.

REPORT.

THE SELECT COMMITTEE of the Legislative Assembly, appointed on 14th July, 1896,
 “to inquire into and report upon the granting to Owen McCosker of Annual
 “Leases Nos. 12,238 and 12,244” beg to report to your Honorable House:—

Your Committee having examined the witnesses named in the List* ^{* See List, p. 6.}
 (whose evidence will be found appended hereto) and considered the papers referred,
 find:—

1. That the Bank of New South Wales being the holders of Cope's Creek preferential occupation license abandoned same on the 31st December, 1891 (a) by default, owing to non-payment of rent, and (b) by forwarding a written notice of abandonment to the Lands Department on that date.

2. That on the 8th April, 1892, Owen McCosker, having been informed by the Lands Department that the said preferential occupation license had lapsed, and that the land was then Crown land open to annual lease, applied in the usual way for an annual lease of 1,920 acres of it. Up to that time McCosker had been paying rent to the lessee of the run for the right to graze stock on this land, and after lodging his annual lease application, and paying the usual rent deposit to the Crown, he continued in occupation of the land while waiting for his application to be formally dealt with by the Local Land Board. Two months later (3rd June) after again satisfying himself by inquiry at the department that the land was available he applied for another annual lease of 640 acres.

3. That on the 20th July the department, on the application of the Bank of New South Wales, reinstated the preferential occupation license, “subject to any conflicting interests which might in the meantime have arisen.”

4. That on the 14th December the Land Board dealt with McCosker's applications, and allotted him 2,090 acres of the 2,560 acres applied for.

5. That the Bank having transferred to Swinton, and Swinton to Cooper, the latter (in October, 1894), brought a Supreme Court action against McCosker for trespass between the 8th April, 1892 (the date of the first application for annual lease) and the 14th December, 1892 (the date of allotment by the Land Board), and gained a verdict for 40s., with costs. On appeal to the Full Court the verdict was sustained, and McCosker was left practically ruined, his legal costs alone amounting to over £300.

6. There can be no doubt that McCosker exceeded his legal rights, in continuing in occupation of the land before the annual leases were actually allotted to him by the Land Board. But in view of the following considerations, viz.:—

(a) That he took up the annual leases on the distinct assurance of the department that the preferential occupation license had lapsed, and the land was then open to annual lease, and, therefore, he had only the Crown to deal with in respect of same.

(b)

- (b) That the reinstatement of the preferential occupation license by the department entirely altered the conditions under which he had been induced to become an applicant, vesting, for the time being, in a third party, a retrospective title (dating back seven months) to the land which had been under application to him for over three months.
- (c) That he was not notified of the said reinstatement.
- (d) That, having done all that was required of him to obtain an annual lease, it was most unfortunate for him that the department should have taken over eight months to grant him same, for, had the matter been dealt with expeditiously—(say) within three months—no trouble could possibly have arisen.
- (e) That, in occupying the land pending the granting of his leases, and while the department held his rent deposits, he was only following a practice, which the Committee understand is not usually taken exception to in such cases.
- (f) That he appears to have been led to defend the Supreme Court action on the strength of the information supplied to him by the Lands Office at Armidale, to the effect that the preferential occupation license was reinstated less the area covered by his annual leases.
- (g) That the course pursued by the department in reinstating the preferential occupation license—unknown to him—subsequent to the receipt of his annual lease applications, made him an unwitting trespasser against the holder of such preferential occupation license, which brought ruin upon him.

Your Committee consider that McCosker ought not to be left to bear the whole of the heavy loss which has fallen upon him, and they, therefore, recommend his case to the favourable consideration of the Government.

S. W. MOORE,
Chairman.

No. 1 Committee Room,
Legislative Assembly,
29th October, 1896.

PROCEEDINGS OF THE COMMITTEE.

THURSDAY, 13 AUGUST, 1896.

MEMBERS PRESENT:—

Mr. Cruickshank,	|	Mr. Macdonald,
Mr. Moore,		Mr. W. H. B. Piddington,
	Mr. Waddell.	

Mr. Moore called to the Chair.

Entry from Votes and Proceedings appointing the Committee, and referring the Return to Order "Cope's Creek Preferential Occupation License," read by the Clerk.

Papers referred, before the Committee.

Reassembling of the Committee to be arranged by the Chairman.

Adjourned.

TUESDAY, 18 AUGUST, 1896.

MEMBERS PRESENT:—

		Mr. Moore in the Chair.
Mr. Ashton,	|	Mr. Copeland,
Mr. Cruickshank,		Mr. Hayes,
	Mr. Macdonald.	

Owen McCosker called in, sworn, and examined.

Witness withdrew.

Reassembling of the Committee to be arranged by the Chairman.

Adjourned.

TUESDAY, 1 SEPTEMBER, 1896.

MEMBERS PRESENT:—

		Mr. Moore in the Chair.
Mr. Thomas Brown,	|	Mr. Cruickshank,
Mr. Copeland,		Mr. Hayes.

Robert Henry De Low (*Officer-in-charge of Lease Division, Lands Department*) called in, sworn, and examined.

Witness withdrew.

Reassembling of the Committee to be arranged by the Chairman.

Adjourned.

WEDNESDAY, 16 SEPTEMBER, 1896.

MEMBERS PRESENT.—

		Mr. Moore in the Chair.
Mr. Ashton,	|	Mr. Thomas Brown,
Mr. Cruickshank,		Mr. Macdonald.

Committee deliberated.

Reassembling of Committee to be arranged by the Chairman.

Adjourned.

TUESDAY, 22 SEPTEMBER, 1896.

MEMBERS PRESENT:—

		Mr. Moore in the Chair.
Mr. Ashton,	|	Mr. Copeland,
Mr. Cruickshank,		Mr. Hayes,
	Mr. Waddell.	

Committee deliberated as to their Report.

Reassembling of Committee to be arranged by the Chairman.

Adjourned.

THURSDAY.

THURSDAY, 29 OCTOBER, 1896.

MEMBERS PRESENT:—

Mr. Moore in the Chair.

Mr. Ashton,
Mr. Copeland,
Mr. W. H. B. Piddington,

Mr. Thomas Brown,
Mr. Cruickshank,
Mr. Waddell.

The Chairman submitted Draft Report.

Same read and amended.

Mr. Cruickshank moved—"That the Chairman report to the House."

Question put—Committee divided.

Ayes.

Mr. Thomas Brown,
Mr. Copeland,
Mr. Cruickshank,
Mr. W. H. B. Piddington,
Mr. Waddell.

Noes.

Mr. Ashton.

And so it was resolved in the affirmative.

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1896.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

MINUTES OF EVIDENCE

TAKEN BEFORE

THE SELECT COMMITTEE

ON

ANNUAL LEASES OF OWEN MCCOSKER, COPE'S CREEK.

TUESDAY, 18 AUGUST, 1896.

Present:—

MR. COPELAND,	MR. MOORE,
MR. HAYES,	MR. CRUICKSHANK,
MR. MACDONALD,	MR. ASHTON.

S. W. MOORE, Esq., IN THE CHAIR.

Owen McCosker called in, sworn, and examined:—

1. *Chairman.*] You are the person who took up two annual leases on Cope's Creek Run, which formed the subject of an action for trespass—Cooper v. McCosker? Yes. O. McCosker.
2. How did you first come into possession of those lands? I had it, first of all, leased from Mr. Swinton, pastoral lessee of Cope's Creek. 18 Aug., 1896.
3. You rented it from him? Yes; and from what I heard I thought he was not paying rent for it, and I wrote to Mr. Cruickshank asking him to ascertain whether he was paying rent or not, or whether the land was open for annual lease.
4. Can you say when you wrote to Mr. Cruickshank asking whether the land was open to annual lease? I cannot say exactly: I think it was in March, 1892.
5. Did you get a reply from Mr. Cruickshank? Yes; I got a reply saying that the land was open to annual lease.
6. What did you do on the strength of that? I applied for an annual lease of 1,920 acres.
7. Do you remember the date of that? The 8th April, 1892.
8. What did you do next? I wrote to you then.
9. You still had some doubt? I had.
10. You wanted to be quite sure about it, so you wrote to me? Yes.
11. When was that? That was in May, I think.
12. Did you get a reply? Yes; you replied that the land was open for annual lease.
13. Do you remember what sort of a reply I sent you? You sent me a letter from the Department which said that the land was open for annual lease.
14. Then what did you do? I applied for 640 acres more.
15. What was the date of that? I think it was the beginning of June.
16. You said just now that you were in possession of this land before you applied for any annual lease, by reason of an agreement that you had with the lessee of the run, Mr. Swinton? Yes.
17. When you made this application, did you remove your stock, or did you allow them to remain? I allowed them to remain on the land. I did not think it was necessary to remove them, as it was Crown land.
18. *Mr. Ashton.*] Up to what date did you pay rent to the lessee? Up to the 8th April, the time when I applied for the annual lease.
19. Does that apply to the 640 acres as well as to the 1,920 acres? Yes.

- O. McCosker. 20. And you did not apply for the 640 acres until June? No; it would be early in June.
 18 Aug., 1896. 21. *Chairman.*] The rent you paid was up to the 8th April? Yes. The lessee said the land was not open to lease. I said that I would pay him right on until the decision of the Board was given.
 22. But the lessee was willing to accept rent up to the end of April if the Board subsequently allowed your application? Yes.
 23. *Mr. Cruickshank.*] You have evidence of that? I have a letter from Mr. Swinton. I wrote asking him if he would acknowledge that I was renting the run from him, and he did acknowledge it.
 24. *Chairman.*] What happened after this? After that I heard that Mr. Cooper had paid up the back rent after I had leased the land, and I wrote to Mr. Cruickshank.
 25. What happened then? Mr. Cooper served me with a writ.
 26. When was that? I think that was in January, 1894.
 27. These applications which you made were dealt with by the Land Board? Yes; about nine months after.
 28. Was that in December, 1892? Yes.
 29. What did the Land Board do with those applications? They granted my application, but not for the whole of the 1,920 acres.
 30. They granted both applications as modified? Yes; they did not grant me the whole area of 2,560 acres; they granted me 2,090 acres.
 31. That was on the 14th of December? Yes.
 32. Did you pay the rent? Yes; I have paid rent until now.
 33. *Mr. Ashton.*] From when? From the time that the land was granted.
 34. *Chairman.*] You were served with a writ by Mr. Cooper? Yes; he served me with a writ as lessee of the Cope's Creek Run. It was for trespass on the run. I went to Armidale, as I heard that annual leases were granted there. I paid a lawyer to go with me, and he inquired at the Land Office at Armidale into all the necessary points, and they were all favourable. He said that my title was good—that all that was necessary to establish my title was there.
 35. Did the officer show any documents bearing on the subject? I did not see anything but what they read out.
 36. Did they say anything to you at the Land Office at Armidale as to your position in regard to these annual leases and the question of Cooper's occupation license? A letter was read out which had been written to the department from that office with reference to the run being reinstated less 2,090 acres granted to McCosker.
 37. Did they tell you that your title to the annual licenses was all right? Yes, that it was good.
 38. You have no doubt whatever about that? None whatever.
 39. In due course the action came off? Yes; it came off in October, 1894.
 40. *Mr. Ashton.*] What was the date of the alleged trespass? It was from the 8th April to the 14th December, 1892.
 41. That was the day on which the Land Board approved of the lease? Yes.
 42. That is to say, they contended that you were in unlawful occupation from the date on which you applied for the land until it was granted to you? Yes.
 43. *Mr. Cruickshank.*] The action was entered against you on the ground that you had no title to the annual lease? Yes.
 44. *Mr. Hayes.*] They brought an action against you for trespass from the 8th April, the time you paid the rent, until the 14th December, the date when the Land Board confirmed your application? I understand that is what it was.
 45. *Mr. Ashton.*] You paid rent to the Crown from the 14th December? Yes.
 46. You paid none prior to that? No.
 47. Do you contend that you were in lawful occupation of the land prior to the date at which you commenced to pay rent? I thought, it being vacant Crown land, having paid a deposit, I was entitled to the land. Of course I had my sheep there before, when I had the land under lease from the lessee, and I did not remove them. I thought I might be a trespasser as against the Crown, but not as far as anybody else was concerned.
 48. *Chairman.*] In October, 1894, the trial came off in the Supreme Court at Armidale? Yes.
 49. What was the result? A verdict was given against me for trespass.
 50. For how much? For 40s.
 51. Did the case come before the Full Court subsequently? Yes, at Sydney.
 52. And what was the result then? My appeal was disallowed.
 53. You lost the case? Yes.
 54. Is it clear to you on what ground you lost it? It is not.
 55. You had to pay the costs of the other side? Yes, and their costs amounted to £226.
 56. Then, of course, there were your own costs;—can you say roughly what they amounted to? To something over £100, irrespective of loss of time.
 57. *Mr. Hayes.*] Have you put stock on the land since the verdict was given against you? Yes. I have possession of the land now.
 58. *Mr. Cruickshank.*] What stock have you on the land now? A few cattle. Before the action I had sheep on it too.
 59. Did you have to sell the sheep to pay the law costs? Yes.
 60. Have you bought any other sheep since? No.
 61. *Mr. Copeland.*] To whom do you pay rent for the land now? To the Government.
 62. *Chairman.*] What rent do you pay for the 2,000 acres? £12 a year.
 63. *Mr. Cruickshank.*] When you applied for the land you paid a certain sum as a deposit? Yes.
 64. The Crown held that money during the time that you were using the land up to the time when it was granted by the Board? Yes.
 65. Were you under the impression that the Government getting that money you were paying the Government for the use of the land? I was.
 66. *Mr. Hayes.*] You were aware when you made your application that it was necessary to deposit £2 per section? Yes.
 67. *Mr. Macdonald.*] Before you made application to the Government for this land you had been a tenant of Mr. Swinton's and had paid him a rent for it? Yes.

68. And you remained in continuous occupation of that land from the date when you first entered on it as a tenant of Mr. Swinton's up to the time of the decision of the Supreme Court? Yes. O. McCosker.
69. And since then you have paid a rent to the Government, and the Government officials have received it? Yes, up to this date. 18 Aug., 1896.
70. And now you are in occupation of the same land? Yes.
71. Had you any notice prior to the action that you were in illegal possession of the land? None whatever.
72. So that actually your possession was undisputed? It was undisputed.
73. *Mr. Copeland.*] The Government still recognise these annual lease of yours? I understand that they do.
74. They accept rent from you? Yes.
75. And by virtue of your paying that rent you still hold possession of the land and run stock upon it? Yes.
76. The Crown has never taken any action against you as a trespasser? No, none.
77. What is your position now then with reference to the lessee Cooper? They threatened me sometime after I took possession the second time with an action at law.
78. How long is that since? About twelve months.
79. But they have taken no action? No.
80. So you now remain in quiet possession? As far as I know, I have not had any notice of any further action. Their solicitor told me that they could take action.
81. But they have not? No.
82. *Chairman.*] Have these leases been surveyed? Yes; by the Lands Department.
83. Did they charge you anything? No.
84. They surveyed the leases for you without charging anything? Yes. I wrote saying the lessee threatened to take action again, when the Hon. Member for Inverell, I think it was, made some inquiry, and the Government then agreed to survey the leases for me, to define the boundaries, so as to prevent any further action.
85. *Mr. Macdonald.*] Does the lessee run any of his stock upon this land that you have now under lease? His stock is on it now. I do not know that he claims it; but his stock is running through that part of the country.
86. *Mr. Cruickshank.*] You were in occupation of this land from the time you applied for it until it was granted by the Board? Yes.
87. Had you during that time any notice that the run had been reinstated? Only what I heard—no official knowledge.
88. When you first rented this land it was from Mr. Swinton? Yes.
89. Did Mr. Swinton at any time give you notice that he had sold his interest in this run to Mr. Cooper? He did.
90. Was that before or after the date of the action? It was before the action.
91. Did Mr. Cooper give you any notice to remove your stock from the land prior to the action? I recollect that Mr. Swinton, about the time that he sold the land, sent me a bill for the rent, and wrote saying that he had sold the run, and that he wanted me to pay up the rent.
92. Was this the time when you had been informed that the run was not under lease or license? It was.
93. Did Mr. Cooper give you notice to remove your stock, or did he show you that he had a title as against the intimation from the department that the land was not under lease or license? Mr. Cooper never gave me notice to remove the stock. I think it was in the way of a bill that Mr. Swinton sent word that he had sold the run.
94. Was it then that you applied again to the Lands Office to know whether the land was under lease? Yes.
95. And you were informed that it was not under lease? Yes.
96. *Mr. Hayes.*] Were you aware at the time when you made your application that you had no title to the land till it was confirmed by the Board? I did not clearly understand that I had no title. I thought that paying the deposit gave me a prior claim.
97. Did you read the section of the Act? I did not. The people in that part put their stock on immediately on paying the deposit.
98. *Chairman.*] You say it is the practice for people when they make application for a lease to go into possession? Yes; I know that no one ever had an action brought against them by the Crown.
99. If a man put his stock on land which he had applied for a lease of, and eat up all the grass, he himself would be the sufferer? Yes; because when the Board granted his application he would have no grass.
100. *Mr. Macdonald.*] I understand you to have been in possession for some years previously? No, for two months. When I had been renting the land for two months I found that it was open to annual lease, and I applied for an annual lease.
101. *Mr. Cruickshank.*] When you heard that Mr. Swinton was not paying for the leases, you took every precaution to ascertain if the land was under lease? Yes, I took every precaution. I first wrote to you, then afterwards I wrote to Mr. Moore.
102. You had no wish to be antagonistic to the lessee? No. I wrote and asked him to try and get the case brought on before the Board, so that as soon as the Board had dealt with it I could give the land up if my application was refused. If the Board had dealt with it at the ordinary time I should not have had an action against me at all.
103. When you gave the deposit, were you under the impression that it gave you a title to the land? Yes; I thought I had a prior title.
104. *Mr. Macdonald.*] Even if you were not sure about your title, were you not under the impression that no other person had a title except the Crown? No one except the Crown.
105. *Chairman.*] I understand that in order to meet the costs of the action, which went against you, you had to dispose of pretty well all your stock? Yes, I did, at a sacrifice.
106. *Mr. Copeland.*] Now you are in undisturbed possession:—the Government have taken no action, and the runholder has taken no action against you for the last twelve months? No.
107. So you remain virtually in undisturbed possession? Yes.
108. *Mr. Ashton.*] And you have been in undisturbed possession ever since the action? Yes.

O. McCosker. 109. When was the action? In October, 1894.

110. *Mr. Cruickshank.*] You sold all your stock to pay the costs? I sold all my sheep, and nearly all my cattle; I had to sacrifice them.

18 Aug., 1896.

111. Have you been able to buy stock since? No, I have not. I always bought on bills before; but since the action I could not get my bills endorsed.

112. *Mr. Copeland.*] Have you any reason to suppose that if you stock up the land the station-owner will take action against you, or are they allowing you to go on quietly because you are not stocking? I have not heard lately that they will take any action against me again. Sometime ago I heard that they would.

113. *Chairman.*] They did threaten you even after the Land Board had confirmed your application? They did. Since the lawsuit they have told me that they could at any time enter an action against me.

TUESDAY, 1 SEPTEMBER, 1896.

Present:—

MR. THOMAS BROWN,
MR. COPELAND,

MR. HAYES,
MR. CRUICKSHANK.

S. W. MOORE, Esq., IN THE CHAIR.

Robert Henry De Low called in, sworn, and examined:—

114. *Chairman.*] Will you state what you are in the Lands Department? I am head of the lease division.

R. H. DeLow.

115. Do you remember the Bank of New South Wales having a preferential occupation license of Cope's Creek pastoral holding in the eastern division? I believe they had.

1 Sept., 1896.

116. Did not the Bank of New South Wales hold a license in December, 1891? I believe they did.

117. On the 31st December the Bank wrote to the department expressing their intention of surrendering the preferential occupation license? On the 31st December the Bank did so write. They wrote notifying their wish to surrender their preferential occupation license. At that time the rent for 1892 had not been paid in accordance with the law, and it was doubtful whether the Bank intended to surrender when really there was nothing to surrender, because the 31st December being the last day of the year, and the rent only paid up to that date, the preferential occupation license lapsed by default of the licensee himself, being non-renewed. The department being in doubt as to the meaning of a notification that could have no possible effect seeing that it was dated the last day of the year when the occupation license really ceased by operation of law, wrote to the Bank to know its intentions; whether it really meant twelve months ahead, namely, December, 1892, and that letter was sent to the Bank on the 2nd February, 1892, asking them practically to interpret their letter of the 31st December, 1891, and the date they intended the abandonment to take effect from. The Bank taking about four months to reply, wrote on the 22nd June, 1893, asking to withdraw its letter of the 31st December, 1891.

118. You got a reply from the Bank to that letter written on the 2nd February? Yes.

119. What was the effect of it? It asked the department to allow the Bank to withdraw its letter of the 31st December, 1891.

120. *Mr. Cruickshank.*] Did they not write to you as follows, on the 7th April:—"Referring to your letter of the 19th ultimo, I have to inform you that it was the intention of the Bank to let the preferential occupation license lapse on the 31st December, 1891, and the occupation license as from the 31st December, 1892"? Yes; I have no doubt that that is correct. That would be the answer to the letter written by the department on the 22nd February, 1892.

121. Did the Government concur in the surrender of the lease from the 31st December, 1891? According to that letter the Bank seemed to have determined that one should be surrendered on the 31st December, 1891, and the other on the 31st December, 1892.

122. *Mr. Copeland.*] And that was approved of? Yes.

123. It was accepted on the 11th April, as dating back to the 31st December, 1891? Yes. On the 8th April, 1892, Mr. McCosker lodged an application for one annual lease on part of the preferential occupation area, and on the 3rd June following he applied for another annual lease of part of the same preferential occupation license.

124. Do you know whether the department had instituted any inquiries previous to McCosker applying for the land, as to whether or not the land was open to annual lease? I cannot say.

125. On the 22nd June, 1892, the Bank of New South Wales wrote withdrawing its letter of the 31st December, 1891? Yes.

126. And requested that the holding should be reinstated? Yes; and that was allowed.

127. *Chairman.*] And you informed the Bank to that effect? On the 12th July the Bank was informed to that effect.

128. *Mr. Copeland.*] What was the date of the Minister's approval? 9th July.

129. *Chairman.*] Will you read the letter which was written to the Bank? On the 12th July, 1892, the Bank was informed with regard to their application as to the preferential occupation license, that—"The amount of £13 18s. 7d., for the year 1891, and £118 0s. 11d., the proper fee for 1892, together with 10 per cent. fine, should be tendered to the Treasury first; and the question of renewing the occupation license subject to any claim which may have arisen in the meantime could then be considered."

130. The Bank was informed of that;—did you get any reply on the same date? On the 12th July the Bank replied to the Treasury, and paid in the amount of £129 16s. 11d.

131. What did they say? Their letter said:—"I may state that we abandoned these holdings in December last, and notified the Lands Department to that effect, but now we wish to withdraw such notice and have the holding reinstated."

132. What did the Treasury do? The Treasury reported that payment to the Lands Department, and on the 20th July the Minister approved of the acceptance of the money, and restoring the preferential occupation license or reinstating it subject to any conflicting claim.

133. What are the terms of the letter written by the department on the 20th July, 1892? They are as follows:—"I have the honor to inform you that the Secretary for Lands has approved of the surrender of preferential occupation-license and occupation license (mentioned in the margin) being reversed, and reinstating

reinstating Bank of New South Wales as licensee, but subject to any conflicting interest which may in the meantime have arisen." R. H. DeLow.

134. I presume that the intention of the department was to protect any such claim as this annual lease which had arisen in the meantime? That is the view which the department takes of conflicting interests. 1 Sept., 1896.

135. The idea being, of course, that if anyone had in the meantime applied for any portion of this land, such portion would not be included in the land reinstated to the Bank? Yes.

136. *Mr. Copeland.*] So that the intention was to restore the land, less the area which had been in the meantime taken up under annual lease? Yes.

137. Did the department follow up that action by withdrawing that area which had been applied for by annual lease from the preferential occupation license? No; not in the sense of withdrawing it under any provision in the Land Act. The area is allowed for in the readjustment of the area of the occupation license. In other words, the occupation license would have been reduced by that quantity when the annual adjustment took place.

138. On the next rent day? Yes.

139. *Mr. Cruickshank.*] What date was that adjustment made from? The 30th June is the period each year for closing the adjustments.

140. *Mr. Copeland.*] Did the department charge the squatter the full rent for the area, or having withdrawn the area of the annual lease, did he cease to pay rent for it? The license fee for the full area would be charged up to the date on which the annual lessee began to pay rent; the date of the allotting of the leased land by the Board.

141. The date when the Board approved of the annual lease application? The date of allotting it, and that I find to be the 14th of December, 1892.

142. *Chairman.*] Was Mr. Cruickshank informed, on Mr. McCosker's behalf, on the 18th March, that the land was available for annual lease? Yes.

143. Have you any note to the effect that I was similarly informed? Yes; that Mr. Moore was similarly informed by the Inquiry Branch.

144. Did Mr. McCosker apply for another annual lease? He did, on the 3rd June. The Board allotted the leases on the 14th December, 1892, and they were gazetted on the 28th February, 1893.

145. *Mr. Cruickshank.*] Do you not think it was an unusual delay in dealing with McCosker's application from the 8th April until the 14th December? Yes.

146. *Mr. Hayes.*] In the case of applications for an annual lease does the title vest until it is approved of and gazetted? The title starts from the date when the Board allot. The Minister approves of the application and the Board allots the land. The 33rd section of the Act of 1889 requires that the rent shall begin from the date of the allotting by the Board. A man who applies for an annual lease is not charged rent from the date of his application but from the date on which the Board allots the land.

147. Does the title vest till then? The title begins from the day when the land is allotted, not one moment before.

148. *Mr. Cruickshank.*] Did the Board hold that Cooper had any title to the land prior to the 14th December? The occupation licensee?

149. Yes? That would be a very difficult question to answer.

150. Do the Government hold his rental by way of deposit from the time that he applies for the land until it is dealt with by the Board? Yes, the money goes with the application.

151. *Mr. Copeland.*] When the Minister approved of the reinstating of the Bank, subject to any conflicting claim, was it known that McCosker had applied for an annual lease of some of the land? I think not.

152. I suppose the application would remain in the Lands Office? It would remain with the Local Land Board until the Board reported, therefore I think it was not known at the head office.

153. *Mr. Cruickshank.*] Have you a copy of a communication sent by the department to the local land office at Armidale, informing them of the reinstatement of the lease? No.

154. If McCosker says that on hearing that the lease was reinstated he rode into Armidale and asked the local agent if such was the case, and the land agent informed him that the run was reinstated, less the area of his annual license, would that be a correct reply? I think so. That would be correct at the time.

155. *Mr. Copeland.*] Are you aware whether the department made any provision at all with a view to the protection of McCosker's application? In question 36 of his evidence he is asked, "Did they say anything to you at the land office at Armidale as to your position in regard to these annual leases and the question of Cooper's occupation license," and the answer of McCosker was, "A letter was read out which had been written from that office with reference to the run being reinstated, less 2,090 acres granted to McCosker." Do you know whether the department took steps to protect McCosker's application by withdrawing that area when reinstating the forfeited leases? The department took no steps.

156. When was McCosker's area eliminated from the preferential occupation license? Practically from the day of allotment of the annual leases on the 14th December, 1892.

157. That was by virtue of the Board approving of his application? Yes.

158. Not by reason of any action taken by the department to protect McCosker's interests? No.

159. Then the department took no action, although it was approved by the Minister that the Bank was only to be reinstated subject to any conflicting interests that had arisen, still no action was taken to protect those conflicting interests? No; because it was not known whether the Board might not recommend the refusal of the leases. The Board have a discretionary power, and they may decline to allow the annual leases. It was not possible for the head office to know that.

160. As a matter of practice are not these applications for annual leases retained at the local land office? They are sent to the local agents, and from there to the Board office, and they do not come to the head office until the Board reports.

161. So the head office would not be aware that McCosker had made an application? Not unless there had been any correspondence to that effect.

162. *Mr. Cruickshank.*] McCosker would have no means of knowing whether this land was under any other occupation than by applying to the office in Sydney? I should say no reliable means. It would be the best for him to do that.

- R. H. DeLow. 163. If McCosker was told on two occasions that the land was open to annual lease, at the time when it was really reinstated to the lessee, would not McCosker have been misled by the department? 1 Sept., 1896. If he were told after the occupation license had been reinstated that the land was open for annual lease, undoubtedly he would have been misled. The department protects such interests to some extent as it protects the interests of all other persons; it reinstates the occupation license, subject to any conflicting claim that may have arisen prior to the date of the restoration. It was not competent for the department to say what claims had arisen. Twenty persons might have applied for land in Cope's Creek holding before the Secretary for Lands agreed to reinstate the preferential occupation license in July.
164. If you reinstated that license on the 22nd July it was not under occupation license on the 14th December? It was reinstated minus the quantity that McCosker put in a legal application for.
165. *Mr. Copeland.*] What evidence have we to show that the department did not reinstate the two areas? Only the phrase, "subject to any conflicting claims that may have arisen," and the correspondence with the Bank stating that, on their paying a certain sum into the Treasury, the land would be restored, and the statement that the application to reinstate the land would be considered, "subject to conflicting claims."
166. Can you tell when the Bank ceased to pay rent under the preferential occupation-license for the particular area for which McCosker applied? I believe that the preferential occupation license is in existence at the present moment.
167. What I want to know is this: When did the department actually eliminate that area that McCosker applied for from the preferential license? On the 14th December, 1892.
168. That was the time when the Board allotted the annual lease? Yes.
169. And the rent would not be charged to the Bank from that date? No.
170. So that, although on the 20th July, 1892, the Minister approved that the Bank should be reinstated with regard to their occupation area, subject to any conflicting interests; still, as a matter of fact, they were reinstated as regards the full area until December, 1892, when the Board allotted it to the annual lessee? Yes; the Bank paid rent for that down to the 14th December, 1892.
171. If it had been held as an occupation license it would not have been competent for the Board to have granted an annual lease? No.
172. How was it competent to the Board to grant an annual lease to McCosker seeing at the time that the land, having been reinstated, was still held by the Bank, the Bank paying rent for it? The difficulty there is that the law as regards annual leases provides particularly that the rent shall not commence from the day of application, but from the day of allotment. If it had been, as in the case of a conditional purchase, that the title began from the day of application, of course the annual lease would have dated back to the 3rd of June, 1892, and the 8th April.
173. The 8th April and the 3rd June being the dates on which the applications for the annual leases were lodged, the land was at that time virtually abandoned; the rent had not been paid; therefore the land was open for annual lease? Yes, it was vacant Crown land.
174. Because the Bank had failed to pay their license fees before the 1st January it became ordinary Crown land open to annual lease, and McCosker having lodged his applications on the 8th April and the 3rd June, that was before the Minister approved of the reinstating, therefore the land really was open for annual lease at the time when McCosker applied for it? Yes, it was open to anyone.
175. Therefore his application would stand good? Yes, it was a valid application.
176. Do you not think it was the duty of the department, seeing that the Minister had approved of the reinstating of the licenses subject virtually to McCosker's application, which was a valid application, to have temporarily withdrawn McCosker's area until you knew what the Land Board would do with it? It was not possible under the law. Land cannot be withdrawn from occupation license except for some public purpose.
177. The license had been abandoned? Then there was nothing to withdraw.
178. Then you reinstated it; but ought not that to have been less the area that McCosker applied for? That is the interpretation which the department put on it.
179. Ought it not to have been withdrawn? There is no power under the law to withdraw land from occupation license, except for public purposes.
180. But you have virtually undertaken to protect McCosker's interest? The department had no other way except to get the licensee to accept the restoration with the understanding that any legal claim that had arisen should be recognised.
181. But he did establish a right at law for trespass against McCosker? Yes; but as I understand the judgment of the Court, it is that the trespass occurred before McCosker's title started.
182. During the period between his application and the Board granting the application? Not for trespass after that.

1896.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

REPORT FROM THE SELECT COMMITTEE

ON

RYANS' CONDITIONAL PURCHASES IN THE
WAGGA WAGGA LAND DISTRICT;

TOGETHER WITH THE

PROCEEDINGS OF THE COMMITTEE

AND

MINUTES OF EVIDENCE.

Printed under No. 18 Report from Printing Committee, 17 September, 1896.

SYDNEY : CHARLES POTTER, GOVERNMENT PRINTER.

1896.

1896.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF THE
LEGISLATIVE ASSEMBLY.

VOTES No. 37. TUESDAY, 4 AUGUST, 1896.

15. RYANS' CONDITIONAL PURCHASES IN THE WAGGA WAGGA LAND DISTRICT.—*Mr. Ashton*, for *Mr. Thomas Fitzpatrick*, moved, pursuant to Notice,—
- (1.) That a Select Committee be appointed to inquire into and report upon the cases of *Thomas Ryan*, *Ellen Ryan*, and *Anastasia Ryan*, selectors in the Wagga Wagga Land District.
 - (2.) That such Committee consist of *Mr. Carruthers*, *Mr. Ashton*, *Mr. Carroll*, *Mr. Waddell*, *Mr. O'Sullivan*, *Mr. Greene*, *Mr. W. H. B. Piddington*, *Mr. Chapman*, *Mr. Watson*, and the Mover.
 - (3.) That the Reports, Minutes of Proceedings, and Evidence of previous Select Committees on this case, be referred to such Committee.
- Question put and passed.

VOTES No. 54. THURSDAY, 10 SEPTEMBER, 1896.

6. RYANS' CONDITIONAL PURCHASES IN THE WAGGA WAGGA LAND DISTRICT:—*Mr. Thomas Fitzpatrick*, as Chairman, brought up the Report from, and laid upon the Table the Minutes of Proceedings of, and Evidence taken before, the Select Committee for whose consideration and report this subject was referred on 4th August, 1896.
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1896.

**RYANS' CONDITIONAL PURCHASES IN THE WAGGA WAGGA LAND
DISTRICT.**

REPORT.

THE SELECT COMMITTEE of the Legislative Assembly, appointed on 4th August, 1896, to inquire into and report upon the cases of *Thomas Ryan, Ellen Ryan, and Anastasia Ryan*, selectors in the *Wagga Wagga Land District*, and to whom was referred, on the same date, the *Reports, Minutes of Proceedings, and Evidence of previous Select Committees on this case*,—beg to report to your Honorable House:—

Your Committee having examined the witness named in the margin ^{Thomas} (whose evidence will be found appended hereto), and considered the Reports and ^{Ryan.} Evidence referred, find:—

1. That Thomas Ryan, Ellen Ryan, and Anastasia Ryan selected land at the Wagga Wagga Land Office on 8th December, 1881, but, as a consequence of wrong information furnished by a departmental officer, and subsequent laches on the part of the Department, they were unable to profitably and peaceably use the lands so selected until a Validation Bill was passed on 23rd July, 1888.
2. That Thomas Ryan was put to considerable expense and trouble in travelling to and fro between Sydney and his selection, a distance of 334 miles, while endeavouring to get the Lands Department to give him a title to the land selected by his daughters and himself.

Your Committee, therefore, recommend the cases of Thomas Ryan, Ellen Ryan, and Anastasia Ryan to the favourable consideration of the Government.

THOMAS FITZPATRICK,
Chairman.

No. 1 Committee Room,

Legislative Assembly,

9th September, 1896.

PROCEEDINGS OF THE COMMITTEE.

WEDNESDAY, 19 AUGUST, 1896.

MEMBERS PRESENT :—

Mr. Ashton,	|	Mr. Carroll,
Mr. Chapman,	|	Mr. Thomas Fitzpatrick.

Mr. Fitzpatrick called to the Chair.

Entry from Votes and Proceedings appointing the Committee and referring the Reports, Minutes of Proceedings, and Evidence of previous Select Committees on this case, to the Committee, *read* by the Clerk.

Printed copies of the papers *referred* before the Committee.

Thomas Ryan, called in, sworn, and examined.

Witness withdrew.

[Adjourned till Wednesday next at *Eleven* o'clock.]

WEDNESDAY, 26 AUGUST, 1896.

MEMBERS PRESENT :—

Mr. Thomas Fitzpatrick,		Mr. Watson.
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In the absence of a Quorum, the meeting called for this day lapsed.

WEDNESDAY, 2 SEPTEMBER, 1896.

MEMBERS PRESENT :—

Mr. Thomas Fitzpatrick in the Chair.

Mr. Ashton,	|	Mr. Chapman,
Mr. O'Sullivan,	|	Mr. Watson.

Committee deliberated as to their Report.

[Adjourned till Wednesday next at a *Quarter-past Two* o'clock.]

WEDNESDAY, 9 SEPTEMBER, 1896.

MEMBERS PRESENT :—

Mr. Thomas Fitzpatrick in the Chair.

Mr. Ashton,	|	Mr. W. H. B. Piddington,
Mr. Waddell,	|	Mr. Watson.

Chairman submitted Draft Report.

Same read and *agreed* to.

Chairman to report to the House.

1896.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

MINUTES OF EVIDENCE

TAKEN BEFORE

THE SELECT COMMITTEE

ON

RYANS' CONDITIONAL PURCHASES IN THE WAGGA
WAGGA LAND DISTRICT.

WEDNESDAY, 19 AUGUST, 1896.

Present:—

MR. ASHTON,
MR. CARROLL,

MR. CHAPMAN,
MR. THOMAS FITZPATRICK.

THOMAS FITZPATRICK, ESQ., IN THE CHAIR.

Thomas Ryan called in, sworn, and examined:—

1. *Mr. Ashton.*] Your case has been the subject of inquiry before two previous Select Committees, one of which sat twice? Yes. T. Ryan.
2. Have you anything to add to the evidence you gave before those Committees? Nothing, except that I had to fence two or three times owing to the boundary having been shifted so often. 19 Aug., 1896.
3. Was not that referred to in your former evidence? No, I said nothing about the trouble I was put to in fencing. That is the only thing I need explain that is new. I was put to the expense of shifting the fence each time the land was surveyed.
4. Did that entail very much expense? Yes, I was put to a lot of trouble in putting up fences and removing them again.
5. Beyond that, you think that the evidence you previously gave covers the whole ground and states your case fully? Yes.
6. *Chairman.*] In your previous evidence, I suppose, you referred to the number of visits to Sydney entailed upon you? Yes; this is the fifty-fourth trip to Sydney.
7. And those trips have been purely on this business? Yes; if it were not for this business I would not have come down. Of course, being in Sydney, it is probable that I did other business as well, but this business was the cause of my coming down.
8. *Mr. Chapman.*] You say you were put to a lot of expense in fencing;—will you explain how that was? When I went there first the land had all been surveyed by Mr. Bolton, and I made sure the boundary marked by him was the proper one, and put the fence up accordingly.
9. How much fencing was there? I suppose about a mile and a half.
10. And you put the fencing on the boundary given you by Mr. Bolton, the surveyor? Yes. He assisted to make out the application, so of course we were sure that he knew the boundary.
11. What did that mile and a half of fencing cost you? Something over £30 a mile.
12. Afterwards you were informed that the fence was on the wrong boundary? Yes.
13. And you had to pull the fence down? Not until the land was surveyed again.

- T. Ryan. 14. Who surveyed it the second time? I forget the name of the surveyor; he came from Corowa. He was one of the Government surveyors.
- 19 Aug., 1896. 15. *Mr. Ashton.*] Was it Mr. Lipscombe? No. Mr. Lipscombe surveyed it for Devlin.
16. *Mr. Chapman.*] On the second survey you were informed that you had the fence on the wrong boundary? Yes.
17. And you pulled it down? I had to shift it again.
18. You put it up on the proper boundary the second time? I put up a brush fence then to make sure.
19. At what do you estimate your loss owing to the removal of the fencing? The cost of all the shifting of the fencing at a low figure would be £50; it really cost me more than that. As Mr. Ashton has referred to Mr. Lipscombe, there is another thing I wish to add. Mr. Lipscombe came there to measure the land for the lessee, and to show that the Government survey was not correct, and he cut down a lot of useful pines that we left for our own use when we were scrubbing. He had six men of Devlin's with him, and I went to stop him. He said he was within a few chains of where he wanted to go, and he would finish it. I saw there were too many for me, and I picked up an axe and went to stop him. I was fined £12 odd over that—for stopping him from destroying the timber.
20. Is there anything further that you desire to add to your evidence? No.

1896.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

NATIONAL PARK.

(REPORT OF TRUSTEES FOR YEAR 1895.)

Printed under No. 12 Report from Printing Committee, 6 August, 1896.

The Chairman of the National Park Trust to The Chief Secretary.

Sir,

National Park Office, 3, O'Connell-street, Sydney, 29 July, 1896.

The Trustees of the National Park have the honor to present you with their Report for the year ended 31st December, 1895.

The Trustees have again very great pleasure in adverting to the high appreciation which still continues to be manifested by the public in the many attractions of this favourite public resort. The number of visitors has greatly increased during the year, so much so that the Trustees have found considerable difficulty in providing conveyances from the railway stations to the boats and the Audley and Warumbul pavilions, in consequence of the limited means at their disposal. Visitors to the Park.

As stated in former Reports, the preservation of the flora on the Park has been made a distinctive feature, whilst the rules prohibiting shooting and net-fishing have been strictly enforced. Flora, &c.

The principal works carried out during the year are as follows:—

The deviation on the Loftus-Audley Road at Audley has been completed, 24 feet wide. In extending the curves and forming an even grade the risk of an accident has been considerably reduced. Audley Road.

This road has been repaired, water-tables lowered, ballasted and blinded where required, and it is now in good order. The Mountain Road.

Several deviations have been made on this road, making the grades easier, and shortening the distance by about 200 chains. This locality is becoming a favourite camping-ground and fishing resort. Wattamolla.

The very heavy rains in the early part of February destroyed two bridges and washed away the approaches. These have been replaced, and the road is now in excellent repair. Lady Carrington Road.

The same flood washed away about 50 feet of the causeway on the Waterfall Road, and also damaged 39 chains of the road. The breach in the causeway has been repaired and the road mended, so that this favourite drive is again open for traffic. Causeway, Waterfall Road.

The Audley dam has, in the past, been a source of outlay after every flood, but it is now made perfect by being securely pitched with heavy dressed stone, which will prevent to a very large extent the filling-up of the river. Audley Dam.

A considerable amount of snagging has been done in the river, which has been kept free from obstruction. River, roads, and pathways.

The roads and pathways also throughout the Park have been kept in a good state of repair.

A large brick and concrete reservoir has been built at Audley for water storage for the supply of the pavilion and other buildings, and the lateral supply has been further distributed to meet the public convenience on the various flats and other picnic grounds. Water supply.

Standpipes and hoses have also been fixed for use in the event of any of the buildings accidentally catching fire.

Three new cottages have been built for the employés, and three others have had additional rooms added to them. Cottages.

When cutting down the road leading from Loftus to the dam, the fence around the Trustees' cottage had to be removed and certain alterations and repairs made to the building to enable this work to be carried out. The building has been up for many years, and has been much eaten by white ant.

Additional rooms have been built at Warumbul to meet the public requirements, and several alterations have been made to the main and out buildings. Warumbul.

The grounds have been greatly improved. A new floating jetty has also been made in a convenient position in deep water, so that there is no difficulty now in landing passengers.

Bush fire-places. Fire-places have been built in various parts of the Park for the convenience of picnic parties. This has been done by the Trustees in order to prevent the spread of bush-fires.

Latrines. Several screened bush and portable latrines have been placed at convenient places for the use of the public.

Buildings. The whole of the buildings have been kept in a good state of preservation.

Tree-planting. About 1,000 ornamental trees have been planted in the different parts of the Park suitable to their growth, including a number of red cedars in the brush near the river, more particularly in the neighbourhood of Bola Creek and the island. Those previously planted are making splendid growth, and in the course of time will become objects of some interest, and will form a striking feature in the landscape and scenery of the Park.

I have, &c.,

CRITCHETT WALKER,
Chairman.

REVENUE and Expenditure for year ended 31st December, 1895.

DR.				CR.	
Revenue.				Expenditure.	
	£ s. d.	£ s. d.		£ s. d.	£ s. d.
To Amount voted by Parliament for the years 1895 and 1896		8,000 0 0	By Balance		2,648 10 5
Royalty on clay, &c.	33 4 9		General improvements, making and maintaining roads, &c.	3,599 14 7	
Rents and agistment	145 0 6	178 5 3	Timber and building material	330 17 3	
			General carpentry	254 16 0	
			Salaries—Secretary, Rangers, &c.	654 18 4	
			Stone-pitching Audley Dam	177 0 0	
			Forage for horses and repairs to vehicles and harness	114 3 10	
			Office rent	65 0 0	
			Birds purchased	31 9 11	
			Furniture, fittings, &c. for pavilions, Audley and Warumbul	113 8 0	
			Balance		5,371 7 11
		£ 8,178 5 3			158 6 11
				£ 8,178 5 3	

M. MALONEY,
Secretary.

FRANK FARNELL,
Hon. Treasurer.

1896.

—
LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

R E P O R T

ON THE

DEPARTMENT OF CHARITABLE INSTITUTIONS

OF

NEW SOUTH WALES,

FOR THE PERIODS ENDING

31st AUGUST, 1895,

FROM THE

DIRECTOR OF GOVERNMENT ASYLUMS AND BOARDING-OUT OFFICER.

Printed under No. 1 Report from Printing Committee, 21 May, 1896.



SYDNEY : CHARLES POTTER, GOVERNMENT PRINTER.

ANNUAL REPORT.

Department of Charitable Institutions of New South Wales,
Sydney, 1st December, 1895.

The Director of Government Asylums and Boarding-out Officer to
The Principal Under Secretary.

Sir,

I have the honor to present, for the information of the Chief Secretary, my Annual Report upon the Government Charitable Institutions of the Colony for the periods ending 31st August, 1895.

In accordance with the recommendations made in my report for the year 1890, and repeated from year to year since, practical steps are being taken to provide in a broader, more humane, and more liberal sense for the requirements of the poor of the community, under a policy which must not only fully meet their necessities, but also secure more economical administration and better management in the Asylums Branch of the Department of Charitable Institutions. In order to carry out this work effectually, it is necessary to provide for the poor in pavilions adapted to the special circumstances of the several classes who from various causes have become a charge upon the State, instead of concentrating them in the obsolete barrack buildings which have in some cases for more than half a century been used as Government Asylums for the Infirm and Destitute. The unsuitableness of these buildings for such purposes has, however, been so often pointed out, and is so generally admitted, that it is not necessary to further refer to them here. The generous provision which Parliament has now made for ameliorating the condition of these unfortunates will admit of their proper classification in home-like buildings, in which the sick can be separated from the sound, and under a system that will admit of the majority of the inmates being treated and rewarded according to their merits, and receiving the wholesome exercise in out-door labour and other industrial occupations that is so necessary not only for their own well-being, but in the interests of the State.

It has been decided to expend £70,000 in erecting pavilions, each capable of accommodating from 50 to 60 inmates, on an estate of about 800 acres at Rookwood, on the model of the Government Asylum for Poor Women at Newington, so as to absorb the George and Macquarie street Asylums for old men at Parramatta, and the similar institution at Liverpool; and there is good reason to believe that within two years the new policy of dealing with dependent adults in this Colony will generally be in practical operation. Indeed, the nucleus of the new institution already exists, as there are now between 400 and 500 men on the ground; tenders for the erection of further pavilions have been accepted; the work of carrying out the full proposals is in the hands of the Government Architect; special efforts are to be made to complete it expeditiously; and in the meantime roads are being formed on the estate, the approaches planted with shrubs and trees, and the ground suitably laid out.

Turning to the operations of the past year, it will be seen that 3,721 infirm and indigent persons were admitted into the Charitable Institutions of the Colony during 1894, that there are now 3,252 permanent inmates in the Asylums, and that the daily average for the
past

past twelve months was 3,356. The average capitation cost per annum for the maintenance of all the old men and women in the main Asylums was £14 7s. 3d. as against £14 12s. 1d. in 1893, or a decrease of 4s. 10d. per head; but when allowance is made for the maintenance cost of all the other kindred Institutions, such as the Cottage Homes, Boys' Home, Glenfield and Rookwood Asylums, the average capitation cost is £15 4s., or a total expenditure of £51,017 5s. 10d. as against £48,116 7s. 8d. in 1893, the gross increase in expenditure being consequent solely upon the natural advance in numbers. A marked and extensive feature in connection with the Asylums that does not exist to any large extent in any other community is the fact that they practically take the place of auxiliary Hospitals, in which the convalescent and incurable poor are transferred from the general infirmaries and provided with medical attendance, nursing, and all other necessary attention, but at smaller cost than is possible in such hospitals as the Sydney and Prince Alfred and cognate institutions. The annual average cost of maintenance in these general hospitals is £54 12s. per patient, and in the hospitals attached to the Asylums only £15 4s., so it may fairly be argued that a saving of £39 8s. per head was made by the Government upon the 208 persons who were transferred during the year, or a total of £8,195 4s., for which the Asylums are entitled to take credit.

STATE OF THE ASYLUMS.

Turning to the Institutions as they at present exist, it is satisfactory to be able to say that the abnormal increases which marked the depression of the two preceding years were not maintained, but the total numbers of Infirm and Destitute who were housed, fed, and clothed, in the various Asylums was nevertheless very large. The practical experience of many years has shown that in a general way the Asylum records act as barometers upon the social condition of the community, and it invariably happens that the pressure is as noticeably greater in times of financial depression as in periods of extreme inclement weather, when the indigent are driven by rain and cold alone from the Public Parks to seek shelter in the Institutions. At the end of 1893 there were 234 more dependents on the books than at the close of the previous year; at the end of 1894 the increase was only 106. There were 3,252 dependents in all the Asylums on the 31st December last, as against 3,146 in 1893, and 2,912 in 1892, and of this total 1,267 were new applicants, and 1,919 readmissions, or a total of 3,859 in 1894 as against 3,905 in 1893. These figures show a falling off in the admissions of 46, whereas, in 1893, there was an actual "increase" of 509 in the admissions over those of the preceding year. The discharges during 1894 were 2,988, as against 3,088 in 1893, or a decrease of 100. The number of deaths was larger by 44 than during 1893, the figures being 583 in 1893, as against 627 in 1894, a result which is attributable solely to the ravages of phthisis, cancer, nervous disorders, and influenza in the hospital divisions.

RETURN showing the number of Inmates sheltered and under treatment in the Government Institutions for Infirm and Destitute during the year 1894.

Institutions.	In Institutions, 1 January, 1894.		Admitted during 1894.		Discharged during 1894.		Died during 1894.		In Institutions on 31 December, 1894.		
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Total.
Liverpool	887	...	868	...	690	...	230	...	785	...	785
George-st., Parramatta..	984	...	1,022	...	845	...	166	...	995	...	995
Macquarie-st., do ...	332	...	394	...	355	...	50	...	321	...	321
Newington	32	545	37	595	42	438	...	90	27	612	639
Cottage Homes, Parramatta	20	23	5	8	4	7	1	1	20	23	43
Boys' Home, Eastwood..	47	...	54	...	75	...	...	...	26	...	26
Glenfield Farm Home...	74	...	97	...	106	...	1	...	64	...	64
Rookwood	202	...	641	...	426	...	38	...	379	...	379
Total	2,578	568	3,118	603	2,543	445	536	91	2,617	635	3,252

THE ASYLUM HOSPITALS.

The most satisfactory results have attended the administration of the Hospital divisions of the various Asylums, into which the convalescent and incurable poor of the general Hospitals are periodically received. There were 117 more Hospital patients in the Institutions than in 1893. When the year closed in 1894 there were 1,300 patients in the Hospitals of the four larger Asylums (Liverpool, George-street, Macquarie-street, and Newington), and though the general admissions into the Asylums were 46 less than those of the previous twelve months, there are now 1,417 patients, or an increase of 117, in the Hospital wards. It will be seen that there were increases in all the Hospital divisions, amounting in all to 9 per cent. of the total, except at Liverpool, where there was a reduction of 2, and at the Cottage Homes at Parramatta, where the numbers were stationary. In the Hospital divisions at the other Asylums there were increases of 24 patients at George-street, 9 at Macquarie-street, Parramatta, 47 at Newington, 1 at the Boys' Home at Eastwood, 2 at the Glenfield Farm, and 36 at Rookwood.

AVERAGE number of Patients in the Institution's Hospitals during 1893 and 1894, and the ratio of increase or decrease.

Institutions.	1893.	1894.	Increase.	Decrease.
Liverpool	361	359	.....	2
George-street, Parramatta	466	490	24	.....
Macquarie-street, Parramatta	234*	243*	9	.....
Newington	178	225	47	.....
Cottage Homes, Parramatta	6	6	...	.....
Boys' Home, Eastwood	2	3	1	.....
Glenfield Farm Home	25	27	2	.....
Rookwood	28	64	36	.....
Total	1,300	1,417	119†	2

* Includes ophthalmic cases. † An increase of 9 per cent.

The deaths in 1894 exceeded those of 1893 by 44, the causes in the more important cases being bronchitis, phthisis, heart diseases, paralysis, cancer, and natural senile decay consequent upon extreme old age. In all the Institutions the members of the trained nursing staff have been most efficient in the discharge of their difficult duties, particularly at the Newington Asylum, and also at the Rookwood Asylum, where the result of substituting trained nurses for trained attendants has more than justified the wisdom of the change.

OPHTHALMIC Cases treated in the Asylum, Macquarie-street, Parramatta, during 1894.

Trichiasis	14	Aphakia	28
Granular ophthalmia... ..	65	Choroiditis	12
Xerophthalmia	4	Sympathetic ophthalmia	1
Nebula	15	Staphyloma of cornea	3
Conjunctivitis	44	Hyalitis	6
Glaucoma	11	Dislocated lens	3
Cataract	45	Mucocele	1
Optic atrophy	40	Iridochochoiditis	3
Excision	1	Shrinking globe	1
Iritis	7	Injury	1
Nouritis	2	Myopic	2
Lost eye	7	Anterior Synechia	1
Ectropion	3	Ingrowing lashes	1
Keratitis	1		
Leucoma	15	Total	341
Ulcers... ..	4		

In addition to these, 58 less important cases were treated at George-street Asylum.

RETURN

RETURN of Deaths in the Government Asylums for the Infirm and Destitute—year 1894.

Diseases.	Liverpool.	George-st., Parramatta.	Macquarie- street, Parramatta.	Newington.	Glenfield Farm Home	Rookwood.	Cottage Homes, Parramatta.	Total.
Surgical—								
Abscess		2	1					3
Fracture		3	1	1				5
Stricture			1					1
Tumours		1	1	1				3
Ulcers		1		1				2
Of Respiration—								
Asthma	4	1	3					8
Bronchitis	4	10	3	9	1	3		30
Influenza	6	1		1				8
Phthisis of lungs, larynx, &c.	85	11	3	6		4		109
Pneumonia	1	5	1			4		11
Of Circulation—								
Aneurism of aorta and other arteries	1	18	9	2		1		31
Apoplexy	3	4		1				8
Cardiac disease ...	20		1	7		6		34
Nervous System—								
Epilepsia	2	4	1	1		1		9
Hemiplegia	1							1
Paralysis	12	27	1	11		2		53
Softening of brain	1	8		2		1		12
Spinal disease	1			1		1		3
General Disease—								
Cancer	42		1	13				56
Cystitis	4							4
Diabetes	1	1						2
Diarrhoea		5	2	3		2		17
Dropsy		5	2	1		1		9
Dysentery		1		2				3
Enteritis							1	1
Hæmatemesis		1						1
Gastritis	1							1
Jaundice			1			1		2
Kidney		1	1			1		3
Liver		3	1			2		6
Malignant Growth				1				1
Nephritis	1							1
Peritonitis	1	1						2
Rheumatism	4	2		1				7
Stomach		3	1			1		5
Syphilis		1						1
Ūræmia		1						1
Senile decay	85	45	15	20		7	1	173
Total	280	165	50	90	1	38	2	627

AGES OF DECEASED INMATES.

The greater number of the 627 inmates who died during the twelve months in the public Asylums were over the age of 60. The figures show that 9 of those who died were over 90 years of age, 86 over 80 years, 168 over 70 years, and 149 over 60 years, whilst the balance was made up of 91 who were over 50, 54 over 40, 51 over 30, and 19 over 20 years of age.

RETURN showing the Ages of Deceased Inmates at the following Government Institutions for Infirm and Destitute for the year 1894.

Institutions.	Above the age of—									Total.
	20	30	40	50	60	70	80	90		
Liverpool	11	38	30	42	56	63	37	3	280	
George-street, Parramatta	4	4	11	16	54	52	22	3	166	
Macquarie-street, Parramatta	1	2	3	7	8	19	10	...	50	
Newington	2	5	7	18	19	25	12	2	90	
Cottage Homes, Parramatta .....	...	...	...	...	1	...	...	1	2
Glenfield Farm Home .....	...	...	1	...	...	...	...	...	1
Rookwood	1	2	2	8	11	9	5	...	38	
Total	19	51	54	91	149	168	86	9	627	

AGES OF INMATES.

The average age of the inmates in all the Asylums, including the Boys' Home at Eastwood, was 63·87 at the close of the year, as against 63·73 in 1893, and 64 in 1891-2. Two of these dependents—one at Liverpool, and one at Macquarie-street, Parramatta—are over 100 years old. There are 27 in the Asylums between the ages of 90 and 100, 310 between the ages of 80 and 90, 959 between the ages of 70 and 80, 884 between the ages of 60 and 70, and 505 between the ages of 50 and 60. In all the younger classes the numbers are small, and range from 26 who are under the age of 20, to 298 who are between 40 and 50 years old. In the boys' division three of the inmates are under the age of 10 years, and 21 under the age of 20.

RETURN showing the Ages of Inmates in the Government Institutions for the Infirm and Destitute, on 31st December, 1894.

Institutions.	Under 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 to 80 years.	80 to 90 years.	90 to 100 years.	Over 100 years.	Total.
Liverpool .....	...	2	15	33	57	111	197	240	113	16	1	785
Georgo-street, Parramatta ...	...	...	15	40	79	141	266	348	99	7	...	995
Macquarie-street, Parramatta ...	...	...	5	12	37	42	102	95	26	1	1	321
Newington .....	...	3	28	53	75	127	173	145	33	2	...	639
Cottage Homes, Parramatta ...	...	...	...	2	2	5	9	15	10	...	...	43
Boys' Home, Eastwood	3	21	...	...	1	...	1	...	...	...	...	26
Glenfield Farm Home .....	...	...	5	8	9	11	16	14	1	...	...	64
Rookwood .....	...	...	4	18	38	68	120	102	28	1	...	379
Total	3	26	72	166	298	505	884	959	310	27	2	3,252

Average age—63·87

THE COST OF STIMULANTS.

Notwithstanding the increases in the number of inmates—more particularly in the number of Hospital patients—substantial reductions have been effected in the general cost of stimulants, which formerly formed a very large item in the expenditure. From the outset good results attended the substitution of nourishing heat-producing foods for the stimulants that appeared to be issued at all the Asylums for all sorts and conditions of complaints and weaknesses, and the expenditure fell from £2,800 in 1888 to £1,107 5s. in 1893, and the item has been further brought down to £983 2s. 5d. for the twelve months under review. The comparison is remarkable, viz. :—That in 1888, when there were only 2,348 inmates in the larger Asylums, an expenditure of £2,800 in stimulants alone was considered necessary; in 1894, with a daily average of 3,356 inmates, the expenditure only amounted to £983 2s. 5d., and the old men and women were admittedly better cared for, healthier physically, and more contented than they were five years previously, when the distribution of grog was largely unrestricted. It will be seen from the subjoined table that, although there was an increase of 127 in the average daily number of inmates, and an increase of 117 in the number of Hospital patients, and of 175 in the number of patients receiving “medical comforts,” the total cost of stimulants for the year was reduced by £124 2s. 7d., as compared with the previous year's figures. The capitation cost for stimulants for the 1,414 persons receiving it in the Hospitals was a fraction over 13s. 11d., but estimated upon the total average for the year, as was done in the Report for 1893, the cost of stimulants was only 5s. 10d. per head as against 6s. 10d. in 1893.

TABLE

TABLE showing the comparative Cost of Stimulants issued to Patients during the years 1893 and 1894.

Institutions.	Average number of Patients, 1893.	Cost, 1893.	Average number of Patients, 1894.	Cost, 1894
		£ s. d.		£ s. d.
Liverpool	361	545 6 1	359	497 13 7
George-street, Parramatta	466	410 11 4	490	169 0 6
Macquarie-street, Parramatta.....	*234	90 5 6	*243	69 18 6
Newington.....	178	61 2 1	225	61 2 0
Cottage Homes, Parramatta .....	.....	.....	6	39 18 3
Glenfield Farm Home.....	.....	.....	27	49 13 11
Rookwood.....	.....	.....	64	95 15 8
Total.....	1,239	1,107 5 0	1,414	983 2 5

* Includes ophthalmic cases.

THE PERCENTAGE OF DEATHS.

As in the previous year there was a small increase in the percentage of deaths at the various Institutions in 1894, when calculated upon the increased daily average number of inmates. There were 44 more deaths in all the Asylums than in 1893, the numbers being 583 and 627 respectively. The average age of the patients was 63·61 in 1893, and 62·95 during the past twelve months. There was an increase of 47 deaths at Liverpool, 28 at Rookwood, 5 at Glenfield, and 4 at Newington, while there was a falling off of 28 at George-street, and 4 at Macquarie-street, Parramatta.

TABLE showing the Percentage of Deaths, and Average Ages of deceased inmates, during the year 1894.

Institutions.	Deaths.	Percentages		Average ages.
		Individuals.	Averages.	
Liverpool	280	17·92	32·90	59·28
George-street, Parramatta	166	8·73	15·79	66·69
Macquarie-street, do	50	7·41	14·70	67·62
Newington	90	8·97	14·52	64·66
Cottage Homes, Parramatta	2	3·57	4·65	76·00
Glenfield Farm Home	1	0·65	1·43	41·00
Rookwood.....	38	4·94	13·67	63·42
Total.....	627	12·50	22·97	62·95

COST OF MAINTENANCE.

The general expenditure upon the four principal Asylums reached the total of £41,724 17s. 3d. during the twelve months now under review, as compared with £42,196 5s. 9d. in 1893, which shows a substantial saving of £471 8s. 6d. upon the year's transactions, notwithstanding the increased daily average, and reduces the capitation cost from £14 12s. 1d. to £14 7s. 3d. This saving has been effected by careful supervision and the exercise of stringent economy, without interfering with the comfort and welfare of the inmates. Including, however, the other kindred Institutions, such as the Cottage Homes for old Married Couples at Parramatta, the Boys' Home at Eastwood, the Farm at Glenfield, and the large Asylum at Rookwood, where extensive works are in progress, the total expenditure is brought up to £51,017 5s. 10d., and the general capitation cost to £15 4s. per annum, a difference of 16s. 7d., that is due to the necessarily more expensive methods of dealing with married couples living in small communities together, the training of the boys in separate establishments, and the carrying out of new works at Rookwood. The sum of £21,671 1s. 9d. was expended in rations alone, while other large items comprised £1,166 13s. 6d. for medical comforts, £2,965 19s. 11d. for

for drugs, £1,504 16s. 11d. for fuel, £596 11s. for water, £611 14s. 5d. for light, £678 10s. 3d. for burials, £1,206 0s. 6d. for travelling expenses (conveyance of paupers), £1,824 7s. 3d. for fodder, £4,741 6s. 9d. for clothing, and £1,545 3s. 5d. for sundries. Savings were effected during the year in the items of medical comforts, £261 19s. 7d.; light, £57 19s. 4d.; and pigs and fowls, £100.

DETAILED Statement of Expenditure—Year ending 31st December, 1894.

	Liverpool, 856.	George-st., 1,086.	Macquarie- street, 318.	Newington, 635.	Totals, 2,905.	Cottage Homes, 43.	Boys' Home, 41.	Glenfield, 74.	Rookwood, 293.	Total, 3,356.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Rations	5,592 13 8	6,845 15 10	2,070 8 9	3,350 1 7	17,850 2 10	434 2 6	209 16 1	598 7 6	2,480 12 10	21,671 1 0
Milk .....	.....	.....	69 3 6	0 4 8	69 8 2	.....	.....	.....	0 19 6	70 7 8
Medical comforts	558 16 6	203 11 5	89 1 3	82 0 10	938 0 11	43 8 8	1 10 0	57 9 8	131 0 3	1,195 13 6
Drugs	1,308 3 1	855 9 11	302 1 5	313 7 3	2,830 1 3	20 16 7	7 2 2	48 3 4	44 16 2	2,905 19 11
Fuel	432 5 3	406 18 5	170 1 10	221 18 6	1,231 4 0	52 6 2	25 5 2	0 18 5	199 3 2	1,504 16 11
Light	217 11 6	123 16 10	97 13 1	68 19 8	503 1 1	28 12 10	7 14 9	22 14 8	44 11 1	611 14 5
Water	100 0 0	221 8 0	77 6 0	124 5 6	522 19 6	16 18 0	.....	.....	56 13 6	590 11 0
Burials	247 18 0	203 12 0	64 11 9	109 1 6	625 3 3	3 12 6	.....	0 19 6	48 15 0	678 10 3
Travelling expenses	293 9 0	451 16 1	140 8 4	86 12 6	1,002 5 11	1 4 10	0 12 0	1 0 7	200 11 2	1,296 0 6
Hardware	124 17 4	116 16 7	20 4 11	34 7 9	296 6 7	1 17 0	10 12 4	8 10 11	106 7 9	423 14 7
Fodder	62 8 1	241 3 1	236 4 6	206 11 10	736 7 6	.....	2 14 1	284 12 4	750 13 4	1,824 7 3
Clothing	1,045 3 2	1,510 17 4	339 10 9	766 13 0	3,662 4 3	26 10 8	33 9 3	38 3 9	980 18 10	4,741 6 9
Sundries	172 4 5	431 1 1	252 5 4	195 19 3	1,051 10 1	76 13 10	30 13 10	157 12 9	223 7 11	1,545 3 5
Pigs and fowls .....	.....	.....	14 10 0	5 10 0	20 0 0	.....	.....	113 13 9	41 16 6	155 10 3
Horses and cows .....	.....	.....	1,004 6 10	2,612 9 7	7,040 8 3	205 1 4	338 8 4	470 0 3	1,568 13 2	10,221 16 4
Salaries and wages	2,009 9 4	1,873 8 6	335 11 3	645 12 0	2,966 12 0	43 18 1	41 17 4	75 11 3	290 5 9	3,427 4 5
Salaries and expenses of Director's Office	874 0 3	1,088 8 6	335 11 3	645 12 0	2,966 12 0	43 18 1	41 17 4	75 11 3	290 5 9	3,427 4 5
Total	13,148 19 6	14,604 1 7	5,443 8 6	8,826 15 5	42,023 5 0	961 3 0	790 15 4	2,043 6 2	7,516 1 5	53,348 10 11
Rent, repairs, and furniture	550 1 11	851 1 0	434 10 9	1,064 12 3	2,900 5 11	37 17 11	171 17 3	364 7 4	1,084 15 6	4,559 3 10
Total	13,699 1 5	15,455 2 7	5,877 19 3	9,891 7 8	44,923 10 11	999 0 11	971 12 7	2,407 13 6	8,600 16 10	57,902 14 9
Addition of stocks on 31st Dec., 1893. (See table A below)	982 9 0	864 0 3	480 5 2	1,509 15 2	3,345 9 7	185 13 7	233 4 4	1,053 10 9	653 19 3	5,971 17 6
Total	14,681 10 5	16,319 2 10	6,357 4 5	11,401 2 10	48,769 0 6	1,184 14 6	1,206 16 11	3,461 4 3	9,254 16 1	63,874 12 3
Deduction of stocks, 31st Dec., 1894. (See table B below)	2,073 0 3	2,141 17 11	1,167 15 11	2,988 14 4	8,361 8 5	204 15 9	245 19 6	1,046 12 6	2,398 10 3	12,857 6 5
Total	12,608 10 2	14,177 4 11	5,200 8 0	8,412 8 6	40,407 12 1	970 18 9	958 17 5	1,814 11 9	6,856 5 10	51,017 5 10
Adjustment of milk supply (add) ..	1,059 5 4	547 17 1	20 11 0	.....	1,627 13 5	58 9 5	.....	.....	53 4 4	.....
Adjustment of milk supply (deduct) ..	.....	.....	58 14 11	251 13 4	310 8 3	.....	.....	1,076 2 4	352 16 7	.....
Total	13,667 15 0	14,725 2 0	6,171 4 7	8,160 15 2	41,724 17 3	1,038 8 2	958 17 5	738 9 5	6,566 13 7	51,017 5 10
Cost per head	15 19 4	13 16 3	14 17 2	12 17 0	14 7 3	24 3 0	23 7 9	9 19 7	22 7 7	15 4 0
Do (including 10 per cent. of rents, repairs, &c)	16 0 7	13 17 10	14 19 8	13 0 4	14 9 2	24 4 9	23 16 1	10 9 5	22 15 0	15 6 9

TABLE A.

Addition of stocks on hand 31st Dec., 1893—	Cows	Pigs and fowls	Horses	Drugs	Spirits	Clothing	Hardware	General and agricultural stores		
266 17 0	45 0 0	257 4 6	609 1 4	.....	34 0 0	469 5 0	86 0 0	1,183 6 6	
.....	25 0 0	162 0 6	187 0 4	.....	2 10 0	131 2 0	2 0 0	322 12 4	
21 5 0	7 8 0	89 11 0	140 10 0	.....	15 0 0	74 9 0	20 0 0	249 10 0	
537 2 5	237 3 9	193 18 2	1,095 15 0	.....	18 3 8	3 3 1	1,117 1 9	.....	
26 7 3	38 17 11	16 17 0	88 3 2	7 10 10	.....	4 11 9	100 5 9	.....	
122 9 7	181 7 6	108 16 5	313 7 7	730 1 0	112 1 5	96 13 8	316 10 5	1,347 3 8		
111 9 1	100 5 3	23 12 4	149 15 11	385 2 7	44 2 11	26 4 5	116 12 0	642 6 4		
148 17 8	32 9 11	54 13 3	393 4 0	623 15 10	21 18 5	85 10 3	194 13 6	1,004 6 0		
Total	982 9 0	864 0 3	480 5 2	1,509 15 2	3,345 9 7	185 13 7	233 4 4	1,053 10 9	653 19 3	5,971 17 6

TABLE B.

Deduction of revenue, stocks, &c., on 31st Dec., 1894—	Revenue	Cows	Pigs and fowls	Horses	Drugs	Spirits	Clothing	Hardware	General and agricultural stores	Travelling expenses	Rent, repairs, &c.	
238 14 9	188 17 3	83 3 2	331 12 11	842 8 1	6 16 0	1 10 0	240 16 1	106 4 10	1,206 15 0	.....	.....
.....	.....	40 5 9	213 12 0	253 17 0	.....	.....	573 17 3	231 15 0	1,150 9 3	.....	.....
.....	.....	28 7 6	191 13 0	220 0 6	.....	1 11 3	124 17 6	54 5 0	400 14 3	.....	.....
28 1 8	6 6 8	27 1 4	85 5 4	146 15 0	.....	.....	60 10 0	115 5 6	312 10 6	.....	.....
648 6 0	372 8 9	228 16 10	1,278 12 2	.....	.....	25 8 7	14 1 11	1,318 2 8	.....	.....	.....
48 5 3	19 19 3	7 15 1	9 9 9	85 9 4	7 14 6	0 16 6	5 4 3	8 10 9	107 15 4	.....	.....
90 10 5	112 5 3	50 0 10	387 18 0	646 14 6	87 13 6	.....	20 12 8	216 14 5	971 15 1	.....	.....
97 19 8	73 16 5	54 5 6	103 3 3	329 4 10	49 12 0	.....	30 1 9	162 15 9	577 14 4	.....	.....
177 10 10	36 7 3	57 1 7	395 15 6	655 15 2	13 17 0	09 12 6	194 10 6	303 10 6	1,037 5 8	.....	.....
293 9 0	481 16 1	140 8 4	80 12 6	1,002 5 11	1 4 10	0 12 0	1 6 7	200 11 2	1,296 0 6	.....	.....
650 1 11	851 1 0	434 10 9	1,064 12 3	2,900 6 11	37 17 11	171 17 3	364 7 4	1,084 15 5	4,559 3 10	.....	.....
Total	2,073 0 3	2,141 17 11	1,167 15 11	2,988 14 4	8,361 8 5	204 15 9	245 19 6	1,046 12 6	2,398 10 3	12,857 6 5

FRUIT AND VEGETABLES.

There was a large output of fruit and vegetables from the gardens of the various Institutions, but the production was not up to that of the preceding year. The production was 192,128 lb., or 85 $\frac{3}{4}$ tons of fruit and vegetables, as against 204,090 lb., or 91 tons, in 1893, and the total for 1894 included 7,119 lb. of jam, which was used at the various Asylums. A large deficiency occurred in the supply of fruit and vegetables from the Boys' Home, owing to its removal from the well cultivated gardens at Rydalmere to a portion of the grounds connected with the Carpenterian Reformatory at Eastwood. The supplies were short at Liverpool, Macquarie-street, Glenfield, and slightly in excess of the previous year at George-street, Newington, and Rookwood.

RETURN of Quantity of Vegetables and Fruit from the Gardens of the various Institutions during 1893 and 1894.

Institutions.	1893.	1894.
	lb.	lb.
Liverpool	47,371	36,175
George-street, Parramatta	22,057	27,079
Macquarie-street, Parramatta	17,492	15,425
Newington	40,617	56,065
Glenfield Farm Home	29,052	17,630
Boys' Home (to 27th October, for 1894)	12,334	3,514
Rydalmere Farm	30,250*	14,361†
Rookwood	4,917	21,879
Total	204,090 (say, 91 tons)	192,128 (say, 85 $\frac{3}{4}$ tons)

* Included in this amount are 4,939 lb. of jam.

† Included in this amount are 7,119 lb. of jam.

THE ADMISSIONS DEPARTMENT.

In every instance the utmost care has been taken in dealing with applications for admission to the Institutions to prevent imposture, and the procedure which now obtains—having grown out of years of practical experience—is so complete that any permanent imposition upon charity is almost impossible. Apart from the antecedent investigation of the circumstances, character, and condition of all applicants for admission who do not come direct from the Hospitals, careful inquiries are made into every case when possible; persuasion is exercised with the view of obtaining some portion of the maintenance of the aged poor from relations who are known to be able to contribute. The income from this source will, however, not be large until there is legislation to compel relatives to contribute. In 1893 the sum of £66 0s. 6d. was collected from the relatives of inmates, and £83 17s. 10d. from a moiety of pensions received by the old men (Army and Navy pensioners) in the Asylums, making a total of £149 18s. 4d.; and in 1894 the relatives of 441 inmates were communicated with, and £121 13s. 8d. collected, which, along with £76 9s. 2d. from pensioners, brought the total for the year up to £198 2s. 10d. Only a few years ago the revenue from this source did not reach £10 per annum. There was an increase in the admissions in 1892 of 473 and in 1893 of 509; the year which has just closed takes credit for a decrease of 46 over the preceding year, the number being 3,905 in 1893 and 3,859 in 1894. The great majority of these dependents were found, upon being subjected to the usual tests, quite incapable of earning a livelihood at any occupation outside the Asylums, but a large proportion of them were able to do light duties inside the Institutions, and so contribute in a measure towards the cost of their maintenance. Out of a total 3,859 dependents, who were admitted during the year, no less than 1,267 were new cases, as against 1,269 in 1893, and 1069 in 1892; and

and 1,919 were readmissions, as against 1,947 during the previous twelve months. There was a further decrease of 20 in the number of inmates sent from the country districts, 320 came in on orders from Country Police Magistrates, and 140 from Country Hospitals. There were small increases in the admissions from the Metropolitan Hospitals—137 were admitted from the Coast Hospital, 49 from the Sydney Hospital, and 22 from the Prince Alfred Hospital. Owing to the careful supervision that has been exercised over the admissions from the country districts the numbers have gradually fallen off since 1889, during which year they numbered 769. They have, as a matter of fact, fallen off nearly 40 per cent. The subjoined returns show the sources of the admissions from the 1st January to the 31st December, 1893-4.

RETURN of Admissions from 1st January to 31st December in the years 1893 and 1894.

Country Orders.	1893.	1894.	New Applications.		Readmissions.		Coast Hospital.	Sydney Hospital.	Prince Alfred Hospital.	Totals.				
			1893.	1894.	1893.	1894.	1893.	1894.	1893.	1894.				
Police Magistrates .....320	485	325	1,269	1,267	1,947	1,919	132	137	54	49	18	22	3,905	3,859
Hospitals165															140	465	1,269	1,267	1,947	1,919	132	137	54	49	18	22	3,905	3,859

COMPARATIVE return of admissions for the past six years—1889, 1890, 1891, 1892, 1893, and 1894.

Year.	Country Orders.			Head Office and Superintendent's.		Coast Hospital.	Sydney Hospital.	Prince Alfred Hospital.	Total.
	Magistrates.	Hospitals.	Total.	New Admissions.	Readmissions.				
1889	514	255	769	1,113	1,124	81	126	23	3,236
1890	437	190	627	694	1,345	82	159	56	2,963
1891	439	179	618	886	1,194	98	99	28	2,923
1892	330	187	526	1,069	1,648	80	53	20	3,396
1893	320	165	485	1,269	1,947	132	54	18	3,905
1894	325	140	465	1,267	1,919	137	49	22	3,859

PROGRESSIVE INCREASE.

It has already been shown that during 1894 the proportion of increase in the number of dependents in the various Asylums was not maintained over previous years. The increases were 319 in 1892, 234 in 1893, and 106 last year, bringing up the total increases since 1887 to 1,217. The subjoined tables show the progressive increases in all the Asylums from year to year for an unbroken period of eight years.

NUMBER of inmates in the Institutions on 31st December of following years:—

Institutions.	1887.	1888	1889.	1890.	1891.	1892	1893.	1894.
Liverpool	767	778	801	789	793	836	887	785
George-street, Parramatta...	644	721	771	867	938	1,000	984	995
Macquarie-st., Parramatta..	258	286	283	288	284	312	332	321
Newington	366	397	454	462	491	519	577	639
Cottage Homes, Parramatta .....	.....	.....	30	42	43	43	43	43
Boys' Home, Eastwood .....	.....	.....	.....	.....	25	34	47	26
Glenfield Farm Home.....	.....	.....	.....	.....	19	168	74	64
Rookwood.....	.....	.....	.....	.....	.....	.....	202	379
Totals.....	2,035	2,182	2,348	2,448	2,593	2,912	3,146	3,252

OVERCROWDING.

Though the overcrowding in the larger Asylums is still serious, the pressure upon the accommodation is not so great as during the preceding year, the improvements and extensions at Rookwood and Newington, and the falling off in the demand, having enabled me to relieve the tension considerably at the more crowded Institutions. There was accommodation at the various Institutions up to the end of February, 1895, for 2,877, but there were no less than 3,421 dependents housed there at that particular time, which shows an excess of 544. The excess in 1893 was 630; so that there has really been a reduction of 86.

TABLE showing the overcrowding on 9th February, 1895.

Institutions.	Accommodation for.	Number now in.	Excess.	Unfilled.
Liverpool	670	877	207	.....
Macquarie-street, Parramatta	240	328	88	.....
George-street, Parramatta	*869	1,026	157	.....
Newington	554	654	100	.....
Cottage Homes, Parramatta	44	41	.....	3
Glenfield Farm Home	65	70	5	.....
Rookwood	405	398	.....	7
Boys' Home, Eastwood	30	27	.....	3
Total.....	2,877	3,421	557	13

Total Excess 544.

* 140 sleep in cottages outside the Asylum.

RETURN showing overcrowding at the following Asylums during the years ending December 31, 1891-92-93-94:—

Asylums.	Accommodation.			Inmates.				Excess.			
	1891-92.	1893.	1894.	1891.	1892.	1893.	1894.	1891	1892.	1893.	1894.
George-street, Parramatta	905	905	860	988	1,041	1,069	1,066	83	136	164	197
Macquarie-street, Parramatta	240	240	240	297	309	346	348	57	69	106	108
Liverpool	650	670	670	810	829	888	856	160	179	218	186
Newington	410	466	554	493	526	586	635	83	116	120	81
Total	2,205	2,281	2,333	2,588	2,705	2,889	2,905	383	500	608	572

STATE CHILDREN'S RELIEF DEPARTMENT.

When the year closed on April 5th, 1895, there were just 365 more children under the control of the State Children's Relief Department than in 1894, when the numbers were 272 in excess of the previous year, the figures being 2,809 and 3,174 respectively. The totals were made up of 1,606 boys and 1,203 girls. During the official year now closed there were 1,822 boys and 1,352 girls under control, or a total of 3,174, showing an increase of 365 upon the operations of 1894. The ages of the children varied from a few days—in some cases from the time of birth—up to the age of 17 years, when they are released from control, and being paid the money which has accumulated in the Savings Bank to their credit during the period of their apprenticeship, are permitted to go out into the world and earn their own livelihood. Generally speaking, they are well inclined and well equipped to do so successfully. There were 601 boys and 452 girls, or a total of 1,053 children boarded out during the year, as against 398 boys and 297 girls, or a total of 695 children, so dealt with in 1894, showing an increase of 358 in this branch alone. Nine boys and 10 girls died, in addition to 5 boys who were accidentally drowned in various parts of the country; 140 boys and 111 girls were discharged to relatives, after due inquiry and upon the recommendation of the officers of the department; 4 girls were transferred to the

Deaf

Deaf and Dumb and Blind Institution; 3 uncontrollable boys were sent on board the training ship "Sobraon"; 49 boys were sent to the Boys' Home at Dundas; 5 boys and 5 girls were handed over to the Benevolent Asylum, Sydney; 3 girls were sent to the Newington Asylum; 2 boys were sent to the Imbecile Asylum at Newcastle; 41 boys and 90 girls were sent to the Shaftesbury receiving Home; 4 boys were transferred to the St. Aloysius' Home; 1 boy was sent to the Ashfield Home; 2 boys were transferred to the St. Joseph's Provident Society; 1 girl was sent to the Consumptive Home at Thirlmere; 18 boys and 2 girls absconded; and 95 boys and 77 girls were discharged from control, they having reached the age of 17 years. Of the 2,094 children who are paid for by the State, 9 are in Hospital; 146 are in the Cottage Homes for Invalids at Parramatta and Mittagong; 10 at the Central Home, Paddington; 20 delicate infants are paid for at the rate of 10s. a week; 16 at 8s. per week; 15 at 7s. a week; and 45 at 6s. a week, whilst the whole of the remainder who come into the subsidy division are paid for at the rate of 5s. a week.

The particulars of the children under control on April 5th, 1894, and April 5th, 1895, are placed in juxtaposition for comparison in the following table:—

	Boarders.		Apprentices.		Adopted without Payment.		Boarded out without Payment.		Absconders' List.	
	1894.	1895.	1894.	1895.	1894.	1895.	1894.	1895.	1894.	1895.
Boys	897	1,123	553	578	49	47	10	9	35	14
Girls	669	806	301	327	95	77	11	14	4	2
	1,566	1,929	854	905	144	124	21	23	39	16

	Unofficial Children.		In Hospitals.		In Cottage Homes.		In Depôt.		Total.	
	1894.	1895.	1894.	1895.	1894.	1895.	1894.	1895.	1894.	1895.
Boys	4	7	3	5	44	35	11	4	1,606	1,822
Girls	6	5	3	4	109	111	5	6	1,203	1,352
	10	12	6	9	153	146	16	10	2,809	3,174

The total expenditure upon the Boarding-out division was £37,475 4s. 10d., and the net average capitation cost was £13 18s. 2d., or a decrease of 4d. per child on the previous year's transactions. It is estimated that this Department has saved over £110,000 to the State since its initiation 14 years ago, in the difference between the cost of maintaining children under this system, and in the barrack asylums. The total expenditure upon the Cottage Homes for invalid children during the year which has just closed was £3,652 12s. 5d., or £3,000 12s. 5d. for maintenance, management, medical expenses, salaries, &c., and £652, the value of clothing furnished to the inmates from the central store at Paddington, and the proportionate cost of inspection. The capitation cost has been £22, or a reduction of 2s. 2d. per head upon the operations of 1894.

CHILDREN'S PROTECTION ACT DIVISION.

Since the passing of the Children's Protection Act in March, 1892, there has been a total of 1,867 registrations of infants under Schedule A, which records the births of children, and full particulars relating to guardians, and arrangements for keeping the children; and 694 under Schedule C, which contains particulars of lying-in-homes and parentage of children. A return of 152 children who attained the age of 3 years, and consequently were exempted from supervision, has been

been made. Of the first quoted number, 338 deaths occurred. Strict supervision has been exercised over all these homes, and as a consequence humane treatment, if not tender nursing of the infants, has been secured. Whenever a semblance of necessity arose there has been special supervision; the parent has been communicated with and the child either returned to its mother or transferred to a better home selected by her. The number of deaths recorded may at first glance appear excessive, but it should be taken into account that the children were in the majority of cases the offspring of a class who, as a rule, probably resort to means to prevent maternity, failing which the offspring as a consequence has become weakened in constitution or by disease inherited from the parent during pregnancy. To discover a remedy for such evils does not come within the province of this Report, but there is no doubt the record of mortality is, in a very large degree, due to the causes stated. In no instance under observation during the past year has death occurred from neglect or ill-treatment by the guardian, and in all instances a medical certificate has been obtained. The registered foster-homes in which more than one child is permitted to be kept are conducted by kind, careful, respectable women. In these the tender nursing of the infants is assured. The charges for all these infants are paid by the mothers, and not in any proportion by the State. The amounts vary from 5s. to 10s. a week, and are properly considered by the guardians as insufficient for young infants. Some assert that they have been moved by feelings of compassion for the mothers, who are themselves only receiving small wages as domestic servants and cannot afford to pay more. The dread of exposure in many instances prevents the mother from suing the putative father in a Court of Justice, and thus he escapes the liability of contributing towards his child's support, and leaves the burden on the woman. Whenever specially requested an officer of this Department has sought an interview with the delinquent with a view to induce him to contribute. In some instances the appeal has been successful—in others it has been met with a denial of the obligation. During the year six persons have been prosecuted for breaches of the Act; in each case a conviction was obtained, and the offender sentenced to a period of imprisonment. It is gratifying to be able to state that the Children's Protection Act has been a most beneficent measure of social reform with reference to the various interests brought within the scope of its operations, and that "baby-farming," with its incidental horrors and enormities, has been pretty well stamped out. One lying-in home, situated at St. Peters, has been broken up, owing to the alleged mal-practices carried on there, and the proprietors (husband and wife) were prosecuted, convicted, and sentenced to fine and imprisonment. Two maternity homes, conducted by religious organisations, applied for and obtained exemptions under section 8 of the Act.

Speaking generally, the administration of the Act is accepted as a boon by most of the persons interested, and mothers possessing maternal instincts fully realise, as a rule, that owing to strict tactful supervision the kindly treatment of their offspring is secured.

THE BOYS' REFORMATORY.

I beg to point out that I have not included a detailed reference to the Boys' Reformatory in this Report, because it has only been in legal operation about four months. I have, however, furnished a separate departmental statement to the Chief Secretary containing a history of each inmate, which justifies the hope that the new policy of dealing with criminal boys will be attended with highly successful results, and will in the time to come have a most important influence, as it has had in older countries, upon the criminal statistics of the Colony.

Colony. In recommending the adoption of this policy I did so with a full sense of responsibility to the Government in this important matter, and with a firm belief, founded upon inquiries and observations elsewhere, that it would, under proper conditions, prove a blessing not only to the young offenders themselves, but to the community.

There are now twenty-six inmates of the criminal class at the Boys' Reformatory. They have all been convicted at the Courts, and several of them have been in gaol more than once. The superintendent is having very little trouble in dealing with them, and an evidence of this is afforded by the fact that for nearly three months he has only had to use the confinement division in one case, and then only for a few days. The principal objection that was raised to the establishment of this Reformatory—namely, that the boys would frequently abscond and be a nuisance to the community—has proved to be groundless. They are employed in orchard work and other industrial occupations; sufficient time is allotted for instruction in the school and for recreation; they appear quite amenable to discipline and to the kindly homelike influences that surround them, and on the whole there is every reason for believing that the Boys' Reformatory will realise the most sanguine hopes that were entertained with reference to it by the advocates of this humane and useful method of dealing with juvenile delinquents.

In concluding this Report I have to express thanks to the heads of the Government Departments and other officers of the Service, and particularly to the Inspector-General of Police and his officials, who have, as usual, rendered me much valuable assistance in carrying out the duties of my office.

I have the honor to be,

Sir,

Your obedient Servant,

SYDNEY MAXTED,
Director of Charities.

1896.

NEW SOUTH WALES.

PARLIAMENTARY STANDING COMMITTEE ON
PUBLIC WORKS.

R E P O R T

TOGETHER WITH

MINUTES OF EVIDENCE, APPENDICES, AND PLANS,

RELATING TO THE

PROPOSED ERECTION OF BUILDINGS AT ROOKWOOD

FOR

INFIRM AND DESTITUTE PERSONS.

Presented to Parliament in accordance with the provisions of the Public Works Act,
51 Vic. No. 37.

SYDNEY : CHARLES POTTER, GOVERNMENT PRINTER, PHILLIP-STREET.

MEMBERS OF THE COMMITTEE.

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 The Honorable JOHN DAVIES, C.M.G.
 The Honorable JAMES HOSKINS.
 The Honorable CHARLES JAMES ROBERTS, C.M.G.
 The Honorable WILLIAM JOSEPH TRICKETT.

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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

ERECTION OF BUILDINGS AT ROOKWOOD FOR INFIRM AND DESTITUTE PERSONS.

REPORT.

THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS, appointed during the first Session of the present Parliament, under the Public Works Act of 1888, 51 Vic. No. 37, the Public Works Act Amendment Act of 1889, 52 Vic. No. 26, and the Public Works (Committees' Remuneration) Act of 1889, 53 Vic. No. 11, to whom was referred the duty of considering and reporting upon "the expediency of erecting Buildings at Rookwood for the accommodation of Infirm and Destitute Persons, in place of the buildings now used for such purposes at Parramatta, Liverpool, and elsewhere," have, after due inquiry, resolved that it is not expedient that the proposed erection of Buildings at Rookwood for Infirm and Destitute Persons, at a cost of £108,350, exclusive of sewerage, as referred to the Committee by the Legislative Assembly, be carried out; but the Committee recommend that all inmates of the Asylums in Macquarie, George, and Harris Streets, Parramatta, be removed as speedily as possible, and that the healthy destitute be housed at Rookwood and Liverpool; and, further, that suitable accommodation be provided near Campbelltown, on available Crown lands, for the chronic and acute sick; and in accordance with the provisions of subsection iv, of clause 13, of the Public Works Act, report their resolution to the Legislative Assembly:—

1. OFFICIAL DESCRIPTION.—Under the proposed scheme it was intended, according to the official description, to locate in one central establishment, to be erected at Rookwood, the whole of the inmates of the Benevolent Asylums situated at Liverpool, Glenfield, and in George and Macquarie Streets, Parramatta, and to provide accommodation at Rookwood for upwards of 3,300 inmates, exclusive of the necessary staff. It was not proposed to deal with the institution for women at Newington. The Rookwood Asylum estate consists of several hundred acres of land, a portion of which, on the western boundary, is detached by the Bankstown Road. The Government some years ago erected a number of buildings on this estate, intending to establish a Boys' Reformatory, but, in 1893, it was determined to adapt these buildings for the reception of the aged poor, for whom accommodation could not be found in the Benevolent Institutions. Subsequently there were and are, being erected, the following additional buildings—four pavilions, each to accommodate sixty inmates, costing £1,300 each; and two pavilions, each to accommodate sixty inmates, at £1,200 each. The scheme included classification of the whole of the inmates, and some further accommodation in a series of detached and distinct establishments, generally on the pavilion system, but so grouped as to be officially controlled from the central administrative buildings, to which would be attached the dining-halls, kitchens, &c. The scheme was worked out in connection with the existing group of buildings, and advantage was taken of the best aspects and sites. The classification proposed was as follows:—

- Group No. 1, Hospital for General Cases, to accommodate 1,000 inmates.
- Group No. 2, General Inmates, to accommodate 960 persons.
- Group No. 3, Casual Inmates, to accommodate 544 persons.
- Group No. 4, Isolation Buildings, to accommodate 800 inmates suffering from cancer, skin disease, ophthalmia, and consumption.
- Group No. 5, Central Administrative Block.

The detached buildings included a residence for the medical superintendent and two cottages for attendants and wardsmen. Fire appliances and an electric lighting plant were also provided. The

The Isolation Hospitals for cancerous, ophthalmic, and consumptive patients were designed with the necessary nurses' rooms, operating-rooms, special lavatories, day-rooms, shelter-sheds, and other conveniences. Non-absorbent and antiseptic material to be used in the construction of the walls and floors. Generally, the buildings would be constructed with external and internal walls of brick, and wide-spreading verandas and shelters, so that the inmates of the hospital and other groups could reach the central dining-rooms under almost continuous cover. The area occupied by the scheme submitted extended to 64 acres.

Estimated
cost.

2. The estimated cost of the proposed scheme amounts to £108,350, but to this must be added, if the system of water-borne sewage be adopted, the sum of £21,632. If a system of precipitation and filtration and cremation be accepted the cost will be £9,935, making a total cost of £118,285. The sum of £70,000 was voted towards the cost of erection on the Loan Estimates of 1895-6. In a statement made to the Committee by the Government Architect, it was pointed out that the proceeds from the sale of the several institutions proposed to be vacated might fairly be placed to the credit of the capital cost of the proposed scheme, and in the event of this course being adopted, it was thought possible the net cost might not exceed the sum voted. The estimated cost of each group of buildings under the classification proposed is:—

<i>Group No. 1—Hospital for General Cases.</i>		Inmates	Estimated cost, £
Includes 8 pavilions already occupied	...	520	...
2 do now under construction (all these are already provided for)	...	120	...
6 pavilions for 60 inmates each; present dining-hall to be converted into dormitory, releasing one pavilion for store purposes	...	360	8,400
<i>Group No. 2—General Inmates.</i>			
16 pavilions, 60 inmates each	...	960	22,400
<i>Group No. 3—Casual Inmates.</i>			
8 pavilions, 68 inmates each	...	544	6,400
Kitchen	...	...	1,000
Laundry	...	...	1,500
Dining-room	...	...	1,500
Workshops	...	...	1,000
Quarters for Superintendent	...	...	1,000
Quarters for Wardsmen	...	...	1,500
<i>Group No. 4—Isolation Buildings.</i>			
Cancer and Skin Disease Patients—			
2 pavilions of 4 wards, each for 25 inmates	...	200	4,800
Operating quarters, &c.	...	...	1,500
Ophthalmic Patients—			
3 pavilions, 100 inmates each, including offices and lavatories	...	300	6,450
Consumptive Patients—			
3 pavilions of 4 wards, each for 25 inmates (including nurses' rooms)	...	300	6,000
Enclosing airing-grounds, sheds, &c.	...	...	500
Kitchen	...	...	2,000
Special laundry	...	...	2,500
Mortuary	...	...	500
Nurses' quarters	...	...	2,000
Matron's quarters and offices	...	...	2,000
<i>Group No. 5—Central Administrative Block.</i>			
1 dining-room for 500 inmates	...	...	1,800
1 dining-room, used as recreation hall, 700 inmates	...	...	2,200
Administrative offices, Assistant Superintendent's offices, visiting rooms, clerks' quarters, &c.	...	...	3,000
Kitchen, scullery, and stores	...	...	3,000
Laundry, including machinery	...	...	4,000
Workshops and stores	...	...	2,000
<i>Detached Buildings.</i>			
Residence for Medical Superintendent	...	...	2,000
2 cottages for attendants and wardsmen	...	...	2,400
Fire appliances	...	...	2,000
Electric light lighting plant	...	...	3,000
Drainage, irrigation, and general laying out of grounds	...	...	5,000
Water Supply (on the assumption that the W. S. & S. Board will supply H. P. water)	...	...	2,000
Sundry supervision, &c.	...	...	3,000
Total	...	3,304	£108,350

3. During his examination, the Government Architect furnished the Committee with the following particulars respecting the present condition of the several Benevolent Asylums which would be affected by the proposed scheme:—

Official statement respecting present condition of Asylums affected by proposed scheme.

Liverpool Asylum.—The institution at Liverpool, which is two storeys high, was originally erected as a military barracks, but has since been added to and used for Asylum purposes. The present number of inmates is 950, including infirm, sick, and cancerous patients, controlled by a staff of ten officers. Special provision is made for cancer patients, but it is rapidly becoming insufficient. The dormitories are well ventilated. The administrative buildings, including kitchens, are inadequate and insufficient in every respect. The meals are served to the able-bodied in an outer shed, which, however, is deficient in warmth during the winter months. It will accommodate 300 inmates at a time. The drainage is obsolete, and continually causes annoyance. The main buildings are fairly substantial, but are more or less in want of repair. The outer buildings are of a very poor description. Provision exists for checking fires, but it is not on a modern system.

Glenfield Asylum.—This Asylum accommodates 85 inmates, convalescents from the sick wards at the Liverpool Asylum, under a staff of two attendants. The estate consists of about 1,000 acres of land with farm buildings, leased up to June, 1896, at a rental of £150 per annum. Some of the inmates are engaged on the farm and in the dairy, which supply the Asylum at Liverpool with vegetables and milk. The sanitary arrangements are defective; the water supply is drawn from the creek.

Macquarie-street Asylum, Parramatta.—The main portion of this institution was originally used as a small barracks. There are 320 inmates, controlled by nine officers. The hospital ward, which embraces rather more than half the dormitory accommodation, accommodates the ophthalmic patients, but has low ceilings and is badly ventilated. The administrative buildings, including kitchens, are inadequate and badly arranged. The meals are served partly in open sheds and partly in the dormitories. Provision exists for a modified fire system. The buildings generally are old and difficult to keep clean. The sewage discharges into the river.

George-street Asylum, Parramatta.—The main buildings connected with this Asylum were originally a tweed-mill and factory. Accommodation is provided for 1,000 inmates, supervised by a staff of nineteen officers. The main building is a brick dormitory of five floors in height, in every way unsuitable for the purposes for which it is used. The staircases consist of skeleton steps, not suited to aged and decrepit patients. Meals are served in the recreation sheds, in the basement room of the main building, and in the hospital wards. This institution is much overcrowded. The buildings are partly in fair repair, but are old, and cannot be expected to remain substantial much longer. The fire appliances are incomplete, while, owing to the elevated construction of the main building, great difficulty would be experienced in removing the inmates in case of fire. The sewage is carried to the river.

4. The number of inmates in the institutions at Liverpool, Glenfield, and Parramatta was, at the commencement of the Committee's inquiry into the proposed work, 2,355; the inmates already at Rookwood numbered 450, and additional accommodation was being erected at Rookwood for 120 persons, making a total of 2,925.

Number of inmates in Benevolent Asylums.

5. Under the proposed scheme it was claimed by the Department that, if the major portion of the destitute population of the Colony could be concentrated at Rookwood, it would to some extent lessen the expense of administration, it being held by the Department that greater efficiency and economy must necessarily be obtained under such a scheme, as compared with the system now in operation of maintaining large numbers of indigent persons in widely-separated establishments. Therefore the object sought to be gained in putting forward this proposal was, as far

Reasons for the proposed scheme.

far as possible, to centralise the administration, and to effect a reduction in the expenditure. In order to effectually secure more economical administration and better management, it was considered necessary to provide for the poor in pavilions adapted to the special circumstances of the several classes, instead of continuing to house them in unsuitable buildings.

The Committee's inquiry.

6. THE COMMITTEE'S INQUIRY.—After obtaining from the Government Architect—under whose supervision the plans of the proposed buildings at Rookwood were prepared—a statement with reference to the subject, the Committee made visits of inspection to the Government Asylums in Macquarie-street and George-street, Parramatta, and to those at Randwick, Rookwood, Newington, and Liverpool, acquainting themselves with the features of each institution and the nature of the accommodation therein provided for infirm and destitute persons. Subsequently, the Government Architect was further examined respecting the details of the proposal. There were also before the Committee as witnesses Dr. J. A. Beattie, Medical Superintendent at Liverpool Asylum; Dr. I. Waugh, Medical Superintendent at the Parramatta Asylums; Dr. J. Ashburton Thompson, Deputy Medical Adviser to the Government; Dr. W. B. Violette, Government Medical Officer at Parramatta; Mr. J. Burt, Draftsman-in-charge, Information Bureau, Department of Lands; Mr. C. W. Darley, President of the Metropolitan Board of Water Supply and Sewerage; The Hon. Sir Arthur Renwick, M.L.C., President of the State Children's Relief Board; Mr. C. R. Scrivener, Staff Surveyor, Department of Lands; Mr. J. Davis, Principal Assistant Engineer for Country Towns Water Supply and Sewerage, Department of Public Works; Mr. Critchett Walker, C.M.G., Principal Under Secretary; Alderman J. Cole, Liverpool; Alderman F. Chapman, Mayor of Liverpool; Alderman P. Smith, Liverpool; Mr. T. W. Taylor, Liverpool; Mr. A. W. Green, Secretary to Charitable Institutions; Mr. Sydney Maxted, Director of Government Asylums; Mr. E. B. Price, Assistant Engineer, Department of Public Works; and Dr. W. Odillo Maher, Visiting Ophthalmic Surgeon to Government Asylums.

Opinion of Liverpool residents.

7. The Mayor and certain aldermen of Liverpool urged the removal of the asylum from that town, for the following reasons:—

- (1.) Because the presence of hospital patients in connection with the asylum is objectionable to the inhabitants.
- (2.) The limited area under the control of the authorities causes the inmates to frequent the town.
- (3.) The existence of any asylum is detrimental to the best interests of Liverpool.

Evidence of Director of Government Asylums.

8. The Committee do not agree with the views held by the Director of Government Asylums with regard to this centralisation scheme, and, in fact, that officer, under examination, expressed an opinion in favour of the removal of the hospitals to another site. Nor does it appear that the saving in administration to be effected by such a scheme is likely to be realised.

Opinions of Committee regarding the asylums.

9. The opinions of the Committee respecting the several benevolent asylums affected by the scheme put forward (based upon actual knowledge of the special conditions and circumstances surrounding each institution) are thus summarised:—

Liverpool Asylum.—The State would not be justified in abandoning so substantial a block of buildings as that at present in existence at Liverpool for housing infirm and destitute persons. The Government Architect's estimated expenditure of £2,400 at the utmost should prove ample to carry out any necessary repairs in connection with the main building and the out-buildings attached to the institution, and this outlay should render it a satisfactory home for about 800 healthy inmates. In the opinion of the Committee it would be both unwise and impolitic to house the chronic sick—especially such as are suffering from infectious or contagious diseases—at or near so important a centre of population as Liverpool. The consumptive, ophthalmic, cancerous, and other patients, who may be regarded as chronic sufferers, should be removed to a more suitable and a more isolated position.

Glenfield

Glenfield Asylum.—This institution, which, strictly speaking, may be regarded as an adjunct to the asylum at Liverpool, serves the purpose of a home for convalescents from the last-named establishment, those fit for service being employed in farm and dairy work. As the lease of this estate expires in June of the present year, an expression of opinion with respect to its utility is uncalled for, it being taken for granted that if able-bodied persons only are located at Liverpool there will be no occasion for the renewal of the lease in question.

Macquarie-street Asylum, Parramatta.—The description already given with regard to its unsuitableness is in keeping with the views of the Committee. The asylum should be closed at the earliest possible date.

George-street Asylum, Parramatta.—The statements made by the Department with respect to the condition of this asylum have been verified. The institution is unsuitable for housing the infirm and destitute poor, and no time should be lost in removing the inmates to a place of greater comfort. Some of the sick are located in the upper storeys, and in the event of a fire taking firm hold of the building the position of some of these sufferers, many of whom are aged and decrepit, would be absolutely hopeless. The Committee recommend that this asylum be closed.

Harris-street, Parramatta.—The houses in Harris-street connected with the George-street Asylum constitute a menace to the public health, and should be vacated.

The Rookwood Buildings.—Rookwood may be utilised for accommodating about 800 of the healthy aged poor.

Newington Asylum for Women.—The Committee inspected this asylum, and consider the arrangements generally leave little to be desired.

Randwick Asylum.—This fine block of buildings, situated at Randwick, and capable of comfortably housing about 700 persons, is at present occupied by about 140 children, and it appeared reasonable to inquire whether it could be utilised for temporarily accommodating some of the inmates of the Parramatta institutions. When investigating the matter, serious objections were disclosed, which appeared to be sufficient to justify the Committee in not recommending Parliament to utilise the buildings for the purpose under consideration. The reasons for adopting this course are :—

- (1.) It would cost a considerable sum of money to make the buildings suitable for the housing of infirm and destitute persons, and the expenditure of a like sum of money on modern pavilions would bring about a better result.
- (2.) The means of egress are not sufficiently good to justify the Committee in recommending the occupation of the highest storey.
- (3.) Further arrangements would have to be made to deal with the sewage of the institution.
- (4.) Further expenditure would be entailed in connection with the water supply.

10. THE POLICY OF CENTRALISATION.—The proposal, as detailed in the plans submitted to the Committee, to house some 3,304 chronic sick and destitute within an area of about 64 acres is in itself open to serious objection. The wisdom of bringing indigent persons from all parts of the Colony and massing them on a limited space is questionable. The individuals so treated would be of varied ages and temperaments, accustomed to different climates, and used to various modes of life. If possible, it might be better to arrange that the healthy aged poor should remain in those portions of the Colony to which they are accustomed, so that they might continue to live amid surroundings with which they are familiar; again, patients suffering from different ailments, especially those afflicted with infectious diseases, should not be housed in proximity to those suffering only from senile decay. Judging from the experience in all parts of the world, the question of dealing with the aged and infirm poor is surrounded by considerable difficulty, the ablest authorities differing materially with regard to the best method to be adopted. So far as the Committee are able to ascertain

The Committee's objections to the proposed scheme.

ascertain, there has been no previous experience in any country of a system of housing all the aged poor in one vast establishment—including individuals suffering from various infectious diseases and those of extreme old age—and this Colony, in their opinion, should not be the first to adopt what appears to be an untried plan. It may be possible—but even this, according to the evidence of competent witnesses, seems to be open to doubt—that there would be some saving in cost of administration, but the mere matter of expenditure cannot be regarded as dominating a question of this important nature; and further, it is clear that such a saving in administration, supposing it to take place, would not compensate for the total abandonment of such a block of buildings as the Liverpool Asylum, which will, as already stated, meet the requirements of at least a portion of our infirm and destitute population, nor would it be sufficient justification for the acceptance of any centralisation scheme embracing those suffering from contagious diseases and those who may be only decrepit.

Site chosen
by the Depart-
ment at Rook-
wood.

11. There may possibly be a sentimental objection to massing the aged and dying at Rookwood, distant approximately half a mile from, and within full view of the Necropolis. This objection, however, might have been overlooked had Rookwood been found otherwise suitable. The important points which, admitting the accessibility of the Rookwood site, control a decision with regard to this proposed settlement may be briefly described as: (1) Salubrity of situation; (2) Nature of soil; (3) Water supply; (4) Possibility of the contamination of the Sydney water supply; and (5) Method of dealing with sewage. With regard to the whole of these an opinion must be pronounced adverse to Rookwood.

(1.) Salubrity of situation—

Viewed from this standpoint, the exposed position of the site chosen for the proposed buildings might alone be sufficient reason for its condemnation; but the Committee have definite evidence from the Visiting Medical Officer that it has already proved itself specially unsuitable for consumptives, who form by no means an inconsiderable portion of those who seek refuge in such asylums.

(2.) Nature of soil—

The soil is a cold clay, and possibly as unfit for the site of such an institution as could well be found.

(3.) Water supply—

A supply of water could be obtained from the Potts' Hill Reservoir, but not by gravitation, the height not being sufficient. For this reason, therefore, an additional expenditure for pumping would be required.

(4.) Possibility of the contamination of the Sydney water supply—

A glance at the plan will show that the proposed buildings would be located at distances varying from a few chains to half a mile from the Potts' Hill Reservoir, where some 80,000,000 gallons of water are stored for the use of the people of the metropolis. The plan shows some of the hospitals to be contiguous to the reservoir in question. It is probable that spores of disease would be carried by the wind into the reservoir. The science of bacteriology is not sufficiently advanced to enable it to be stated accurately what the danger would be, but that it is considerable is placed beyond doubt by the evidence of reliable witnesses, who are of opinion, without binding themselves to a definite statement, that the proposal is both impolitic and, on prudential grounds, objectionable. The Deputy Medical Adviser to the Government, Dr. J. Ashburton Thompson, expressed a definite opinion that no institution of the kind should be placed within half a mile of the reservoir, and in this view he is fully borne out by other well qualified witnesses. But without entering closely into the scientific aspect of the case, the Committee are of opinion that it would be highly imprudent to erect the proposed buildings at Rookwood.

(5.) Method of dealing with sewage—

The Departmental proposal was to deal with the sewage locally, and in the first instance appears to have been simply a continuation and enlargement of the present method by which the liquids are dealt with under a system of

of irrigation, the solids being used as fertilising agents in connection with the orchards and gardens, with additional appliances to cremate the sewage from the several hospitals proposed to be established. The continuation of such a method with a population of some 3,300, on a soil singularly unsuitable for the purpose, would eventually prove disastrous. The Committee were subsequently informed by the Department of Public Works that to bring the sewage from the proposed institution into touch with the Sydney system of sewerage would entail an expenditure of some £21,632. To deal with the sewage by precipitation, filtration, and cremation would cost £9,935, to which must be added an annual charge of £1,064 for working expenses. The fluids, after being rendered innocuous, would find their way into Haslem's Creek, and thence into the Parramatta River.

In view of these conditions, had the Committee not been influenced by the existence at Rookwood of housing accommodation for some 500 people, they would have rejected the Departmental proposal in its entirety.

12. Before finally dealing with the subject, an expression of opinion with regard to the general question of relief to the aged and infirm poor in New South Wales may not be out of place.

Number and Increase of Paupers in New South Wales.

The number of infirm and destitute poor in these institutions appears to the Committee to be excessive, and the evidence taken respecting the increase of pauperism shows that the number of persons in receipt of State relief is becoming rapidly greater, and the expenditure incurred in maintaining them in the several Government institutions is necessarily seriously increased as time goes on. The subjoined official return shows the progressive increase to be—

31st December, 1890	...	...	...	...	...	...	...	2,448
" 1891	...	...	...	...	...	...	...	2,593
" 1892	...	...	...	...	...	...	...	2,912
" 1893	...	...	...	...	...	...	...	3,146
" 1894	...	...	...	...	...	...	...	3,252
" 1895	...	...	...	...	...	...	...	3,425
1896, to 8th February	...	...	...	...	...	...	...	3,540

Taking our population into consideration, the proportion of poor provided for solely by the State is in excess of what it is in any of the other Australian Colonies. In view of the fact that the annual expenditure incurred in maintaining the aged poor is already so large, and, further, that this expenditure is growing yearly, the Committee feel it to be their duty to urge that legislation dealing with the question as a whole is absolutely necessary. The importance of this subject is sufficient justification for making the following suggestions:—

- (1.) Effective legislation dealing with the whole subject of State relief is urgently necessary.
- (2.) Special care should be exercised with regard to the admission into the several asylums of applicants for State relief.
- (3.) New South Wales should make provision for her own infirm and destitute only, except in special cases.
- (4.) Where it is possible the State should compel the relatives of the inmates in the several asylums to contribute towards their maintenance.

13. The difficulties in the way of making a centralization system effective and humane may be briefly stated as:—

The Policy of Centralisation further considered.

- (I) The absence of valuable local interest in the administration.
- (II) Removal of the infirm and destitute from those associations and companionships to which they have been long accustomed.
- (III) Loss of local interest and feeling as a consequence of such removal.
- (IV) Difficulty regarding effective classification with respect to character.
- (V) Difficulty regarding proper classification with respect to health.
- (VI) The inevitable overlooking of the unit which invariably results from the massing of large bodies of human beings.

Number of inmates for whom accommodation is required.

14. Recognising that the intention of Parliament with regard to the question of the relief of the infirm and destitute has not been definitely expressed, the Committee do not consider it wise to make provision for many more than the number at present housed in the various Government Asylums. The Liverpool Asylum, as already explained, can accommodate 800 healthy aged poor. At present, at Rookwood, provision is being made for the housing of 570; this number may be increased to 800. Accommodation being provided for 800 healthy poor at Liverpool and 800 at Rookwood, 1,400 chronic sick would remain to be housed in hospital buildings elsewhere. The numbers furnished to the Committee, as will be apparent from the evidence, vary considerably, but these figures may be regarded as a correct approximation.

Summary of Committee's recommendations.

15. The objectionable condition of the Asylums situated at Parramatta renders immediate action imperative, and it is therefore necessary to make suggestions which, if acceptable to Parliament, will enable the whole question of dealing with the aged poor to be considered without delay. The suggestions which are already partly embodied in this Report it may be well to epitomise as follows:—

- (1.) George-street Asylum, Parramatta, to be closed at the earliest possible date.
- (2.) Macquarie-street Asylum, Parramatta, to be closed as early as found practicable.
- (3.) The houses in Harris-street, Parramatta, to be vacated.
- (4.) The Asylum at Liverpool to be placed in order at an expenditure of (say) £2,400 for the accommodation of 800 destitute persons. All the consumptive, cancerous, and ophthalmic patients to be removed from Liverpool. It is also highly desirable, and indeed absolutely necessary, that a larger area of land should be acquired for purposes of recreation for the inmates of the Liverpool Asylum. Section 43 should be obtained under lease at an expenditure of £50 per annum. This, together with the land already in possession of the Asylum, comprises an area of 25 acres, which should be set aside as Asylum grounds. With this extent of land available for exercise and gardens, it will not be necessary for the aged poor to enter the town of Liverpool.
- (5.) Rookwood already accommodates 450 inmates, and provision is being made for a further number of 120. This number may be increased to a total of about 800, with the following restrictions:—
 - (a) No permanent hospital patients to be housed on any portion of the estate.
 - (b) No extension of the plan to be permitted nearer the Potts' Hill Reservoir than Group 1, as shown on the plan published with this Report.
 - (c) All lands within 30 chains of this reservoir to be reserved from alienation or use for habitation of any description whatever.
- (6.) That a site be chosen for hospitals to house the chronic sick, also embracing consumptive, cancer, and ophthalmic patients, in addition to those suffering from scabies, to the number of 1,400.

Site chosen by the Committee.

16. In choosing a site upon which to erect these hospitals, regard must be paid to the following considerations:—

- (1.) Isolation.
- (2.) Accessibility.
- (3.) The area must be large enough to provide ample space for the erection of separate hospitals for consumptive, ophthalmic, and cancer patients, and, if it should eventually be decided by Parliament to concentrate all the infirm and destitute in one locality, the land available must be sufficiently extensive to permit the erection of widely-separated buildings for housing those suffering only from senile decay.
- (4.) Salubrity.
- (5.) The large percentage of patients suffering from consumption and respiratory complaints precludes the selection of a site near the seaboard.
- (6.) Water supply.—This should be abundant, institutions of this kind requiring an ample supply of pure water.

(7.)

- (7.) Soil.—The soil should be of a porous nature, and such as can be readily drained.
- (8.) There must be no possibility of contamination of any existing water supply.
- (9.) It is imperative that there should be available a sufficient area of sandy soil suitable for a sewage farm, should it be found necessary to deal with the sewage locally.

After the fullest investigation with regard to available Crown lands in the county of Cumberland, an area of about 70 acres in the parish of St. Peters, surveyed into homestead areas Nos. 229 to 246, 248 to 249, 252 to 255, 258, 262, 223 to 226, and 269 to 271, was selected as being the most suitable site. Had it been possible to obtain a suitable area nearer the metropolis and closer to a railway station it would have been chosen.

The site recommended is isolated, the formation being sandstone. There is no population in the immediate vicinity. From Sydney to Leumeah Station is 33 miles by train; the distance thence to the site is $1\frac{1}{2}$ mile from Leumeah, and an equal distance from Campbelltown. For administrative purposes the railway journey will be but twenty-two minutes from Liverpool, and the time of journey from Sydney one hour and a quarter.

The area is sufficiently extensive to afford ample space for separate hospital buildings for the treatment of consumptive, ophthalmic, and cancer patients. If it should eventually be decided by Parliament to concentrate all the infirm and destitute in one locality there will be plenty of room to house, also in isolated positions, those suffering only from senile decay and infirmity. There is also a sufficient extent of land for gardens, orchards, exercise grounds, and all other purposes.

With an elevation of 400 feet on sandstone country, combined with excellent natural facilities for drainage, the salubrity of the site selected is beyond doubt.

It is sufficiently removed from the sea to be suitable for consumptive patients.

The water supply is abundant—a dam costing £1,050 would impound 180,000,000 gallons of pure water, which will be continually replenished, and which can, by means of turbines, be lifted to a reservoir to command suitable building sites.

There is no possibility of contaminating any water supply.

An area of sandy soil, embracing 58 acres at the western portion of the site selected, is eminently suitable for a sewage farm, and would amply deal with the whole of the sewage from the buildings for all time to come.

The turbines which provide for pumping the water will be sufficient to supply the power for electric lighting and other purposes.

17. The estimated total cost of the scheme recommended by the Committee, which provides for 3,000 persons, is as follows:—

	£	s.	d.	Cost of scheme approved by the Committee.
<i>Liverpool</i> .—The Government Architect's estimate of expenditure to cover all necessary improvements, including alterations in system of drainage	2,400	0	0	
<i>Rookwood</i> .—A liberal estimate, including all incidental charges necessary for housing 230 inmates more than at present provided for—making the total 804	8,500	0	0	
<i>Campbelltown</i> .—Providing suitable accommodation for 1,400 chronic sick poor—including consumptive, ophthalmic, and cancer patients—all necessary administrative buildings, water supply, electric installation, water power, drainage, fire appliances, laying out of estate, clearing, road making, supervision, and all incidental work	52,000	0	0	
	<hr/>			
	£62,900	0	0	
Departmental scheme for 3,300 persons, including sewage ...	118,285	0	0	
	<hr/>			
Saving	£55,385	0	0	

The Committee do not anticipate that any large sum would be obtained from the sale of the sites and buildings proposed to be vacated at Parramatta and at Liverpool.

The work of clearing the area at Campbelltown should be carried out judiciously, and no larger portion denuded of trees than is absolutely necessary for the efficient management of the institution. Extensive belts of timber should be left between the hospital buildings and adjoining the sewage farm.

Resolution of
the Com-
mittee.

18. The resolution arrived at by the Committee, and shown in the following extract from their Minutes of Proceedings, dated 11th March, 1896, is as follows:—

Mr. Wright moved,—

“That, in the opinion of the Committee, it is not expedient that the proposed Erection of Buildings at Rookwood for Infirm and Destitute Persons, at a cost of £108,350, exclusive of sewerage, as referred to the Committee by the Legislative Assembly, be carried out; but the Committee recommend that all inmates of the Asylums in Macquarie, George, and Harris Streets, Parramatta, be removed as speedily as possible, and that the healthy destitute be housed at Rookwood and Liverpool; and, further, that suitable accommodation be provided near Campbelltown, on available Crown lands, for the chronic and acute sick.”

The motion was seconded by Mr. Lee, and passed.

THOS. EWING,
Chairman.

Office of the Parliamentary Standing Committee on Public Works,
Sydney, 13 March, 1896.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

MINUTES OF EVIDENCE.

ERECTION OF BUILDINGS AT ROOKWOOD FOR INFIRM AND DESTITUTE PERSONS.

TUESDAY, 21 JANUARY, 1896.

Present:—

THOMAS THOMSON EWING, Esq., (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHREY.

The Hon. JOHN DAVIES, C.M.G.

The Hon. JAMES HOSKINS.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

ANGUS CAMERON, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee proceeded to consider the proposed Erection of Buildings at Rookwood for Infirm and Destitute Persons.

Walter Liberty Vernon, Esq., Government Architect, sworn, and examined:—

1. *Chairman.*] The plans before us of the proposed buildings were prepared under your supervision? Yes.
2. You have a full knowledge of this proposal? Yes.
3. Would you like to make a statement on the subject? Yes. I will do so:—

W. L.
Vernon, Esq.

It is proposed to locate in one central establishment at Rookwood the whole of the inmates of the old men's Benevolent Asylums, situated at Liverpool, Glenfield, and George and Macquarie streets, Parramatta, and to provide accommodation at Rookwood for upwards of 3,300 inmates, exclusive of the necessary staff. It is not proposed to deal with the institution for old women at Newington, but to retain it permanently.

21 Jan., 1896.

Liverpool Asylum.

This building was originally erected as a military barracks, and has since been added to and used for asylum purposes. The present inmates number 950, inclusive of infirm, sick, and cancerous patients, and are controlled by a staff of ten officers. The floor-space for sleeping purposes amounts to 46 feet superficial per inmate. The building is two storeys high, and the dormitories are well ventilated. Special provision is made for cancer patients, but it is rapidly becoming insufficient. The administrative buildings, including kitchens, are inadequate and insufficient in every respect. The meals are served to the able bodied in an outer shed, which, however, is deficient in warmth during the winter months. It will accommodate 300 inmates at a time. The drainage is obsolete, and continually causing annoyance. The main buildings are fairly substantial, have brick walls, stone dressings, and hardwood timbering, but they are more or less in a defective state of repair. The outer buildings are of a very poor description. Provision exists for checking fires, but it is not on a modern system.

Glenfield Asylum.

This building accommodates 85 inmates, convalescents from the sick wards at the Liverpool Asylum, under a staff of two attendants. The estate consists of about 1,000 acres of land and farm buildings, leased up to June, 1896, at a rental of £150 per annum. A portion of the inmates are engaged on the farm and dairy, which supplies the Liverpool Asylum with milk and vegetables. The sanitary arrangements are deficient, and the water supply is drawn from the creek.

Macquarie-street (Parramatta) Asylum.

The main portion of this building was originally a small barracks. It contains 320 inmates, at a dormitory floor-space of 44 feet superficial per inmate, and is controlled by nine officers. The hospital ward, which is rather more than half the dormitory accommodation, accommodates the ophthalmic patients, but has low ceilings and is badly ventilated. The administrative buildings, including kitchens, are inadequate and badly arranged. The meals are partaken of partly in open sheds, with the same inconveniences as at Liverpool as to weather, &c., and partly in the dormitories. The Matron-Superintendent has quarters of recent construction. The drainage is on a somewhat better system than at Liverpool, but to a certain extent is obsolete, while it discharges into the river to the annoyance of the Parramatta Council. Provision also exists for a modified fire system. The buildings generally are old, difficult to keep clean, and to a great extent may be considered makeshifts.

George-street (Parramatta) Asylum.

The main buildings and buildings connected therewith were originally a tweed-mill and factory. The buildings accommodate 1,000 inmates, giving a floor-space of 41 feet superficial per inmate, and are supervised by a staff of nineteen officers. The dormitories are divided into hospital, ordinary, and invalid wards, and the patients are fairly well classified. The main building is a brick dormitory of five floors in height, with little or no balcony, and in every way unsuitable for the purposes for which it is required. The staircases consist of skeleton steps, unsuitable for aged and decrepit patients. Meals are given in the recreation sheds, open to the same objections as before, and in the basement room of the main building, and also in the hospital wards. The administrative buildings have no proper arrangements, and are little more than a makeshift. This institution is in every quarter much overcrowded, the accommodation being far too limited. The buildings are partly in fair repair, but are old, and cannot be expected to remain substantial much longer. The drainage is carried to the river, with the same objection as applies to Macquarie-street. The fire appliances are incomplete, while owing to the elevated construction of the main building the greatest danger threatens the inmates.

W. L.
Vernon, Esq.
21 Jan., 1896.

Summary.

The present number of inmates of the institutions is	2,355
Inmates already at Rookwood	450
Additional accommodation being erected at Rookwood for.	120
Total	2,925

The total accommodation at present provided, therefore, is for 2,925 inmates, and it is proposed to provide at Rookwood sufficient accommodation for 3,300, of which it may be found necessary in the first instance to provide for 3,000 only.

Proposed Rookwood Asylum.

The estate consists of several hundred acres of land, a portion of which on the western boundary is detached by the Bankstown-road. The Government erected a number of buildings on one of the upper portions of the site, intending to establish a Boys' Reformatory, but in 1893 it was determined to adapt these buildings for the reception of excess inmates, for whom accommodation could not be found in the old Benevolent Institutions. Subsequently there were, and are being erected the following additional accommodation—4 pavilions for 60 inmates each, @ £1,300 each; 2 pavilions for 60 inmates each, @ £1,200 each. These buildings also provide a dining-room and kitchen, intended for hospital purposes and matron's quarters. The new scheme includes a classification of the whole of the patients, and provides further accommodation in a series of detached and distinct establishments, generally on the pavilion system, but so grouped as to be officially controlled from the central administrative buildings, to which will be attached the dining-halls and kitchen, &c. The scheme is worked out in connection with the existing group of buildings, and advantage is taken of the best aspects and sites. The classification proposed, and the estimated cost are as follows:—

	Inmates.	Estimated cost. £
<i>Group No. 1.—Hospital for General Cases.</i>		
Includes 8 pavilions already occupied	520	...
2 pavilions now under construction (all these are already provided for)	120	...
6 pavilions for 60 inmates each; present dining-hall to be converted into dormitory, releasing one pavilion for store purposes	360	8,400
<i>Group No. 2.—General Inmates.</i>		
16 pavilions, 60 inmates each	960	22,400
<i>Group No. 3.—Casual Inmates.</i>		
8 pavilions, 68 inmates each	544	6,400
Kitchen .....	...	1,000
Laundry .....	...	1,500
Dining-room .....	...	1,500
Workshops .....	...	1,000
Quarters for Superintendent .....	...	1,000
Quarters for Wardsmen .....	...	1,500
<i>Group No. 4.—Isolation Buildings.</i>		
Cancer and Skin Disease Patients—		
2 pavilions of 4 wards, each for 25 inmates	200	4,800
Operating quarters, &c. ....	...	1,500
Ophthalmic Patients—		
3 pavilions, 100 inmates each, including offices and lavatories	300	6,450
Consumptive Patients—		
3 pavilions of 4 wards, each for 25 inmates (including nurses' rooms)	300	6,000
Enclosing airing-grounds, sheds, &c. ....	...	500
Kitchen .....	...	2,000
Special laundry .....	...	2,500
Mortuary .....	...	500
Nurses' quarters .....	...	2,000
Matron's quarters and offices. ....	...	2,000
<i>Group No. 5.—Central Administrative Block.</i>		
1 dining-room for 500 inmates .....	...	1,800
1 dining-room, used as recreation hall, 700 inmates .....	...	2,200
Administrative offices, Assistant Superintendent's offices, visiting rooms, clerks' quarters, &c. ....	...	3,000
Kitchen, scullery, and stores. ....	...	3,000
Laundry, including machinery .....	...	4,000
Workshops and Stores .....	...	2,000
<i>Detached Buildings.</i>		
Residence for Medical Superintendent .....	...	2,000
2 cottages for attendants and wardsmen .....	...	2,400
Fire appliances .....	...	2,000
Electric lighting plant .....	...	3,000
Drainage, irrigation, and general laying out of grounds .....	...	5,000
Water Supply (on the assumption that the W. S. & S. Board will supply H. P. water) .....	...	2,000
Sundries supervision, &c. ....	...	3,000
Total	3,304	£108,350

The cost of the present group of buildings (including the two pavilions in course of construction) is £27,378, so far as can be ascertained. The above scheme provides dormitory floor-space for inmates as follows:—

<i>Group No. 1</i> —General hospital, A. & B.	44 ft. super. each.
<i>Group No. 2</i> —General inmates	44 ft. super. each.
<i>Group No. 3</i> —Casual inmates	37 ft. super. each.
<i>Group No. 4, Isolation</i> —Cancerous patients	943 ft. cube, 74 ft. super.
Ophthalmic patients	943 ft. cube, 74 ft. super.
Consumptive patients.	943 ft. cube, 74 ft. super.

The various groups are designed with baths, latrines, &c., in the same proportion as in the recently-erected pavilions, which have been found ample for the purpose. The Isolation Wards for cancerous, ophthalmic, and consumptive patients are designed with the necessary nurses' rooms, operating rooms, special lavatories, day-rooms, and shelter-sheds, and with non-absorbent and antiseptic material for the construction of the walls and floors. The buildings generally will be constructed with external and internal walls of brick, with wide spreading verandahs, shelters, and seats, and the inmates of the Hospital and general groups will be enabled to reach the central dining-rooms under almost continuous cover. It will be seen from the foregoing schedule that the estimated cost of the new scheme amounts to £108,350 or £40 13s. 5d. per head of inmates. It is hardly possible to compare the cost per inmate for this institution with that of similar ones elsewhere, as the information cannot be obtained; but in comparison with general hospitals and hospitals for the insane, which necessarily require far more elaborate and special accommodation and appliances, the result should be most

most satisfactory. The sum of £70,000 was voted towards the cost of erection on Loans 1895-6. The general question of economy in supervision is one into which I am not able to enter, but it is apparent that greater efficiency and economy must necessarily be obtained in such a scheme as the one proposed, as compared with the existing establishments. I respectfully venture to point out that an expert opinion might be obtained as to the value of the several institutions proposed to be vacated, the proceeds from the sale of which might fairly be placed to the credit of the capital cost of this scheme, and by that means it is possible that the net cost might not exceed the sum voted.

W. L.
Vernon, Esq.
21 Jan., 1896.

- I assume that the Water and Sewerage Board will supply water at high pressure which at present is not done.
4. *Mr. Davies.*] There is a sort of sewage farm? We have an irrigation farm there. There are no sewers, at all at Rookwood, and unless special provision is made I do not think it is likely that there will be any, because the configuration is so very difficult. From Group No. 1 the sewage is conducted to irrigation beds which are kept constantly flooded. The present buildings are drained eastward into a series of irrigation plots where it is treated, the able-bodied inmates working there under a special supervisor.
5. *Mr. Cameron.*] I presume that there is no great difficulty about the drainage? No.
6. It is land that may be fairly easily drained? The sites where the buildings are can be well drained.
7. *Mr. Wright.*] I suppose there is no means of disposing of the sewage matter except by utilising it on the soil? I do not know of any except in the isolation block. There I propose to bring the sewage down in a southerly direction, then to deal with the sewage by a cremating process or by some system of precipitation which must yet be considered.
8. *Chairman.*] The whole of the sewage will have to be dealt with locally? Yes.
9. *Mr. Davies.*] Would the drainage be in the burial-ground? No. The drainage of Group No. 2 takes the course of a natural valley in a north-westerly direction, and will be treated by the casual patients in their own ground.
10. They will utilise it? Yes. They will utilise the labour of these casuals.
11. The buildings are to be on the highest point of the land at Rookwood? Yes.
12. Looking down on the cemetery? Group No. 1 looks on the cemetery, but from no other place can you see the cemetery at all.
13. *Mr. Humphery.*] How far is it from the cemetery where interments take place? I should think as the bird flies it is nearly half a mile from the centre of Group No. 1. It is 90 chains from the centre of the cemetery to the centre of Rookwood.
14. *Mr. Hoskins.*] Do you know how much money is available by vote of Parliament for the proposed buildings? £70,000 on the loans of last year.
15. And the difference between £70,000 and £108,350 has been expended? The cost of the new work is estimated at £108,000, against which £70,000 has been voted. The expenditure already incurred is not included in these calculations at all.
16. Then the difference between £70,000 and £108,350 the amount which the buildings are to cost will have to be voted? Yes. In the discussion on the Loan Bill I think it was stated that the proceeds of the sale of the existing properties should also go towards the payment of the expense of this scheme.
17. Did you originally report to the Government in favour of removing the existing buildings—that the buildings were not healthy or suitable? No. I have not reported on them.
18. You have simply given effect to the instructions which you received from the Government? Yes.
19. You do not estimate that the £70,000, the sum now available, will cover the cost of the whole of these alterations? No. If the whole scheme were to be erected at once it would not cover it.
20. Have you inspected the buildings at Parramatta, Liverpool, and other places where these poor people are housed, with the view of reporting to the Government as to whether they are suitable for the purpose? I have visited these institutions from time to time in connection with repairs which are constantly going on, and I have a fair knowledge of those buildings.
21. And have you reported to the Government that you think it would be better to continue to repair those buildings than to erect new buildings? No; I have not.
22. I suppose if you are frequently asked to repair the buildings and you think it is not desirable to repair you report to that effect, and recommend the erection of new buildings? In the ordinary way I would do so, but knowing that these buildings were being kept on from year to year till some scheme could be evolved, I have not thought it my duty to press the matter on faster than it is already going. It has always been in view since I have had to do with these buildings that they must be vacated sooner or later.
23. But how long have they been occupied for the purpose for which they are now being used? I could not say.
24. Looking at the fact that if your proposed scheme is carried out it will involve the expenditure of a large sum of money, do you not think it might be curtailed by still further utilising some of the buildings at present in use—say, for instance, the Liverpool Asylum? The main building of the Liverpool Asylum is in a fair state of repair, and its dormitory is well ventilated, but the administrative buildings are altogether out of character with the requirements of the institution.
25. But seeing that they have answered the purpose for a long time, would it entail any large expenditure of money to put those buildings into a suitable condition? They are not worth putting into a proper condition.
26. Have you ever inspected the Destitute Children's Asylum at Randwick? No.
27. I suppose you are aware there are upwards of 130 acres of land attached to that building? I know there is a good area.
28. Was it on your recommendation that Rookwood was selected as the most eligible site on which to group the asylums for the destitute and infirm? No; but it is a good site.
29. I have heard it stated by a member of the Committee that at Randwick there is room for 1,000 male patients, and the trustees are willing to give up the buildings to the Government. Would it not be worth while to have that building inspected to see whether it could not be adapted for housing some of these unfortunate people, instead of going to the expense of erecting new buildings at Rookwood? I think the scheme for erecting buildings at Rookwood is intended partly to centralise the administration and to reduce expenditure—instead of having the cost of four separate establishments, having only one. To occupy Randwick would only continue the present objectionable plan of having separate administrations. I can hardly imagine that there is room for 1,000 persons in the Randwick institution.
30. Would there not be this advantage that you would have no difficulty in draining the land at Randwick, whilst you have at Rookwood? I do not admit that there is any difficulty in draining the land at Rookwood except as regards the Isolation block. There is no difficulty about the drainage of the major part of it.

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31. Do you think it would be a nice thing to have a number of aged and infirm people grouped in a building not far removed from a sewage farm? There are 420 patients now close to the irrigated garden, and there is no objection, but they get some very good crops.
32. Are there not disagreeable exhalations from sewage farms? If the management were not good I admit that such might occur, but we have had no occasion to find fault with the present system at Rookwood.
33. What is the system at Liverpool? Liverpool is drained into the river, and there is very great objection to it.
34. You propose to have one-storey buildings;—will it not cost a great deal of money to group 2,900 people in buildings of that kind; a great deal more than it would cost if you put on second storeys? We have already constructed four pavilions at Rookwood, and two at Newington, and we are constructing two more at Rookwood at a cost per bed of from £19 to £21, which is an extremely low rate.
35. How much is that lower or higher than the cost per bed at the asylums at Liverpool and Parramatta? I have endeavoured to obtain it, but I cannot find out the cost of those buildings.
36. Do you really think that you can provide accommodation in one-storey brick buildings for 2,900 people at a cost of £108,000? I do. I have already had four pavilions built by different contractors at a cost of £1,300 each, to hold sixty inmates, each. That is in wood, and the difference between wooden walls and brick walls will not exceed £100. That would make £1,400 as against £1,300 each. I am perfectly justified in considering that I can build twenty-four more pavilions at the same price.
37. Would you have to build twenty-four more pavilions to accommodate the aged and infirm people at Liverpool and Parramatta? It will take more than twenty-four. There will be at least twenty-four pavilions of the same character as those already built, and there will be others of a rather different character.
38. Supposing this scheme is carried out, and these 2,900 people are removed to Rookwood, have you any apprehension, from what you know of sanitary matters, that the site will probably have to be abandoned on account of defective drainage? I have not the slightest fear of that.
39. Do you know of any establishments where large numbers of people have been congregated in a building in a flat country like Rookwood, where the drainage has not become a nuisance at last? You mean where there are no sewers.
40. Where there are no sewers? We have had a difficulty at Bathurst Gaol, but we have got over that by using prison labour for irrigating the garden.
41. *Mr. Cameron.*] Had you not considerable trouble with the sewerage at Darlinghurst Gaol? Not in my time; that is sewered. The drains at Darlinghurst were obsolete. We are taking one old drain up and putting a new one down now at the Courthouse.
42. *Mr. Hoskins.*] Have you no fear with regard to Rookwood if a large number of infirm people are collected there? Not if the sewage is properly utilised. It is extremely valuable as a fertiliser and inasmuch as the institution has a very large amount of labour to spare there should be no difficulty at all in disposing of the sewage in the garden without any detriment at all.
43. If the Committee think it advisable to inspect the building at Randwick to which I have referred would you have any objection to go with them? I should be very glad to attend upon the Committee there.
44. Have the residents of Liverpool ever complained of any offensive smells arising from the drainage of the Liverpool Asylum? Yes. They have constantly.
45. What is the nature of the complaints? The complaint is that we are fouling the river, and we are asked to do something to remedy it.
46. If the Liverpool Asylum is vacated the houses will be of no value to the Government will they? I do not think so. They ought to be burned.
47. *Mr. Cameron.*] They are very old are they not? Yes.
48. The people of Liverpool and Parramatta do not like the idea of losing those institutions do they? I think they would be very sorry to lose them although they are always grumbling about them.
49. *Chairman.*] In your statement you said you would take the water supply from the Sydney Water Supply if you could get a high pressure;—why did you make that qualification? The water supply at present comes from Potts' Hill which is alienated from the estate.
50. *Mr. Cameron.*] How far is it from the estate roughly speaking? I suppose about 20 chains. The water from the reservoir will only find its level at about 11 feet up the buildings of Group No. 1. Consequently there is no pressure. I have spoken to the President of the Water and Sewerage Board suggesting that he should carry out some scheme by which he could pump the water into an elevated tank to supply the institution, in preference to the institution doing it for itself. I think that the matter is still under consideration. Something must be done.
51. *Mr. Humphery.*] What is the elevation of the site on which you propose to build these different wards? Above the sea.
52. Yes? I could not tell you.
53. How far is it above Potts' Hill Reservoir? It is 11 feet below.
54. Is it below the pipe-line? The pipe-line is below that again.
55. Do these buildings occupy the highest site on the ground? The building stands on the highest portion which contains Groups No. 2 and No. 5.
56. Are the two Groups, No. 2 and No. 5, on the same level as No. 1? Practically; but some of the buildings are a little lower.
57. Would the several groups be 11 feet below the level of the water in the Potts' Hill Reservoir? Yes; 11 feet and more.
58. *Mr. Cameron.*] Would it carry water to the highest point in the building? No. Only 11 feet from the foundation upwards.
59. *Mr. Humphery.*] What difficulty is there in bringing the water from the Potts' Hill Reservoir to this site? It is necessary for the institution to have a head of water for fire purposes independent of domestic purposes. Therefore, it is absolutely necessary to get an elevation considerably more than 11 feet.
60. *Mr. Cameron.*] In the event of fire you would have no pressure? No; only 11 feet. We have constructed in connection with the present buildings a small water tower, but it would not be sufficient for a larger building.
61. *Mr. Humphery.*] Inasmuch as all your buildings are to have only one storey, would it be necessary to have a great pressure of water? We must have more than the Potts' Hill Reservoir gives.

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62. Without the supply which you obtain from Potts' Hill, how could you provide water for 3,000 or 4,000 people? I could not do it except from the Potts' Hill Reservoir. There we have abundance of water.
63. Have you suggested any scheme to the Water and Sewerage Board? I have in an unofficial way to Mr. Darley.
64. In any case a pumping scheme would be necessary to give the supply which you require? Yes.
65. *Mr. Cameron.*] Then you would have a storage reservoir? It would be better for the Water and Sewerage Board to have it.
66. *Mr. Humphery.*] You say that the Liverpool Asylum drains into George's River? Yes, below the dam.
67. Into what part of George's River do the paper mills drain? Above the dam.
68. Does not that contribute very much to the pollution of the river? If they discharge offensive matter into it, it will.
69. Can you say whether the river is polluted by the drainage of the Liverpool Asylum only? It is polluted generally by the town of Liverpool.
70. Is not all the drainage into the river there? Yes.
71. So that though the people object to the pollution of the river by this particular asylum, I suppose there are other causes of pollution? Yes. But they conveniently lose sight of all the others.
72. From whom did you receive instructions to prepare plans for the construction of these buildings? From the Under Secretary for Works.
73. Were you desired to prepare a comprehensive plan so as to provide for the inmates of all the asylums? Recently; when I had notice that the Committee were about to take the matter in hand.
74. Are you aware that Mr. Maxted, when examined by a Royal Commission, considered it necessary to take in the inmates of the Asylums at George and Macquarie Streets, Parramatta only? I am not aware.
75. I think you mentioned that the cost of the four pavilions that you recently erected at Rookwood averaged £1,300;—but if they were constructed of brick the cost would be £1,400? Yes.
76. How many inmates have you provided for? Sixty for each building.
77. At an average cost of £1,400 for each pavilion the cost per head would be a little over £20? Yes.
78. If you can provide for the accommodation of 240 people at £20 a head, why does it cost £40 per head to provide for 2,000 or 3,000? The £40 per head is inclusive of all the administrative buildings. The cost—£20—of the pavilion is simply for the sleeping accommodation.
79. Have you provided other accommodation besides pavilions at Rookwood? Yes; dining-rooms, kitchens, workshops, laundries, &c. There are thirty pavilions estimated to cost £37,200, and there are three isolation blocks estimated to cost £17,250, and the difference between these two amounts and the £108,000 is the cost of the administrative blocks and general estate works.
80. That is to say the cost of housing the present inmates of the different asylums, numbering nearly 3,000, will be £55,000, and the administrative Department will cost as much more? Yes; that is so.
81. How many kitchens have you? One large kitchen for Groups 1 and 2 for 1,950 persons.
82. How many altogether? Three kitchens altogether.
83. Will you explain their positions with regard to the different groups of pavilions? The large kitchen is central, between Groups No. 1 and No. 2. The second kitchen is a distinct one for the casuals and is near Group No. 3, and the third kitchen is common to the three isolation wards for consumptive, cancerous, and ophthalmic patients.
84. How many pavilions are there in Group No. 1? Sixteen.
85. What is the distance between the groups? A chain between the nearest group and the dining-room.
86. What distance is the dining-room from the kitchen? It is about 60 feet from the dining-room to the kitchen window.
87. Assuming your designs to be carried out will it involve at least three separate services to provide for the different groups? Not complete services. I must tell you in these institutions the inmates are employed as cooks, and each kitchen must be supervised.
88. How many kitchens are there at present? There is one kitchen to dine 420 inmates. Two additional kitchens will be supplied, and the existing kitchen is to be used for other purposes.
89. Altogether you propose to have three kitchens in connection with the sixteen pavilions? The casuals have one kitchen.
90. How many groups of pavilions will you have for each class and how many pavilions in each group? There will be sixteen pavilions in the hospital Group No. 1.
91. In connection with that how many kitchen services? There is half a kitchen. In Group 2 there are sixteen pavilions, and the other half of the kitchen. In Group 3, the casual group, there will be a distinct kitchen. There will be three kitchens to the proposed establishment.
92. Are the whole of the buildings detached? The buildings are detached, but the verandahs are continuous.
93. What distance separates the different pavilions? The width of a 10 feet verandah in some cases. They are joined at the angles of the verandahs.
94. Is that the most economical way of providing accommodation for so great a number? Yes.
95. Is there any reason why the building should not contain more than sixty inmates? It is not safe to put more than sixty helpless old men in one room at a time for the reasons that at night they might disturb each other, and in case of any panic it would be difficult to deal with them if there were a larger number. Sixty or sixty-four has been fixed by practice as the limit for a dormitory of this character.
96. Of course you are aware that at present there are 700 or 800 in one building? They are on different floors, but that system is condemned.
97. Can you tell us what has been done in the other colonies, and in Great Britain and America? I can produce evidence as to what has been done in England.
98. Do you not think it will be as well to place before the Committee information as to the practice followed in other places besides New South Wales? I can do so, but I do not think I can find any information as to the pavilion system in connection with benevolent asylums. I can find plenty of examples of lofty buildings containing a number of rooms built on a very small space of ground, but that would not help the Committee at all in considering this matter.
99. Whose suggestion has led to the preparation of the plans now submitted to the Committee providing for the pavilion system? It is the outcome of the modern way of dealing with these matters, and especially where you have so much room as you have at Rookwood.

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100. Does it admit of the concentration of the administration as much as buildings of two storeys would? Perhaps not quite so much as two storeys would, but the administration is equally central, as in the case of the hospitals for insane, which I know are built upon the most recent principles. For instance, at Kenmore, which is the result of the examination of the hospitals for insane in all parts of the world the administration is quite as wide as this.

101. Do you not think some distinction should be made between insane patients and those who are merely suffering from old age? There is a great difference made, and in order to show a comparison I may mention that Callan Park Asylum cost £308 per patient as against £40 per inmate of the Benevolent Asylum.

102. Do you think the same objection would apply to the construction of two-storey buildings for housing people who are simply old and slightly unwell as for housing insane patients? I think that all the old people in the institution should be on one floor. Many patients in the Hospital for Insane are comparatively young people and the staircase is nothing to them, but to old people it is a very different thing.

103. But are there not thousands of old people who sleep on the second floor? Yes, but not in large numbers as they do in asylums.

104. Out of 3,000 or 4,000 people do you not think a large number will be able to occupy a second floor ascended by an easy flight of stairs? I should prefer putting them on the ground floor if it is possible.

105. Do you not think that the management of the institution could be greatly economised by having fewer pavilions and having them of two stories? I do not think so.

WEDNESDAY, 5 FEBRUARY, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHREY.

The Hon. JOHN DAVIES, C.M.G.

The Hon. JAMES HOSKINS.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Erection of Buildings at Rookwood for Infirm and Destitute Persons.

Walter Liberty Vernon, Esq., Government Architect, sworn, and further examined:—

W.L. Vernon,
Esq.
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106. *Chairman.*] With regard to the various instructions given by the Committee on the last occasion have you any statement to make? I have two or three exhibits to hand in. The first is a plan of a pavilion with two floors, sixty beds in each.

107. Do you desire to make any statement with regard to that? The only statement I will make is that the cost, according to two independent estimates, comes to just double the cost of a pavilion with one floor. That is caused by the fact that we have to build up two special stair-cases; otherwise the cost would be relatively smaller. Another exhibit is a plan of the Randwick Asylum, showing the possible accommodation. I have also a short report giving further information with regard to the methods adopted in the United States in dealing with the poor. This information, which I am sorry to say is very meagre, is as follows:—

At the request of the Committee I have made still further inquiries into the mode adopted by the United States in housing destitute poor. I find that the State has no control over this class, but that it is managed by the several Counties in the different States. In many of them the poor are placed on what are called "poor farms," in communities, in which the several families have their separate dwellings, and are employed in tilling the land,—sometimes with a pecuniary benefit to the State, sometimes at a loss. These communities do not, so far as I can ascertain, much exceed probably 100 inmates in number. In the case of towns with large populations the arrangements in some cases are somewhat different, and the poor are housed more closely; but in very few instances do I understand the latter to be of any considerable size or capacity; and, as much as possible, as in the former cases, they are placed in individual dwellings. In the cities again, what is called the "shop" system is adopted, comprising the employment of the indigent families in workshops at such occupations as they are most adapted for. I am informed that in a few cases the buildings are of the same character and extent as are common in the United Kingdom, in which the poor are housed in wards of one floor over another. I cannot, however, gather sufficient evidence to make a comparison of the means for housing the poor in the United States with that adopted for a similar purpose in the benevolent institutions of this Colony. In Pennsylvania, in 1891, there were seventy-two "poorhouses," thirty-seven of which were "county," and thirty-five "local," with 8,799 inmates, averaging 122 each, and costing annually £30 each, or 2.92 dollars per week.

107½. Have you a statement to make as to what will eventually become of the sewage from the Rookwood buildings? I have no written statement; but I would respectfully recommend the Committee, if the question of the removal of sewage by water carriage is considered, to call before them the Engineer-in-Chief for Public Works, who has the adjoining works more or less in hand. For instance, in Parramatta the scheme is still in his hands, and I think it would be more advisable to obtain his evidence on this point than mine—that is, in the event of the Committee considering the question of the water carriage of sewage. I hand in a statement of the cost of repairs and improvements to the three institutions during the last five years. This is only as far as the Works Department is concerned. At Liverpool the expenditure was £1,448; at Macquarie-street, Parramatta, £1,917; and at George-street, Parramatta, £823.

108. What else has been spent? I could not tell you. There has been some expenditure in connection with the Colonial Secretary's Department, and the institutions themselves; but I do not think there has been much.

109. *Mr. Davies.*] Was there a Board appointed, and did it make a suggestion for grouping the whole of the buildings at Rookwood? I am unable to say.

110. How, then, did the recommendation to group the whole of the buildings at Rookwood come about—what were your instructions? My instructions were to consult the Director of Benevolent Asylums as to what was required.

111. No Medical Board or Board of Works has sat to make this recommendation? There was a meeting of all the medical officers, with myself—that was subsequent to my instructions—and upon the deliberations of that meeting I based the grouping of the different classes.

112. Did the medical officers so far as you could gather, approve of massing the whole of the pauper people in institutions at Rookwood? No objection was raised in my hearing.

113. But there has been no absolute inquiry, so far as you know, into the condition of the different institutions that are being dealt with, by the erection of the proposed large group of buildings at Rookwood? The scheme is in its infancy; I do not think there has been an opportunity.

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114. I want to know where it was born—where did it come from? I could not say.

115. All that you know is that the scheme was simply based on instructions you received from the Minister for Works? Quite so, through the Under Secretary.

116. But you are not able to tell us who proposed to erect this large number of pavilions, and mass the whole of the paupers from Liverpool, Parramatta, and Rookwood on one spot? I am not. I heard the discussion on the matter which took place in the Legislative Council, and in which the scheme was mooted. I happened to be present at the time.

117. Would you care to express an opinion as to the practicability of carrying out a scheme of that kind on the site proposed? I am of opinion that it can be done.

118. Can it be done with satisfaction? I think so.

119. With due regard to the safety of the people living in the neighbourhood and the inmates of the institution? Yes.

120. Do you think it a wise policy to concentrate the whole of the paupers of the country on one spot? Do you mean from a hygienic or from an administrative point of view?

121. Take both points? Well, from the sanitary or hygienic point of view I think it is perfectly possible. It is a community of 3,000 people, that is all. With regard to the administrative point of view, I could not express an opinion. I simply say that if the building were placed in the position which I have indicated it would be more economical than the present system.

122. With regard to the sanitary arrangements, if the present proposal were carried out, how would you provide for the drainage and sewerage, bearing in mind that the inmates at Rookwood would equal in number the population of many of our large inland towns, and that there would be a possibility of the number increasing? If it were determined to lay down a sewerage system and remove the sewage by means of water carriage, of course there would be no more difficulty in the case of 3,000 persons than in the case of 300,000. If you deal with the question outside of water carriage, I think under the circumstances you can do it without any difficulty or danger whatever.

123. Do I understand you to advocate the treatment of the sewage by conveying it to sea by water? No. My opinion is that at Rookwood you could very well utilise the whole of the sewage products upon the extensive lands that you possess there to the greatest possible advantage.

124. Have you made any estimate of the probable cost of the removal of all the sewage and faecal matter by water from these institutions, containing about 3,500 persons? I should suggest that you might call evidence from Mr. Hickson on that point.

125. You have made no estimate yourself? Only a very rough estimate as to the length of the sewer.

126. As you suggest that this would be a possible solution of the difficulty, it occurred to me that you might have made an estimate of the cost yourself? I might explain that that system is contingent upon providing some means of meeting the difficulty of outlet in the way of an irrigation farm, or filter beds of some description, and as to that I could not possibly give an opinion, because I do not know the locality, nor the circumstances under which the land could be obtained. Something of the kind would have to be done, so that the effluent waters running into the Parramatta River would be treated before they got there. I would rather not give an opinion upon that point. I know, roughly speaking, the length of the sewerage, and about the cost of it.

127. In reference to an irrigation or sewage farm is the soil on the proposed site suitable so as to assist you in the matter of treating sewage by means of a sewage farm? No; the soil is not the best. The soil is a stiff clay, but by working it it can be made considerably lighter.

128. What is the depth of the soil before you reach the clay? One spit I should think at the most.

129. Would that be suitable land for the treatment of sewage in the manner you suggest by a sewage farm? In dealing with a sewage farm of that description you are only dealing with the fluids and the slop water from the institution and not the nightsoil. But the scheme you have just referred to deals also with nightsoil, and of course that would have to be dealt with in an entirely different manner. There are several ways of dealing with the nightsoil. One is by deodorising, according to a scheme now under the consideration of the Government in connection with the Parramatta Asylums; another is by cremation, similar to a system we have at Bathurst Gaol. Those are the two most modern ways of dealing with nightsoil, and in an institution of that kind they can be both adopted most effectually.

130. Have you any idea of the cost of the treatment of nightsoil by either of these systems? There is an offer to the Government at the present moment to treat the nightsoil of the two institutions at Parramatta at a cost of £550 a year, or about that. The present cost of removing the nightsoil from those institutions by the Council of Parramatta is about £600. At Bathurst Gaol we cremate the nightsoil from about 340 prisoners, with a plant capable of doing considerably more work than that; but we could not make it smaller to make it effective, and the consequence is that the expense is over-weighting the result. It is costing 19s. 5½d. per prisoner per annum to cremate the nightsoil at Bathurst Gaol; but I could treat two and a half times as much nightsoil at the same cost.

131. *Chairman.*] What would be the cost at Rookwood with 3,000 people? We have an offer to deal with 1,300 people at the present moment for £550.

132. *Mr. Davies.*] Is the offer from the same party? There are three or four different patentees in Sydney, and there are agents for patents in the United States and England who are perfectly ready to take this matter up.

133. What is the original cost of the plant at Bathurst Gaol? The original contract was £800. That included the furnace, and everything complete.

134. And the cost is practically £1 per annum for each prisoner? Very nearly that.

135. In addition to the capital cost of the plant? Yes. But I should explain that at Bathurst, owing to some prison regulation, or other cause of which I am not aware, the urine is put with the nightsoil, and the consequence is we have to do more work in reducing the urine to steam and solids than we should have to do if we only had to deal with the night-soil. That is another point against Bathurst which would not occur in an institution of this kind.

136. What would be the cost of providing appliances similar to those used at Bathurst Gaol for an institution at Rookwood to accommodate 3,500 people? In considering the matter with an officer of mine,
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- who has had a good deal to do with the details of this scheme, we came to the conclusion that we could do it at a cost of from 5s. to 7s. per head per annum.
137. Independent of the capital cost of the plant? Yes.
138. Could you furnish the Committee with an estimate of the probable cost of the plant? Yes.
139. You state that after the appliances are all provided, the cost would be from 5s. to 7s. per annum at Rookwood? That is our opinion.
140. That would be the only effective means of treating night-soil and sewage matter at Rookwood, with a population of 3,500 people—it would be effective beyond a doubt? I am certain of it.
141. Much more effective than establishing a sewage farm on a clay sub-soil only a few inches from the surface? I would not recommend a sewage farm for the disposal of night-soil in that position. The clay sub-soil would be a fatal objection. But in the case of slop waters the objection could be overcome.
142. But I am speaking of solid matter? I would not recommend putting solid matter on a farm.
143. What do you propose to do with it? I propose to cremate it.
144. You only propose that now;—you have not proposed it before in connection with your system of drainage and sewerage? I have put down a provisional sum of £5,000 in my estimate for dealing with that particular subject, in which particulars are not gone into. The item is this, "Drainage, irrigation, and general laying out of grounds, £5,000."
145. That applies to a sewage farm? That applies only to the irrigated gardens—an enlargement of the irrigated gardens which we have already commenced, and which are shown upon the plans. It is not a sewage farm at all.
146. It is what we saw the other day? It is not a sewage farm.
147. The process is the same? It is a modification of the sewage farm.
148. But you favour the system of treating all solid matter by fire? I think that is the best.
149. The matter so treated would make good manure for garden purposes? Fairly good. There is some quality in it, but not very much, after the fire has been through it.
150. Will you let the Committee know, when convenient, what would be the capital cost of machinery and plant required for treating the solid matter from an institution containing 3,500 people? I will do the best I can. I should like to say, with regard to the proposal, so far as it has gone, that there is a considerable amount of unutilised heat in connection with a crematory, and especially one of that size, and the proposal is, although the scheme has not been worked out, to utilise that waste heat in connection with the electric light, and therefore the two schemes are very much combined. I refer to the lighting of the whole of the institution by electricity.
151. *Chairman.*] That would be added to your estimate? No; there is a sum of £5,000 put down, which includes that.
152. But that refers to irrigation? It is supposed to cover the dealing with the sanitary point in connection with the scheme, though perhaps the item is not as explicit as it might have been.
153. *Mr. Davies.*] But you feel satisfied that although it might be costly the treatment of all solid matter by fire would be effective? I am of that opinion.
154. In regard to the proposed building the idea is to build hollow walls—brick walls? It was a suggestion I made that there should be hollow walls to the pavilion, and I think that ought to be done.
155. What is the object of that? To keep the damp from reaching the internal portion of the walls. The site is a very exposed one.
156. Would a 9-inch solid brick wall be as serviceable as a hollow brick wall? No, although the walls are protected to a great extent by verandahs, the place is so exposed that with a driving rain it is desirable to adopt hollow walls in order to be on the safe side, particularly with a second floor.
157. If a 9-inch brick wall were used instead of hollow 14-inch work, the verandahs being wide, would not a very large saving be effected in the cost of each pavilion? It would effect a saving of 4½ inches as regards the main walls of the building.
158. Would that represent £300 or £400? Nothing like that. Perhaps £60, £70, or £80, or something like that.
159. You have handed in to-day some plans with regard to the Randwick Asylum, and the possible accommodation there;—to what extent do you estimate the present buildings at Randwick would relieve one of the institutions at Parramatta? Omitting the top storey of the Randwick Asylum, which I do not propose to utilise at all, I find there is accommodation for 534 inmates.
160. That is without including the upper dormitory? Yes, without the one in the roof.
161. Could not that be utilised by those patients having pretty fair health and strength? Well, I think a third floor is objectionable.
162. That is the ground of your objection? Yes; it is perpetuating the present weak points of the George-street Asylum at Parramatta.
163. How many floors are there in the Randwick Asylum according to the plan you submitted? There is a ground floor, a first floor, and a second floor; but I do not take the second floor.
164. Then in your proposal there is only one set of stairs? Yes.
165. And this will provide for 534 beds? Yes.
166. What is your opinion as to the accommodation that building will afford at Randwick? I think it would be suitable, but before it could be occupied it would be necessary to alter the sanitary arrangements, also, I think, to enlarge the kitchen appliances, and possibly, build more shelter for the inmates, more weather-sheds or something of that kind. The baths, washing-places, and so on, and the drainage should certainly be overhauled, and I think very considerably altered and improved.
167. What do you estimate would be the cost of making the place suitable to receive, say 500 or 600 people? I have not formed an estimate yet.
168. Would it run into large figures? Well, you could spend £1,000 there.
169. Would £1,000 do it? A good deal would depend on the outflow of the sewage, and that is a matter that wants consideration. If you suddenly increased the occupancy from 147 to very nearly 600, you might cause a very great nuisance, the removal of which would involve considerable expenditure.
170. But the place would be thoroughly drained into the main sewer going to Coogee? I do not know the distance.
171. It would only be a haphazard estimate? That is all.
172. Does that include any expenditure that might take place in making further arrangements for the children? No; that is assuming that the building is handed over void. 173.

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173. You paid a visit with the Committee to the George-street Asylum, Parramatta? Yes.
174. You saw the condition of things at Parramatta, and especially at the George-street Asylum? I did.
175. What was your opinion, as to the condition of those patients who are cooped up in the George-street Asylum, when we have a large building, like the Randwick Asylum, which might be utilised, even temporarily, to relieve that institution? I think the inmates should be removed from that large building without delay, and also from the hospitals in Macquarie-street.
176. There would be no great difficulty in relieving the George-street institution if you had at the disposal of the Government the pile of buildings at Randwick, even as a temporary means of relief? I think some discrimination should be exercised in the classification of the inmates to go to Randwick, but that is more within the province of the Director of Asylums. Without more special appliances I do not think it would be suitable for a hospital. Those appliances would have to be provided.
177. What extent of land have you at Rookwood? Originally there were 700 acres, but some portion has been alienated. I cannot quite find out how much.
178. Has not some portion been taken over by the trustees of the burial-ground? It is just possible; that I am not able to say.
179. You believe there are about 600 acres? I am under that impression.
180. If all the pavilions are erected at Rookwood according to the plans you have submitted to the Committee, what will be the total space they will cover; I mean including the existing buildings, as well as those proposed? I will endeavour to obtain the information.
181. I understand you estimate the cost of each of these pavilions at something like £1,200 or £1,300? At £1,400.
182. Are they likely to be more costly than the buildings erected at Newington? There will be an excess of cost by reason of the brick walls as compared with the wooden walls at Newington, and I have to allow for the fluctuation of contractors' prices. I built two pavilions at Rookwood at a cost of £1,200 each, and two others at a cost of £1,300 each, and two at Newington, I think, at a cost of £1,100; so that even those varied.
183. The pavilions at Newington for accommodating sixty beds each cost £1,100? Yes.
184. And the only difference in the cost of the proposed buildings at Rookwood will be in regard to the brick walls? Yes.
185. And these would cost £300 more? No; that is hardly the way to put it. The buildings at Newington, from my recollection, entailed some small loss upon the contractor; his price was rather too low. I take it that the Rookwood prices were much fairer, and ones upon which I could base calculations. I think about £1,250 is a very fair average price for any of these pavilions.
186. The wooden pavilions? Yes.
187. And the brick ones, you say, would cost £1,400? Yes.
188. Would the difference of £150 be a sufficient margin to allow for a brick building? Yes.
189. You say that £1,400 would be ample to put up brick walls? It is a fair price.
190. What was the cost of your new kitchen appliances at Newington? I am speaking now from memory, but I think the cooking apparatus cost about £700; and then we built a kitchen in addition.
191. Costing £100? Altogether it cost more—that is, the building and the plant together. These new appliances saved 115 tons of coal per annum. That is the saving effected in cooking alone.
192. For how many inmates do the new appliances at Newington provide? Six hundred and forty.
193. Could you increase its capacity without further expense? The cooking apparatus will provide for more inmates than it does at present. The cooking plant cost about £700, in addition to which there was a building to erect, but I cannot quite remember what the cost of the building was.
194. But the total cost was over £1,000? Yes, the two together cost that.
195. I want to know the capacity of the new kitchen. Supposing there were double the inmates—would it cook for 1,200? No, it would not cook for double; it might cook for from 950 to 1,000 with good management, and a good deal depends upon the management.
196. There would be no difficulty in cooking for 1,000? That would be the extreme number; I think that perhaps 900 would be about a fair number.
197. You have not any appliances like those at Newington in any other institution under your control? Not in any of the benevolent institutions, but we have in the lunatic asylums.
198. I mean in the benevolent institutions? That is the only one.
199. Was that imported or made in the Colony? It was designed in my office and made in Sydney.
200. What kind of cooking apparatus do you propose should be used at Rookwood? A similar cooking apparatus to that used at Newington. In the hospital kitchen a range would be necessary as well, but in the general kitchen the steam cooking apparatus would be sufficient.
201. In your estimate have you taken into account provision for these cooking appliances, or do you regard that item as outside the building? That is all provided for in the estimate.
202. Can you tell me what would be the cost of providing cooking appliances at Rookwood for 3,500 people? I can only give an approximate estimate. A large kitchen cooking apparatus would probably cost from £800 to £850, and the hospital kitchen would cost very much less—probably £450 or £500 would be sufficient in that case. This is necessarily an approximate estimate of cost, as I have no figures with me.
203. You might furnish the Committee with particulars of the estimate? I shall be happy to do so.
204. You say that £800 would be the cost of the main kitchen. Approximately.
205. If you had to pay £700 for a cooking apparatus for the Newington kitchen sufficient to provide for from 900 to 1,000 people, how do you expect to obtain a cooking apparatus to provide for 3,500 people for a sum of £800? The provision in the main kitchen is only for 2,000 people—actually 1,960. The central kitchen provides for the two main groups with an estimated accommodation of 2,000. The three hospital or isolation groups have a kitchen, and the casual group on the west side of the road has another kitchen, all of a much simpler description. So that there would practically be three kitchens—one principal one and two small ones.
206. What would be the cooking capacity of those three kitchens? Sufficient for 3,300 people—the gross capacity.
207. That would simply be provision for the number of paupers in the institutions at the present time? I am given to understand that the total number is 2,925; but on this point I cannot speak of my own knowledge.

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208. There would be cooking capacity for at least 2,900 or 3,000 people? Yes.
209. That would only be providing for the number of paupers at present in the institutions? The cooking provision is equal to a population of 3,300, while the existing number of paupers is 2,900.
210. What I want to know is, whether you provide in your scheme for a possible large accession of paupers at the Rookwood institution? Not to any large extent. But the pavilions at Rookwood, which are supposed to carry sixty beds, are at the present moment, as a matter of fact, carrying sixty-four beds, and they can carry sixty-eight, although I do not advise it.
211. How do you propose in your scheme to meet the necessity which may arise in the near future for additional pavilions? I have not considered that. I would not advise that the institution should be larger than that proposed.
212. You would not advise that the number should be increased? No, I would not.
213. You accompanied the Committee to Liverpool yesterday, when they inspected the asylum buildings there? Yes.
214. What is your opinion of the fitness and capacity of the two large main buildings at Liverpool for housing the indigent poor at present occupying it? The main building is suitable in all respects, except that it is overcrowded. I find that we have a clear space of 46 feet per bed, and as a large proportion of these wards is used as hospital wards, they should have more like 70 feet per bed. In the case of ordinary wards, a space of 46 feet is sufficient. There is no fault to find with it; in fact, it is very suitable.
215. What is the air space proposed at Rookwood? In the hospital wards the air space is to be 943 cubic feet per patient. In regard to the general wards, I have only reckoned the superficial feet per floor, which is quite sufficient in a case of that kind.
216. What would that be? Forty-four feet, and in the case of the hospitals, 74 feet.
217. *Mr. Wright.*] That is less space than at Liverpool? Yes, 2 feet less, in the case of the ordinary wards.
218. *Mr. Davies.*] Then in your new scheme you regard 2 feet less floor-space than is available at Liverpool as ample for housing the inmates at Rookwood? Yes; as regards the able-bodied inmates.
219. What do you estimate is the cost per bed of your hospital wards? I have only got the cost of the ordinary pavilions per bed, and not the hospital.
220. I think you estimate that the main pavilion, apart from the hospital, would cost about £19 per bed? The cost would be £23 at Rookwood with brick walls.
221. You are not able to tell the Committee what the cost per bed would be in the case of the hospitals? I attempted to get this estimate, but the hospitals contained so many adjuncts in the way of nurses' rooms, operating rooms, and so on; that I could not dissociate the actual sleeping accommodation from these necessary adjuncts, and therefore I could not get an exact estimate of the cost per bed of the sleeping accommodation only.
222. Could you give an approximate estimate? As administrative buildings would be included, such an estimate could not be useful as a matter of comparison.
223. Do you think the Liverpool buildings could continue to be used for the same purpose if additional ventilation were provided, verandahs erected, and perhaps a new kitchen obtained;—with these alterations do you think the institution could be utilised, the number of inmates being reduced? I am of opinion that if the proposed scheme of centralising all the institutions at Rookwood is broken into it would be very desirable to retain Liverpool as it is, with certain improvements.
224. Your estimate of the cost of the proposed group of buildings at Rookwood is £108,000? Yes.
225. After seeing the Liverpool buildings, do you think it would be wise to spend that large sum of money when the patients can be housed quite as well in good buildings such as those at Liverpool, with slight alterations that might be necessary—do you think it would be wise in the public interest? No. I think money can be saved by retaining Liverpool, and without injuring the scheme at Rookwood at all, because that is a progressive scheme.
226. You think the Liverpool buildings might be utilised? I think they might.
227. And to great advantage? I will go so far as to say so.
228. Supposing this scheme were carried out for centralising the whole of the pauper patients of the Colony at Rookwood, to what purpose would you apply a building like that at Liverpool;—what could be done with it; could it be sold, and if so what could be got for it. What could be done with a building like that? It is very difficult to say.
229. Would it be worth anything for any other purpose? No other purpose presents itself at the present moment.
230. What would be the probable cost of the erection of two brick buildings like those at Liverpool—I mean a rough estimate? There are three buildings. I should say from £20,000 to £22,000.
231. Even according to your own estimate as to a reduction in the number of inmates, this institution at Liverpool could safely house at least 600 people? Perhaps it could, with the outlying wards as well.
232. In view of the fact that you have a pile of buildings like those at Liverpool in a very fair state of repair, would it be an act of wisdom to abandon those buildings and proceed to spend a very large sum of public money in order to carry out some whim that somebody has—I cannot say who it is; you yourself say there has been no Board, so far as you know, that has met and decided on the matter—to carry out the whim of some public officer or some other person to concentrate the whole of the pauper patients of the Colony in one spot;—would it be an act of wisdom to do this in view of the pile of buildings you have at Liverpool, and which by a small expenditure could be made much more ample and acceptable to the patients who might be kept there in reduced numbers? I think it would be advisable to leave Liverpool for consideration until the last. But I am not prepared to condemn the scheme of unification.
233. Can you tell me the advantages to be derived from it? I understand there would be an advantage in regard to administration.
234. What proof is there that there would be such an advantage;—have you made any investigations with regard to the cost of administration under different systems in other parts of the world? One of the largest institutions of the kind is St. George's Union, in London, containing 1,844 patients.
235. Have you a list of the different institutions and their respective capacities? I have not attempted to make a list of them; I have only searched the records and books for information that might, perhaps, be of use to the Committee in comparison with the scheme now before us. I would point out that
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- St. George's Union only embraces St. George's parish, while this scheme embraces the whole Colony of New South Wales, and, therefore, we can hardly make a comparison even in that case.
236. *Mr. Lee.*] You visited the Asylums in Macquarie and George Streets, Parramatta? I did.
237. In the case of both of those institutions the buildings, I believe, were utilised for their present purpose, and not specially built for the accommodation of indigent and sick persons? That is so.
238. At the George-street Asylum there are hospital wards in connection with the buildings? Yes; not distinct, but within the main buildings.
239. A very large proportion of the accommodation is used for hospital patients—that is to say, for the sick paupers? I think acute cases do not go to George-street, but only the bed-ridden cases.
240. There is a large number of sick cases there in hospital? Yes.
241. And a large proportion of the dormitories is taken up for the housing of sick paupers? Yes.
242. Does not the same remark apply to the Macquarie-street Asylum? Yes; except that perhaps the cases are more defined at Macquarie-street.
243. But is there not a large number of sick paupers there? Yes.
244. Is not a large proportion of the accommodation occupied by the sick? Yes.
245. And the same remark applies to Liverpool? In a smaller degree.
246. But even there is not a large proportion of the accommodation devoted to the sick? Yes.
247. So that all through the benevolent asylums of the Colony the same thing exists, as far as hospital accommodation is concerned? Yes.
248. In your proposed hospitals at Rookwood, for how many beds have you made provision? I have provided for 1,000 beds in what is called the hospital Group No. 1, and 800 beds in the isolation groups.
249. That will be 1,800 beds out of a total of 3,300? Yes.
250. That appears to be a very large proportion as compared with the number of inmates accommodated? I provided that proportion upon advice of a meeting of the medical men, and upon the result of their deliberations.
251. And from what has been observed in the existing asylums, you do not think that provision is excessive? I think it is about correct.
252. Of course you have been in consultation with medical officers in connection with all these institutions? I have at the one meeting—that is all.
253. It is upon the information derived from them that you have based your calculations as to space? Upon the decision they came to I formed this scheme; and the medical officers, I might say, not only discussed the relative proportion of accommodation of the different groups, but to a very great extent the relative positions of the different sites.
254. At all events, the necessity for providing so large an amount of accommodation for sick paupers is based upon previous experience? It is based on the recommendation of the medical men to myself in this particular case.
255. And they obtained their opinion from past experience? I presume so.
256. For how many patients do you provide in the proposed cancer hospital at Rookwood? I provide for 200.
257. And in the consumptive ward? For 300.
258. And in the other wards? I provide for 300 in the ophthalmic ward. I should explain that the cancer patients also include those troubled with skin diseases. I believe there are only about sixty cancer patients in the institutions at present.
259. How many beds would that be altogether in that group? Eight hundred.
260. And the balance would be provided for in the general group? No; there are 1,000 in the general hospital, and the balance in the general group.
261. So that hospital accommodation must necessarily be a very large feature in the institution? Necessarily so.
262. In other words, it would embrace over one-third of the inmates? Considerably over one-third. The provision is for over one-half.
263. After all that accommodation has been provided it will only meet the requirements of the present day? I presume that is the case; but I understand from Mr. Maxted that 2,900 represents the normal number of inmates expected to be accommodated.
264. Are you of opinion that the hospital accommodation in the George-street Asylum is suitable? I think it is very unsuitable. It is overcrowded. The cubic space per bed is very small.
265. The accommodation for hospital patients in the George-street Asylum is, in your opinion, inadequate? It is.
266. Is it not a fact that in order to afford means of egress in case of accident a double set of staircases has been erected? Yes; there has been a double staircase provided for that purpose.
267. Is there any water supply to cover the upper storeys in the building? I cannot say at the present moment; but I know the supply is very inadequate. There is a water supply in the general building, and, speaking from memory, I believe there is a hydrant on each staircase.
268. What would be the position of the sick paupers in the upper storeys in case of fire? Absolutely hopeless.
269. It would be absolutely impossible to remove them? Quite.
270. Is there not a carpenter's shop on one side of this very building? There is.
271. Is not the building in danger of catching fire at any time? I think it is very unwise to put that carpenter's shop alongside the main building.
272. Apart from that apparent danger, the building is altogether unsuitable for the accommodation of paupers? Altogether unsuitable.
273. It consists of two distinct buildings, does it not? Yes.
274. One at the termination of George-street, and the other on the wharf? Yes.
275. Both being connected by an over-head way? One over-head way on a lower floor.
276. Does that not render the administration very incomplete? Very incomplete indeed.
277. And expensive? I should imagine so. The bed space at George-street, I might say, is 41 feet per bed.
- 278-9. It was originally a tweed factory, was it not? I believe it was.
280. And built very many years ago according to the then existing ideas of accommodation? Yes, for factory purposes.
- 281.

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281. Where is the sewage matter from that institution conveyed? It is conveyed into the river adjoining. The night-soil is carefully collected and disposed of elsewhere by the Municipal Council of Parramatta, but all the liquid sewage—slop-waters, bath waters, and urine—goes into the river.
282. And with regard to the night-soil? There are no water closets. It is all collected by the Parramatta Council.
283. At a cost to the Government? I believe that the cost altogether to the two institutions is about £600 a year.
284. And the Council undertake to do it? They are doing it now.
285. Is not the accommodation at the Macquarie-street Asylum equally as bad as that at George-street? Equally so. There are two fair wards there, but with that exception it is unequal to the requirements.
286. Have the Government erected any new buildings at Macquarie-street? In 1891 we erected quarters for the Superintendent, but there has been nothing else, except a few casual repairs.
287. That would not accommodate many patients, would it? No; except that the erection of the quarters for the Superintendent relieved the main building, so that it could accommodate more inmates.
288. Have the Government expended any money upon new buildings at the George-street Asylum? Nothing to speak of.
289. Consequently the amount given in the return handed in by you a short time ago would refer to the maintenance of the old buildings, and not to the erection of new ones? Yes, to a great extent. We have put up a few sheds.
290. In other words patched up the old buildings? Just so.
291. And the buildings are themselves very old? Yes.
292. Is not the present building in Macquarie-street the building that was used many years ago as a hospital barracks? I understand so.
293. And are not the ceilings very low? Very low indeed.
294. And is it not badly ventilated? Yes.
295. And altogether unsuitable for the accommodation of the inmates? Quite unsuitable. There is no outlet from the Macquarie-street Asylum except into the street.
296. Have you thought over the possibility of accommodating all our sick paupers in one place—the sick as distinct from the able-bodied portion? I have not. I think it would be rather difficult, because these old men are sick one day and well the next.
297. You say that the hospital accommodation in connection with each of these places is very large? It is.
298. I should like to know if you could offer any suggestion to the Committee by which all the sick paupers could be accommodated in one place, instead of being spread all over the country as they are at present? I think the scheme before the Committee, with regard to isolation wards, is one that could be well adopted, because there accommodation is found for the absolutely ill—those who are suffering from consumption or cancer—and there is no doubt that there you can embrace the whole of the acutely sick under one administration and one control. The general hospital is a matter, one cannot quite so easily give an opinion upon, because, as I understand, inmates are constantly shifted to and from the general hospital and the ordinary wards, as they may happen to be well or temporarily sick. There is a constant change going on in those cases; but with regard to the acute cases I first mentioned I think you could, with advantage, adopt a scheme of this kind.
299. There are acute and chronic cases which practically remain in the hospital until the patient dies? That is so.
300. Whereas, in the casual cases a certain percentage are ill to-day and well to-morrow, and many leave the institution, and come back again? I do not know how many leave.
301. But that is about the general course of things, is it not? I should imagine so; but I cannot say from personal knowledge.
302. Will you state to the Committee what have been the requirements at Liverpool in connection with the cancer hospital? Some short time ago it was considered desirable to remove the cancer patients from the main building. I think the Committee were shown the wards in which the cancer patients were originally accommodated. We built a temporary building across the railway, on a piece of detached ground. That pavilion is unfortunately now becoming too small to accommodate the patients sent there. It is not of a substantial character, and perhaps advisedly so, the object being that it might be burnt in the event of its being vacated. That is the only arrangement that has been made.
303. When any additional buildings are required at these asylums for any purpose, I presume you are consulted in the matter? Yes, generally.
304. And as a rule they are erected under your superintendence? With the exception of Newington they all are. There may be exceptions, even in the other institutions; but generally speaking they are.
305. What was your object in designing a wooden hospital building for the cancer hospital at Liverpool? Want of money, and the necessity of putting up a light structure of an inexpensive kind, because the larger question was looming in the distance, as to what was to be done with the whole of the institutions.
306. Not for any hygienic reason? No, not particularly; but it fell in with the scheme.
307. Have you considered the question of the modern systems adopted in Europe in regard to hospital buildings? To some extent I have.
308. Is there not a very large feeling on the part of the medical faculty in Europe in favour of hospitals being, as a rule, constructed of wood? It is a matter very much discussed between medical men, and I think it is very much hedged round with the class of patients to be considered.
309. Has the question been so far decided that the architects of the world have taken it up and adopted it? Not to an extent to be known. This Government has to some extent adopted the system in the case of the Little Bay Hospital, where a series of wooden buildings have been erected, with the intention, I think, that some day they may be burnt.
310. Do you remember when the question of finishing the Sydney Hospital was before the Public Works Committee? Yes.
311. Do you not remember that it was held very strongly by some of the leading medical men of the Colony that permanent buildings should not be erected for hospital purposes? I believe that opinion was expressed; but I think medical men have very diverse opinions even upon that point.
312. And was not one of the reasons assigned that all buildings used for hospital purposes became saturated with what is called "hospitalism," of which erysipelas is an instance? That opinion has been expressed.

313. If that is held to be the case, would it not equally apply to buildings proposed to be erected for housing the poor? I do not think so altogether. In this scheme you have other considerations as well. One of the main considerations is that the money to be expended is loan money. It would be a very improper thing to spend loan money upon buildings of a temporary character, and which can only last a short time, unless you provide such a sinking fund that the debt could be wiped out as the building was wiped out. That is one reason. The other reason is that in the case of old people there is no infection in the general sense of infection. You may have contagious cases, such as cancer and consumption, to some extent, but you have none of those virulent cases that occur among younger people. Such are not treated in a place of this kind.

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314. Do you not think that the scum and dregs of the Colony being collected in a large institution of this kind would bring in every disease known to medical science? I do not think that these institutions admit infectious cases. But on that point I could not speak authoritatively.

315. The pavilion system would reduce the danger from fire and make the means of escape much easier? Yes.

316. These isolated hospitals which you say ought to be erected to stand for a large number of years are liable to become saturated with hospitalism? I did not say so.

317. Supposing that were the case, do you think it desirable to sink so much money in brick and mortar in the way proposed? I think the general custom in the erection of hospitals proves that the proposal is perfectly justified. In my report I have laid particular stress upon the fact that in these isolated hospital wards it is proposed to make the walls and the floors with non-absorbent antiseptic material. For instance, the floor would not be a wooden floor, and the walls and the ceiling would be treated as in the case of most modern hospitals; so that there would be no means by which infectious microbes or particles could adhere to the building internally in any shape or form. I mean every reasonable precaution would be taken.

318. Would not the accommodation already provided at Rookwood, together with the pavilions in course of erection, be sufficient to house the sick from all the male asylums? The medical men say it will not be quite sufficient. It requires six more pavilions, and I have shown those on the scheme in connection with the present buildings.

319. I mean if the present inmates were removed? Just so.

320. And if it were used entirely as a sick hospital? I understand so from the medical men. The convalescent inmates of the present buildings would be removed, and these would be filled entirely with sick men.

321. You say then it would require six more pavilions in addition to those you have erected? Yes.

322. Do you know the area of land at Newington? No; it is very confined on one side, but they have ample room on another.

323. Coming back to the question of dealing with the night-soil at Rookwood, I should like you to give the Committee a clear idea of what you really propose to do with it;—in general terms you told Mr. Davies, but the matter is of such vast importance that I should like you to be able to state exactly to the Committee how you are going to treat it, and what the cost will be? The view I take is this: If the Engineer-in-Chief for Public Works gives evidence before the Committee that sewers can be constructed there, and that the liquid from those sewers can be discharged into the river in a fairly good and clear state that will be one clear way out of the difficulty. With regard to the solids, my opinion is that you can deal equally well with them on the estate.

324. By what process? By the process of cremation, utilising the liquids—that is the soap-suds and so on—for irrigating the gardens, thus employing the man and enriching the soil.

325. Do you make a strong point of the treatment of the solid matter by cremation? I think it is better than treatment by desiccation, or by any chemical process. I think cremation is by far the best method.

326. Are you strongly of opinion that the nightsoil from the large number of inmates in the institution should be treated before being placed upon the land in the vicinity? Yes, I am of that opinion.

327. And in a manner that would destroy any germs that might exist? I am of that opinion. My scheme shows a crematory.

328. I think it shows it for the hospital only? That is so.

329. You propose to deal with it partially; but why not propose to deal with the whole matter collectively? In preparing the scheme I was in some little doubt as to how far the sewerage system could be adopted. Even at the present moment I do not know, and it has left me in some difficulty as to the formation of a definite scheme to place before this Committee.

330. You have not proposed any definite scheme for cremation? The actual details have not been thoroughly thought out, but provision has been made for dealing with it in the estimate submitted.

331. What is done with the solid matter at Rookwood at the present time? I think it is buried in the far part of the estate. Of my own knowledge I do not know what is done with it.

332. How do you dispose of the same matter from the Liverpool Asylum? The liquid is discharged into the river, and I believe the nightsoil is removed by the Liverpool Council, but I do not know of my own knowledge.

333. There is no system of cremation there? None whatever.

334. The Liverpool Asylum has been in existence for many years, has it not? I understand so.

335. And all the appurtenances are nearly perfect—the kitchen arrangements and the dining-room, and with the exception of the want of some little weather sheds and out-houses the system is rather a perfect one, is it not? No, the kitchen is not of the best description for the purpose, and the dining-room should be altered. It is long and narrow. It is an old shed, which has been filled in, and that makes it very difficult to work.

336. But there is no immediate necessity for an alteration? No immediate necessity, but I think the kitchen should be altered.

337. It has answered all purposes for some years past? I think money would be saved by altering the kitchen at once.

338. But as a matter of fact it would last for many years to come? The main building would.

339. And the administrative portion—that connected with the cooking and feeding of the inmates? I do not think so.

340. It is a substantial building is it not? Not very. I think the question of proper administration is even more important than the state of the building.

THURSDAY, 6 FEBRUARY, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.
The Hon. JOHN DAVIES, C.M.G.
The Hon. JAMES HOSKINS.
HENRY CLARKE, Esq.

CHARLES ALFRED LEE.
JOHN LIONEL FEGAN, Esq.
THOMAS HENRY HASSALL, Esq.
GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Erection of Buildings at Rookwood for Infirm and Destitute Persons.

Walter Liberty Vernon, Esq., Government Architect, sworn, and further examined:—

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341. *Mr. Clarke.*] Can you state the acreage covered by the proposed scheme at Rookwood? Yes. A ring fence enclosing 64 acres would cover the whole scheme. It would not necessarily include the orchard and the garden.
342. After giving the matter some consideration, I presume you consider that Rookwood is a suitable place at which to erect the proposed buildings? I do. I think it is an admirable place.
343. It has been recommended that the male paupers should be removed from the asylums at Parramatta, Liverpool and Glenfield, and located in the proposed buildings at Rookwood? My instructions covered some such scheme, and the scheme I have put before the Committee I have great confidence in.
344. Who gave you those instructions? I received general instructions from the Under Secretary for Public Works.
345. It is some time, I think, since a few of these people were located at Rookwood? The first batch were sent there in 1893.
346. Do you not consider that there would be great difficulty in getting proper drainage at Rookwood? No; I do not.
347. Where would you propose to drain to? There are two alternative schemes which might be considered. The first is the removal of the whole of the sewage by water carriage into one of the existing systems, or down to Haslem's Creek, to be dealt with there; and the other is to retain on the estate itself all the products of the sanitation.
348. But if the sewage were taken down to Haslem's Creek, would it not have to be conveyed into the Parramatta River? Eventually, I presume, the effluent waters would go into the Parramatta River.
349. Would it be possible to take the sewage to the nearest point of the present sewerage works at Ashfield? I have heard the Engineer-in-Chief for Public Works express an opinion upon that point; but I would rather he gave it than I did, because I do not know much about it.
350. Have you any idea as to the cost? No.
351. When the Committee were at Rookwood last week, I noticed that you were utilising nearly all the sewage on the orchard and gardens? We are utilising the whole of the slop waters.
352. What do you do with the most offensive portion—the faecal matter? Of my personal knowledge I do not know what is being done with it at the present moment. In the new scheme it would have to be considered.
353. What is the number of acres in the orchard and garden at Rookwood—the land under cultivation? We have fifteen beds under cultivation at the present moment, covering, I suppose, an acre and a quarter—not more.
354. Orchard and all? We do not irrigate the orchard. We have not sufficient liquid for the orchard.
355. If the sewage from that institution, containing 450 inmates, can be disposed of in the manner just mentioned, without being offensive, would it not be possible to continue the same plan on a larger scale over a larger area? I certainly think so, and I strongly recommend it.
356. Considering the large area of land available for cultivation by trenching, you think that the whole of the offensive matter coming from the proposed institution at Rookwood could be utilised without injury? Yes; excluding the night-soil. I do not think it would be advisable to irrigate the night-soil on the estate. But as regards the slop waters, washing waters, bath waters and urine, I am strongly of opinion that it would be desirable and efficacious.
357. It was pointed out the other day, when we were at Rookwood, that this matter was kept in pits for a considerable time before being utilised, and there appeared to be nothing offensive, as far as I could see? It can of course be done in that way; but the question is a much larger one when you are dealing with 3,000 people instead of 400.
358. If you have now a few acres of land in connection with an institution of 400 or 500 inmates, could not the offensive matter be utilised in the same way in connection with a larger institution to which is attached an area of about 600 acres? It could, but I think there are safer ways of dealing with it.
359. You think it would be better to deodorise it? Either deodorise it or burn it. Either system is good.
360. It would not then answer the purpose of manure for the farms so well, as a good deal of the strength would have been taken out of it? That is quite true. But the slop waters would be sufficient to irrigate all that it would be necessary to cultivate; so that it would not be required.
361. Can you say, in round numbers, how many people there are at the Liverpool Asylum? I think we were told the other day that there were 871. Formerly, I was informed, the number was 950, so that the number evidently varies from time to time.
362. Do you not think that the asylum at Liverpool could be utilised for the accommodation of sick cases—chronic cases such as consumption, but from which there would be no fear of contagion? I think the ordinary sick can be accommodated there, but not to the extent they are accommodated now, and certain improvements would be necessary. But I am of opinion that cases requiring isolation should not go there at all.
363. You would have to find room for them somewhere else then? Yes.
364. Do you think it would be a fair thing to send a lot of such people to the Randwick Asylum, situated in the centre of a large population? I do not think it would be very desirable. 365.

365. Besides I do not think the Randwick Asylum is drained any more than Rookwood? Only imperfectly.
366. Can you say whether the Randwick Asylum could be connected with the main sewer? I could not say.
367. *Mr. Fegan.*] What is the system of sewerage adopted at the Randwick Asylum? I do not know.
368. You do not for a moment suggest that room should be found in the Randwick Asylum for more than 40 or 50 of these people? I think that is the utmost capacity. Of course there is the upper floor, but I do not recommend that these cases should be put upon the upper floor at all. I think it is too high up. It would be perpetuating the evil you are trying to diminish at the present moment.
369. Therefore if only 50 patients were removed from the Parramatta Asylum to the Randwick Asylum, there would still be a large unoccupied space in the latter building? There would be the floor in the roof still unoccupied.
370. You would not, of course, keep the present inmates there? No; I have made no provision for them at all.
371. Do you know what was suggested in the event of their removal? I do not know.
372. You would not remove healthy children from an asylum like that, which is their only home at present, to give it to the inmates of the Parramatta Asylum, would you? I naturally assume that if they were removed provision would be made for them elsewhere. I cannot say more.
373. But do you not think that the removal of patients from the Parramatta Asylums should take place immediately? Yes; from George-street particularly.
374. Then some provision would have to be made for the children who now occupy the asylum at Randwick? If any of the inmates of the George-street Asylum were sent there that would be necessary.
375. And therefore it would be necessary that immediate steps should be taken on behalf of the children? Naturally.
376. So that one evil is almost as great as the other? The same difficulty would probably present itself.
377. In regard to the proposed buildings at Rookwood, when were you first asked to prepare the plans? It was after this Committee began to sit. I was informed that in about a week's time I should be required to go before the Committee to give evidence on the Rookwood scheme.
378. But when were you asked to prepare the plans for the scheme placed before the Committee? At that time.
379. Then, it has not taken you very long to prepare these plans? I put a great amount of assistance on to the work, and gave as much attention as it was possible to give to it, and I had it ready for the Committee.
380. While preparing these plans had you any consultation with the Engineer-in-Chief for Public Works? No, I had not—not specially, only casually.
381. Does it not seem strange to you, in your professional capacity, that in preparing these plans no proper system of sewerage was provided for? In my own mind the scheme I prepared was for using the whole of the sewage products upon the estate itself, and not dealing with water carriage at all, and hence I did not make any communication with the Engineer-in-Chief.
382. But as a rule, I suppose the Engineer-in-Chief takes a prominent part, as far as sewerage is concerned, in the preparation of plans and specifications for the erection of Government buildings? Not necessarily.
383. Is that portion of the work left to you? Yes, entirely.
384. So that really the question of the system of sewerage comes directly under your control independently of the Engineer-in-Chief? That would be the case, excepting where the sewers under the charge of the Engineer-in-Chief come within proximity to the establishment. Then, necessarily, I should go to the Engineer-in-Chief. But where the sewers are isolated, as in the case of Kenmore, for instance, the whole of the sewerage arrangements are under my charge.
385. What are your arrangements at Kenmore? We are carrying out a system of irrigation there.
386. With the solids and the liquids? Yes.
387. I presume it is a kind of sewage farm? It is not constructed yet. It will be.
388. That is your intention? Yes.
389. I notice that in your plans you have made provision for a crematory at Rookwood? I have.
390. I suppose you are aware that that system is largely in vogue in France? Yes, and Germany.
391. And the product of the crematory is sold at a high price? I am not quite so certain about that. It is often so stated; but I do not think in practice it has ever been a great success as regards the sale of the product.
392. Have you any data to go upon in saying it has not been a success? As far as I have ascertained, the products do not contain those chemical properties which they should do, and which they did in their natural state, and they are consequently so much less useful for fertilising purposes.
393. Neither are they so obnoxious? They are not obnoxious at all. That is entirely removed.
394. But I suppose you have heard that after the crematory has finished with the matter it is sold for manure? Yes; I have had to deal with such schemes myself in England.
395. And did you deal with them successfully? The sales at first were good, but in nearly every case they fell off.
396. I suppose you have been acquainted with large land owners in England whose farms have been entirely manured by excreta? I know several municipalities which dispose of the whole of the sewage on farms, but I do not know of any private owners who adopt that system.
397. Is it not a fact that the tendency on the part of municipal bodies in England, is to utilise the sewage by applying it to farm purposes? Yes, entirely.
398. The old idea of doing away with the sewage altogether is exploded, and the practice is to utilise it as much as possible? The old system of polluting the rivers is being put a stop to very severely, and municipalities are being driven into irrigating certain tracts of land in their own municipalities and disposing of the sewage, and this they are doing very successfully.
399. Since the adoption of this new system, has fever or any other disease been more prevalent than formerly? I think it has been less prevalent.
400. Therefore that experience should be a criterion to guide this country in the matter? I think so, decidedly.

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401. More especially seeing that we have a greater amount of sunshine than is the case in England? Yes, that is in favour of the system, and the land being drier is more absorbent.
402. You are acquainted with the nature of the soil at Rookwood? Yes.
403. Do you not think that even that soil would neutralise the excreta in time? I think it would; but it is not the best of soils for dealing with excreta.
404. Therefore, you think the plan you have proposed is the best under the circumstances? I think so, under the circumstances.
405. According to your plans it is proposed to make provision at Rookwood for 3,000 people? Yes, actually 3,300.
406. Since you have seen the various buildings have you looked at your plans again to see what buildings are really not necessary? I have had the matter constantly in my mind, and assuming that 3,000 people are there, I do not think any one building could be omitted.
407. You have said that there is a number of rooms in the Liverpool Asylum which could still be utilised for their present purpose? Yes, with certain improvements.
408. How many people could you safely put in the Liverpool Asylum—I mean without overcrowding? If only able-bodied inmates were put at Liverpool the Asylum would hold probably about 900.
409. How many are there now? The figures given to me are 950, but there is a discrepancy in those numbers which I cannot explain.
410. Do you say that, with the present provision existing there, there would be room for 900 able-bodied men? That is the number which has been given to me, and my own calculations have shown that there is sufficient bed-space for that number.
411. Did you include the hospital at Liverpool Asylum known as the long room? I have calculated that as part of the accommodation. It is not a satisfactory room at all.
412. And people when they come to the position of having recourse to a charitable institution, especially people who are physically unable to help themselves, ought to be fairly well looked after? Yes; if you were to take bed-ridden people it would not hold anything like that number.
413. How many bed-ridden people would it hold? I should have to increase the 46 superficial feet per bed to something like 74 feet, and consequently the number of inmates would be proportionately smaller. I am only assuming that Liverpool would take inmates who are, you may say, locked out of the bed-rooms during the day, or not allowed in.
414. Therefore, if the authorities were to look well into the matter and send the able-bodied men to Liverpool, that Asylum could be used with benefit even yet for 900 inmates? Undoubtedly it could, subject to certain expenditure.
415. What is your idea about the George-street Asylum at Parramatta? I think it should be shut up on the very first day possible.
416. It is not very creditable to the country? Quite the contrary.
417. It is not a suitable building for the purpose in any shape or form? It is quite unsuitable.
418. You said in your evidence yesterday, I think, that the buildings were formerly an old tweed factory? Yes, a portion of George-street Asylum.
419. Are the other buildings at Parramatta also unsuitable and dangerous from more causes than one? Yes.
420. The mortality there is rather large, is it not, through overcrowding? I cannot tell you.
421. For these reasons you would entirely abolish the present charitable institutions at Parramatta? I would certainly close those two—George-street and Macquarie-street.
422. And to what place would you remove the inmates? I would remove them to Rookwood.
423. Since your visit to the Liverpool Asylum, you are satisfied that that institution will accommodate 900 people;—would not that fact materially reduce the cost of your original proposal? It would necessarily reduce the accommodation required by 1,000; but the question of unification of administration would still remain undecided.
424. And you think that a very important factor in this proposal of yours? I think so. It is a matter upon which I cannot give much information myself.
425. If so many sick patients were housed in such a small space, would there be any fear of detriment to the health of the people outside? I cannot see that it is possible.
426. *Mr. Hassall.*] In reference to the estimate of cost of these proposed buildings, which I take it is a matter more nearly connected with your Department, is it absolutely necessary to erect buildings of such an elaborate character, costing large sums of money, in order to provide for the supervision of this proposed asylum;—take, for instance, £1,000 for a kitchen in the casual group? It is by no means elaborate. It is the plainest possible description of kitchen that could be built—just the four walls, roof, and floor. But it is the size of the building necessary for providing food for 544 patients that makes the cost appear large.
427. Does that item include all the necessary cooking utensils, or is it for the building alone? It is to provide for the kitchen and the laundry together, and will provide the necessary steam and cooking and washing apparatus. To some extent these are combined. The cost of the cooking apparatus itself in that particular kitchen is £265.
428. Leaving £735 for the building alone? Yes; and part of that is useful for the laundry.
429. But you allow £1,500 for the laundry as well? I allow £2,500 for the two, although they are stated separately.
430. With regard to the pavilions, some, in Group No. 2, are estimated at £1,400 each, and the pavilions in the casual group, No. 3, are put down at £800 each;—why should there be that difference? I propose in the case of the casual group to make the dormitories merely enclosed sheds, because the inmates, generally speaking, will comprise the lowest class of men accustomed to sleep in the open air. For these you require the most moderate accommodation possible. Therefore, in the casual group, we propose to build on that plan, and to have them more like ordinary farm-buildings than buildings of the character of an institution.
431. *Chairman.*] And are they to hold the same number? I have put them a little closer together. I have put sixty-eight instead of sixty. I give them 37 superficial feet per bed, instead of 44.
432. *Mr. Hassall.*] But you provide them with beds, and with the shelter of roof and walls, and so on? Oh, yes; but we only give them one front verandah, instead of a verandah all round. That makes a difference in the cost.

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433. You do not think that style of building would be suitable for permanent inmates? No, it would not be sufficiently substantial. It would not be comfortable enough either. I understand that these casuals are constantly coming in and constantly going out, and the roughest description of accommodation, providing it is shelter from the weather, is really all they require.
434. Then, again, I see that you have a kitchen at a cost of £2,000, and a laundry at £2,500, making £4,500 for these purposes in the Isolation Group, No. 4;—is it necessary to go to such great expense? This kitchen and laundry provide for 800 inmates, instead of 544, and the kitchen is to include better appliances than in the case of the casuals, because the cooking is for invalids. I have calculated the cost of the kitchen—the cooking plant—at £480.
435. And you think that no lower sum than that would erect suitable buildings? I am afraid to put down any lower sum than that, because of the size of the place. There are so many rods of brickwork, and so many feet of flooring and roofing, that the estimate could not be reduced. Nothing is allowed for superfluous decoration or anything of that kind.
436. The nurses' quarters are to cost £2,000;—how many nurses will that provide quarters for? I understand about twelve; but I am not quite clear upon that point yet. I had to provide for from twelve to fourteen.
437. And for the matron's quarters and offices there is a sum of £2,000? That refers to the matron's quarters and the necessary offices in connection with the isolation group. There are also store-rooms, still-rooms, and a visitors'-room. It is a sort of administrative block really.
438. And what do you propose to do with the quarters at present occupied by the matron? We propose to retain those. She is the superintendent.
439. For the same purpose? I understand that the present superintendent is superintendent over the whole institution, and the matron is only matron of the isolation wards, and I should think she will have all her work to do to look after 800 patients there. You see they are sick patients, and are treated differently from the others.
440. Then, again, in Group No. 5 there is £3,000 put down for "kitchen, scullery, and stores," and £4,000 for a laundry; this makes altogether £14,000 for kitchens and laundries; do you not think these estimates are rather high? Not from my experience in connection with lunatic asylums. You are dealing with such an enormous scheme. The kitchen plant will cost at least £800. I went into the particulars very closely this morning. Then I have to provide boilers and laundry machinery and the big space required for washing clothes for 2,000 men.
441. In that particular group? It includes two groups—the hospital group and the general group.
442. You propose also to erect a residence for the medical superintendent at a cost of £2,000; that ought to build him a very nice house? Well, it would build a comfortable house. But it is to include all the outbuildings, the laying out of the grounds, fencing, and everything of that description. From my experience it is desirable to provide a medical superintendent at a place like this with comfortable quarters.
443. With regard to the pavilions, the total cost is estimated at £51,450, and the cost of the whole of the buildings is estimated at £108,350; therefore, the pavilions for the inmates are to cost only about half the total sum; the other half is to be swallowed up by buildings required for administration? That is not quite the case, because the cost of the pavilions at present at Rookwood should be added to the cost of the pavilions. It must be recollected that the administrative buildings you refer to are to be used in common for the existing institution as well as for the new one.
444. And have they not buildings at the present time used for these purposes? Yes. But they are not to be used for such. The dining-room you were in the other day will be used as a ward.
445. And these other buildings you propose to erect are in lieu of buildings now used for laundry purposes, dining-rooms, and so on? The present laundry will be used for farm purposes.
446. Do you not think that if this scheme is carried out, and the proposed expenditure incurred, the cost of the maintenance of paupers in this country will be something enormous? Not if you compare it with the cost in other places.
447. Have you any information upon that point? I cannot get very much, but I averaged the cost of five of the London workhouses, and they cost £46 per inmate.
448. Do you know how that item is made up? I have referred to a special work upon this class of building in which the cube contents of the buildings and the cost per foot are given. I have taken five good leading typical buildings, and I find the average cost is £46.
449. That is the cost for housing a pauper? Housing a pauper in London. He is housed there, and necessarily so, in very close quarters. There is not the same chance to keep paupers there by the pavilion system.
450. *Mr. Wright.*] And there is also a difference as regards the climate? Yes. This scheme is estimated to cost £40 13s. 5d. per inmate, as against £46 in London.
451. *Mr. Hassall.*] Have you any particulars of the cost per head in Victoria? No.
452. Or in any of the neighbouring colonies? No. I have particulars of the cost in the case of lunatic asylums and hospitals, but I have not been able to obtain the information in regard to institutions of this kind.
453. You could not get a fair estimate from the cost of patients in lunatic asylums and hospitals? This Committee recommended the construction of the Kenmore Asylum at a cost of £250 per bed; but we think we shall reduce that in the result to about £225, saving £25 per bed. Callan Park cost £308 per bed, Gladesville £108, and Parramatta £77. I admit that those establishments do not afford a fair comparison.
454. Because in the one case you are providing absolutely for paupers, and in the other case for people who are afflicted, and have to be kept under restraint? Yes.
455. How many paupers are there in the institutions in London where the average cost is £46 per inmate? According to the last returns, St. Luke's, in the City Road, had 1,251 inmates, St. George's Union 1,844, St. Olave's 377, and the Marylebone 744. These are poor infirmaries and unions.
456. And the average cost is £46? I would not say that they are necessarily the institutions I took, but I took five.
457. Then you do not think your estimate could be reduced without impairing the efficiency of the administration? Not if 3,300 inmates are to be provided for, and except I have favourable tenders—that is all I can hope for.

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458. If the work were carried out by tender, do you think any material reduction would be made in the cost of these necessary buildings? I should hope a percentage would be saved; but I could not say how much.

459. *Mr. Black.*] In answer to a question by Mr. Fegan, I think you said that some difficulty would arise in housing the children at Randwick Asylum, if it were proposed to remove some of the paupers from other places into that institution;—do you not think it would be possible to house the children at present at Randwick, in the main building—in the building now used as a hospital. I mean the Catherine Hayes building. If the receiving house now in use at the back were used as a hospital, do you think the Catherine Hayes wing would be sufficiently capacious to accommodate the children now in the main building? No, not quite. The Catherine Hayes hospital carries eighty-five beds.

460. And how many children are there now in the institution? One hundred and forty-seven; and this makes no provision for a dining-room or a day-room, so that I am afraid you could not get them in.

461. Do you think that Rookwood is the best site available to the Government for such a scheme of grouping as you propose? So far as my knowledge goes it is the best site available.

462. How far is it from the nearest part of the city sewerage scheme? I would rather leave that question to Mr. Hickson, because I do not know where his sewers come to.

463. You think it is sufficiently elevated to be easily connected with city sewerage system? Oh, yes; the elevation is all right.

464. It is proposed to resume some land at Rookwood, if this scheme is carried out;—do you know the area? I was not aware of that.

465. I refer to the piece of land which you told me you thought Mr. Brunker proposed to resume? Two portions have been sold, and the proposal is to resume those. One of them has a house upon it.

466. You have no idea of the probable cost of the resumption? No.

467. Do you know anything of the sewage system that prevailed at Salford in England about thirty years ago? I must have forgotten.

468. If I remember rightly it is a system of desiccation. I think the sewage is dried by compression. The solid portion is sold in cubes for the purpose of manure. Those cubes are said to be without smell until broken up. The fluid which is filtered off, if I remember rightly, is said to be so absolutely pure and tasteless that it is the common drink of the visiting aldermen? I think that system is called the General Scott system. It was also adopted in a town in Middlesex; but gradually better systems have taken its place.

469. You propose, I believe, to destroy the solids at Rookwood by combustion? I do.

470. Is there any danger of the obnoxious gases that would be liberated by the consumption of the faecal matter falling when given ponderosity by contact with the upper air—when the wind is in that direction—into the waters of the Potts' Hill Reservoir? Not if the plant is so constructed that all the surplus heat and steam is carried again through the furnace; and in all properly-constructed crematories that is done.

471. You think, then, that if the plant is properly constructed it will be impossible for any noxious gases to escape? I do not see how such a thing would be possible with a properly-constructed crematory. The effluvia, or whatever is drawn off in the process of cremating, is burnt again in a properly-constructed crematory.

472. That would necessitate a double furnace, I suppose? No; there are double flues in the same furnace, and the gases pass through the fire again. It is used, really, as a draught to the furnace.

473. Under such circumstances there would be no unpleasant odors escaping—not through the chimney? There should not be. I do not think there would be.

474. That being so, I suppose even the smoke would be colourless? Yes; it is the case at Bathurst. We have no fault to find there.

475. I believe, from what has fallen from you previously, that one of the chief failures of the present system is the fact that the sick are not sufficiently isolated from the aged and delicate? That is one reason of the failure; and also not having sufficient cube space per bed.

476. You are aware that at Newington there is some proposal for isolating patients of the better class;—do you think that is advisable in a pauper system? I do not know of my own knowledge what the proposal is at Newington. We prepared plans some little time ago for a series of double-room cottages round a quadrangle, and the institution is carrying those out itself. What the precise object was I am not aware. We did not find either the money or the supervision.

477. Do you not think, if there is to be any classification of patients at all, that it would be better to classify them according to their behaviour, and not according to their origin or up-bringing? I should think that would be the best; but of course necessarily I am not versed in management.

478. Yesterday you were asked some question with regard to hospitalism;—do you not think that it is only the inner skin of a building that is likely to be saturated with the germs of disease; when I say the inner skin, I mean the plaster, the flooring, the doors, and the fittings generally? That is all.

479. If these were renewed at stated periods, there would be no necessity for the wholesale destruction of the building from any dread of the conveyance of disease? There would be no need at all, if the building were properly constructed in the first instance.

480. Do you know of any cheap system for the deodorisation of faecal matter by the use of chemicals;—is there not some German system by which they drench the faecal matter with chemicals, and render it odorless—kill all noxious properties? Yes; there is such a system in use now in the neighbourhood of Sydney, to some extent.

481. Is that an expensive process? No; and proof of that is given in the evidence I gave the other day. A firm is prepared now to treat this matter from the George-street Asylum Parramatta at a less cost than is now being paid for its removal. That, to my mind, is a proof that it can be done.

482. What would become of the matter so treated;—could it be used as manure? The proposal was to take it to Rookwood, and put it into the ground there.

483. Merely to bury it, not to use it for any purpose of improving the soil? They say it will fertilise the soil, but I am not quite so sanguine myself. It would lighten the character of the soil very much, and probably in that case you would get better pasture.

484. If it is still proposed to maintain, say, 1,000 patients at Liverpool, with some alterations there in the direction of increased hospital accommodation, which I think is possible, if I remember the site rightly, that would, of course, largely reduce the cost of your Rookwood scheme; it would possibly render it unnecessary

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unnecessary to construct one group? That is so. It would save one group, and the administrative buildings would be proportionately smaller, or, in other words, they would be built in sections.

485. If the Committee were to make a proposal of that character, would you be prepared to recommend it? If the Committee gave up the idea of concentrating the whole, I think that would be the best proposal. But the inmates of Liverpool then should only be those who are able-bodied. I would remove all the sick. I would remove the isolated cases as well as the chronic sick.

486. How would it do then to retain the Liverpool Asylum as a refuge for casuals only? That would do very well.

487. That would render it unnecessary to go in for improved hospital accommodation at Liverpool? It would.

488. *Mr. Wright.*] I think, in answer to a question asked you some time ago, you said these plans had been hurriedly prepared? Not hurriedly; they were got up in a short time.

489. Were these plans prepared to meet the amount placed on the estimate, or was the estimate prepared to meet these plans? The sum voted by the House was voted months before I had any instructions at all.

490. Without any plans—before any plans were prepared? So far as I am aware.

491. So I take it these plans were prepared to meet the estimate? No; these plans were prepared to meet the requirements which I was instructed to provide for.

492. Yes; but to meet the estimate also? I was obliged to prepare these plans altogether independent of the estimate. I do not know what the estimate was based on; but I prepared them with a view to the greatest economy in every one of the buildings.

493. If plans are not prepared, is it competent for you or any architect to say what would be the actual cost? We can form a very close approximate idea of the cost of all our buildings before preparing any specifications.

494. You can cube them if you like, and make a rough estimate? That is one way of doing it.

495. But can you design the buildings, showing the elevation, and tell the cost of it with any degree of accuracy? Not the elevation only; the plans I could.

496. Plans and elevation, without any reference to the material or the finishing trades? Yes, we do it every day; we are obliged to do it.

497. But it is more or less guesswork, is it not? No, it is the result of experience. In this case I have six pavilions upon which I can base my further estimate. There the practice comes in.

498. You had the advantage of having built similar pavilions before, and these guided you in the present case? And our previous estimates of those were closely adhered to when the tenders came in.

499. So that, as a matter of fact, knowing the class of the buildings, as well as the finishing trades, you can form a pretty close estimate of the cost? Yes.

500. In view of the fact that the proposed asylum will contain a population of something over 3,000 old men, the bulk of whom are suffering more or less from diseases, some of which are of a most offensive kind, do you think it would be wise to treat any part of the refuse from that institution for irrigation purposes? Yes, I do. I think it is perfectly safe to treat the ordinary hospital sewage, and that from the general cases and the casual cases, in that way.

501. By that system you not only treat the urine of the patients, but also the slop waters as well as the water in which the bandages are washed and the sores are dressed? No; those are in connection with the isolated cases, and I would not treat those at all.

502. Only the general cases? That is all.

503. What do you propose to do with the fluid matter from the infectious or diseased cases? I propose to precipitate that, and I have marked the position for the crematory for these isolated wards.

504. What process of precipitation do you suggest? I have not gone into the details of the particular chemicals to be used. That is a matter which would hardly affect the scheme.

505. Are you aware that in Manchester very extensive works were constructed for precipitation at an enormous cost, and the undertaking was a total failure? No, I am not aware of that.

506. And that it was conducted by some of the ablest chemists of Europe? I am not personally aware.

507. You have no idea of the cost either of the work of combustion on the one hand, and precipitation on the other, or of utilising the fluids of one portion on the ground? Yes; I consider that the sum of £5,000 will cover the whole of the provision necessary.

508. That is an estimate? Yes.

509. And you still think that the ordinary sewage from the non-hospital portion of the building might with safety be used for the purpose of cultivating vegetables? I do.

510. I think you said that the kitchen appliances at Newington cost between £700 and £800? Yes.

511. That plant has sufficient capacity to cook for 900 people? Yes; that is the limit of its cooking power.

512. In a subsequent reply you said that the same estimate of cost would apply to a plant to cook for 3,000 at Rookwood? I do not think I said that. I said to-day that the cooking plant for Rookwood to cook for 2,000 would probably cost about £800. But I must explain that the cooking plant at Newington combines also a system of hot water and steam for baths and general purposes.

513. And a laundry also? Yes.

514. The cooking appliances at Newington, I understand, were made in the Colony? Yes, we are making others now for the gaols and the asylums. We are introducing all these cooking appliances.

515. I suppose they are of the most modern pattern obtainable? Yes, I have fitted up the very latest kind in Young Gaol, and it was finished about three weeks ago. It is the very latest improved cooking apparatus that is made, and it was made in the Colony.

516. You stated that the portions of the Randwick Asylum which you propose to utilise would accommodate over 500 patients? Yes.

517. Could you give the floor-space for which you provide the superficial feet? In the main asylum the floor-space varies from 50 feet to 47 feet per patient.

518. What do you consider should be the maximum space at Liverpool? The maximum accommodation for 900 patients would give 46 feet.

519. And at Parramatta? The accommodation there is 44 feet and 41 feet respectively in the two institutions.

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520. And what do you propose at Rookwood? I propose 44 feet, and 74 feet for the hospital cases.
521. Then, as a matter of fact, you propose less at Rookwood per patient for the non-sick than is now provided in the existing institutions? That is not so. The 44 feet at the Macquarie-street Asylum at Parramatta is necessarily an average over the whole of the inmates, including hospital cases as well as convalescent cases. But at Rookwood I have been able to separate the two, and I have provided 44 feet for the able-bodied and 74 feet for the hospital patients.
522. Referring again to Newington, can you tell the Committee what is the consumption of coal per annum at that institution? I do not know what is the annual consumption, but my officer who has charge of the cooking plant there tells me that since the erection of it the saving of coal has amounted to 115 tons per annum.
523. 115 tons per annum would alone seem to be a large consumption? Yes.
524. Having attained such a result at Newington, you expect of course to minimise the consumption of coal at other institutions? Yes. We can cook far cheaper under this new system and far better.
525. Following up the remarks of Mr. Hassall about the cost of these buildings, do you not think that £2,000 is a large sum of money to spend in the erection of quarters for the matron? It would be if the accommodation were for the matron only; but the matron's block includes other accommodation besides.
526. It was pointed out by Mr. Hassall that your estimate showed a total cost of £14,000 for kitchen and laundry appliances alone;—that seems a very large sum? It is; but the establishment is so large.
527. And I suppose it is possible that the estimate may be reduced? I hope it will work out in the same way as Kenmore is doing. There I am saving 20 per cent. on the estimate.
528. You said that possibly the heat used to cremate the solid matter at Rookwood would also be applied to produce electricity? What I meant was that it would be possible to combine the crematory with the electric lighting plant, and by that means to utilise all the waste and surplus heat from the crematory in the electric lighting plant.
529. For your electric lighting plant you have put down a sum of £3,000? Yes.
530. Do you propose to work that by an engine, or by water? By an engine. A powerful engine will be required, as it is a large installation.
531. Does not £3,000 seem a small estimate for supplying the electric light for the whole of the buildings including motors, dynamos, accumulators, and so forth? It looks small on the face of it; but it will not be necessary to light up the whole of the pavilions so that one may see to read in any position. As long as you give a general light through the pavilions it will be sufficient.
532. *Mr. Hoskins.*] Was it on your suggestion that the sewage and faecal matter in the Bathurst Gaol was disposed of by burning? No; it was not.
533. Have you yourself seen the way in which they dispose of the sewage at that gaol? Yes; frequently.
534. Is it burnt within the boundaries of the gaol wall, or at some distance from the gaol? Within the outer wall of the gaol.
535. Does not the smoke arising from the burning of that faecal matter smell disagreeably? No; we never had a complaint, and never detected a smell.
536. How far is the gaol building from the town? The gaol is, I suppose, three-quarters of a mile from the centre of the town; it is up on the heights.
537. There are not many houses built about the gaol? Not many.
538. And there are only about 350 prisoners there? That is the number.
539. In answer to Mr. Black you said that a number of towns in England had disposed of their sewage very readily; was that done by cremation or by means of sewage farms? By irrigation and sewage farms principally.
540. Are such farms considered a success in England? On the whole they are.
541. Is it not a fact that the smells arising from a sewage farm are very disagreeable? Not if the work is properly carried out.
542. Have not complaints frequently been made about the smell proceeding from sewage farms in different parts of England, say Croydon? Complaints have been made when the carriers have been allowed to surcharge themselves and become choked. I know of my own knowledge of cases when the carriers and the subsoil drains have become surcharged with solid matter on account of the non-absorbent character of the soil. But that has very often arisen from causes which can be removed, and have been. I know a case in Buckinghamshire at the present moment where Mr. Baldwin Latham, the engineer, has experienced that difficulty, and he has overcome it.
543. Then the satisfactory working of sewage farms, and their not becoming a nuisance to the neighbourhood, depends upon careful working and careful supervision? Yes.
544. And also primarily upon the nature of the soil over which the sewage is spread? Some soil is much better adapted for the purpose than other.
545. Have you ever been at the Botany sewage farm? Yes.
546. Have you ever smelt any disagreeable smells from that sewage farm? Not on the farm itself. I have in the outfall chamber, but not on the farm.
547. I suppose you will admit that it would be almost impossible to find a soil better adapted for absorbing sewage than that of the Botany sewage farm? It is capital soil—sand.
548. Therefore, per contra, the soil at Rookwood being non-absorbent clay it would be very difficult to deal with? It would not be nearly so good.
549. I think I may fairly assume that, in your opinion, the sewage from the proposed buildings at Rookwood must be disposed of either by the solid matter being burnt, or the fluid matter being taken by subsoil drains under the ground or otherwise by water carriage? Those are, in my opinion, the alternatives.
550. You have no idea what it would cost to convey the sewage of Rookwood to the nearest point of the Sydney sewerage system? I have not.
551. Did it never occur to you that if the sewage were conveyed by tunnel or pipes, and discharged into the Parramatta River, it would cause a nuisance there? Undoubtedly, if carried direct into the river, it would do so.
552. Seeing that according to your statement, in order to prevent the disposal of excreta and sewage from being a nuisance to the neighbourhood, everything depends upon its being carefully attended to, do you think that with a subsoil like that at Rookwood it would be safe to try the experiment? I think it would be safe so far as regards the slop waters. I am of opinion that the present system could be extended with perfect safety to any extent one liked,

553. You believe it would be perfectly safe to dispose of the excreta by burning? Yes.

554. Looking at the fact that there are only about 450 patients in the asylum at Rookwood now, and that the excreta is disposed of by being buried, I suppose you will admit that if that practice were persevered with, and there were 3,000 patients there, the ground would soon become poisoned, owing to the quantity of excreta that would be buried? To some extent. But considering that the acreage is so large, even under that system, if it were conducted under proper control, there need be no fear. But I think the other system is the safer one.

555. *Mr. Black.*] How long does it take buried sewage to undergo the process of conversion—say, with a clay subsoil? I think you can get evidence as to the actual time from the results at Rookwood, and that would be better than any opinion I might give.

556. *Mr. Hoskins.*] Supposing the Committee were to recommend that, say, 700 able-bodied paupers should still be kept at the Liverpool Asylum, and temporary arrangements were made at Randwick for accommodating 500 more, how long do you think it would take you to erect at Rookwood the necessary buildings to accommodate the patients remaining at Parramatta? That would be about 1,000. It could be done successively pavilion after pavilion, so that I think in a period of from nine to ten months we could get the whole done. With a special effort one might do it in a shorter time.

557. Seeing that you could not find accommodation for all the paupers under nine or ten months, and perhaps a year, and allowing for casualities, and having regard to the fact that the buildings at Parramatta are so ill-adapted for housing the helpless poor, do you not think it desirable that arrangements should be made at once by which the George-street Asylum should be relieved of the large number of patients who are now there? I think it would be desirable. In giving the opinion that it would take from nine to ten months to provide the whole accommodation, I would add that I could begin to give accommodation after the first three months, so that the men could go successively on to the ground as pavilion after pavilion was erected, the time taken to complete the whole being about ten months. In a case of emergency like the present, perhaps it could be done in a little less time.

FRIDAY, 7 FEBRUARY, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.

The Hon. JOHN DAVIES, C.M.G.

The Hon. JAMES HOSKINS.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Erection of Buildings at Rookwood for Infirm and Destitute Persons.

Joseph Aloysius Beattie, Esq., L.R.C.S.I., M.K.Q.C.P.I., Medical Superintendent, Liverpool Asylum, sworn, and examined:—

558. *Mr. Lee.*] You are Medical Superintendent at the Liverpool Asylum? Yes.

559. How long have you been in the service of the Colony? Since the beginning of 1878.

560. What positions have you occupied? First that of Medical Officer of Immigration, then in the Lunacy Department, subsequently in the Health Department, and now in the Charities Department.*

561. How long have you been at Liverpool? Ten years next September.

562. Were you medical officer at any of the other charitable institutions prior to that date? No, not in the New South Wales Charities Department.

563. Have you served in a similar capacity in any other country? Yes; I was clinical registrar of a large public hospital in Ireland, and medical officer of a large institution there.

564. In the report of the Director of Government Asylums it is shown that at Liverpool on 1st January, 1894, there were 887 inmates, that the number admitted during that year was 868, the number discharged, 690; the number dying, 280; and the number remaining in the institution on the 31st December of that year, 785; according to these figures there were, at the close of the year, 102 inmates less than at the beginning of the year;—can you assign any special reason why that should be the case? Except possibly the transference of inmates to some other institutions. I know of no reason why there should be fewer applications; on the contrary, the number seems to grow larger and larger each year.

565. What do you consider to be the proper capacity of the Liverpool Asylum? I should say 800.

566. Could 800 be accommodated there without any serious overcrowding? Including the cancer wards—yes.

567. The report also shows that at Liverpool, in the same year, the deaths were 280, or an average of 32·90, while the deaths at George-street Asylum, Parramatta, containing a larger number of inmates, were 166, or a percentage of 15·79;—how do you account for the higher death-rate at Liverpool? By the difference in the class of cases. At Liverpool we have practically all the indigent consumptive cases in the Colony and the cancer cases.

568. I understand that after applications for admission to the asylum are dealt with the patients are classified and the chronic cases sent to Liverpool? Yes; chronic, sub-acute, and moribund cases of consumption, and pulmonary diseases—in fact, the worst cases are sent to Liverpool.

569. In other words, the hospital asylum of late years has dwindled to a large extent into a hospital for the incurables? I should say it has developed.

570. As much as for the relief of the indigent and infirm? Rather more so. It has changed its aspect. It may be considered as in a transition state—rather less of an asylum, and more of a hospital.

571. And a very large percentage of the inmates are sick persons? Yes, 50 per cent.

572. Do you find the cancer hospital overtaxed in regard to accommodation? We have ample accommodation for our cancer patients.

573. And with reference to the consumptive cases? The wards for the accommodation of consumptive patients are not in accordance with the most modern ideas of treatment.

574.

* NOTE (on revision):—I have taken 6,000 immigrants from England to Sydney as senior medical officer of immigration. It was I initiated the substitution of steam vessels chartered from the Orient Company for the old sailing ships for the carriage of immigrants, with a marked decrease in our death-rate. I have had charge of the Quarantine Station. I have been boarding health officer, acting health officer, and first medical superintendent of Little Bay Hospital.

W. L. Vernon, Esq.
6 Feb., 1896.

J. A. Beattie,
Esq.,
L.R.C.S.I.,
M.K.Q.C.P.I.
7 Feb., 1896.

- J. A. Beattie, Esq.,
L.R.C.S.I.,
M.K.Q.C.P.I.
7 Feb., 1896.
574. In what respect? Eight or nine years ago, I recommended to Sir Henry Parkes the advisableness of making a balcony all round those two large wards, which the members of the Committee saw on the occasion of their visit, and opening some of the windows and making doors of them, so that we could put the patients out on their bedsteads and enable them to get an airing and lie in the sun, out of the wards. That was promised, but it has never been done. Although the ventilation in the wards is adequate, still the patients who are just able to move about are not able to get up and down stairs with facility, and consequently they are restricted to the vitiated air of the wards.
575. The simple addition recommended by you would meet the case? It would mitigate the evil. But the wards were not built as hospital wards. We are merely utilising them for that purpose. If there were a space round about the wards, and they were on the ground floor, the patients could drag their feeble limbs about and sit on seats amongst the grass and flowers, and that kind of thing. Only a very few can do this now, and those who can get down stairs have to be carried up again frequently.
576. Large as the accommodation is for that class of patients, it still requires adding to for their proper treatment? We might so classify the patients as to accommodate the consumptive patients on the ground floor; but, even then, the wards are scarcely of a character that would be advised, according to the most modern principles, for the treatment of consumptive patients.
577. I suppose, as a rule, the consumptive patients never leave the institution? Not as a rule. Some have gone to the Thirlmere Hospital, the Carrington Hospital, and other similar institutions, and some have come back to die at Liverpool.
578. I should like to hear your views as to the policy of having some place where all the incurables could be dealt with solely, without being mixed up with other patients, as they are at Liverpool at the present time? The advantages of a more systematic arrangement and more complete classification of the patients, as well as a more efficient nursing staff, are so apparent that it is not necessary that I should dwell upon them.
579. Could you not suggest some means by which the incurables could be housed in one position? I think the scheme proposed for the removal of patients to Rookwood, so far as it affects the patients themselves, is a very admirable one. I am quite aware that there are objections, more practical than sentimental, to the adoption of that scheme—the proximity of the waterworks, for instance. I am not prepared, and it would be difficult if not impossible, to assign any scientific basis for the objection, with regard to vitiated air and so on. But it is a little more than a sentimental objection, it is rather a practical one, I think.
580. Rather a serious one? I would consider it an objection, as regards the selection of a site, to this extent, that if another site could be obtained for the treatment of consumptive cases their removal to such a site would be a judicious preference.
581. Do you visit Parramatta occasionally? I have been there—not lately. I have sometimes been at Rookwood and I have also been to Newington.
582. I suppose it has occurred to you that there is a large proportion of hospital patients at each of these asylums? Quite so.
583. Would it not be possible to have some place where the whole of these hospital patients could be dealt with, instead of having a series of hospitals, as is the case at present? Such a scheme as the present one would facilitate the executive work, and diminish the expenses in regard to many details. The carriage of provisions and medicines and other things would be much less, and I think the change would be altogether beneficial. It would be on parallel lines to such a place as Callan Park or Gladesville where large numbers of insane persons are maintained.
584. Are there any insane in your institution? From my experience in the Lunacy Department, I think we have very many cases of senile dementia which I could not distinguish from similar cases I have had under my care as medical officer in hospitals for the insane.
585. Would they be classed among the incurables? They certainly could not be cured.
586. You think they are fairly fit subjects for a lunatic asylum? Yes.
587. And for treatment such as is carried out at Callan Park? Yes, but of course that would involve a very considerable expenditure. The per capita cost for the maintenance of a lunatic is very much more than that of a pauper.
588. But apart from that I wish to draw a distinction between the ordinary indigent and infirm being treated at our asylums and incurables being treated there also. At present it is a mixed system. Could not the institution be relieved to a certain extent by the removal of incurable cases? I should think so.
589. And would you recommend that in future great care should be taken that only such cases as are really indigent should be admitted to these asylums? So far, we have not had any serious inconvenience from the presence of semi-demented cases in the asylum at Liverpool. During the nine and a half years of my medical superintendence we have had less than a dozen deaths from suicide. I have repeatedly sent cases to one of the asylums for the insane that have developed suicidal mania afterwards.
590. Would it not be possible to convert an asylum like that at Liverpool into an institution solely for the treatment of incurables, of whom there are so many at present in that asylum? Yes, I think it would be very feasible indeed.
591. By the removal of the healthy inmates? Quite so.
592. And convert the Liverpool Asylum into a home purely and simply for the treatment of these incurables? Yes.
593. It simply means that they go in there to stay until they die? I think I would suggest the removal of the consumptive cases for the reasons I have stated. They have not room round about for walking. The people of the town object to their presence in Liverpool;—so much so, that I had to prevent the admission of these patients into the little park in front of the asylum.
594. Where would you suggest they should be removed to? Perhaps the Government might subsidise such a place as the Goodlet Home, at Picton.
595. Do any of the consumptive patients leave your institution? Some have gone to the Goodlet Home, and some have come back from there.
596. Do they go at their own expense? I think the matron there makes some arrangement to defray the expense, and sometimes we defray the expense.
597. Have you any arrangement with the Goodlet Home, for the transfer of patients? No.

598. Do you know whether that institution would be willing to take any number of that class of patients? J. A. Beattie, Esq., L.R.C.S.I., M.K.Q.C.P.I.
It would have to be very considerably enlarged;—it is on a very small scale at present.
599. You think then that the Liverpool Asylum would be suitable for the treatment of the class of patients you have just indicated? Yes; chronic cases, paralytic cases, chronic surgical cases, deformities, and all cases other than consumptive.
600. And cancer? No; I think we could accommodate the cancer patients.
601. As a rule, is not the class of people with whom you have to deal at Liverpool Asylum, the scum of the Colony? Certainly.
602. And do they not bring in every disease under heaven? Yes.
603. The nature of their lives outside would necessitate their herding in all the worst localities? Yes.
604. Supposing the Liverpool Asylum were devoted to the accommodation of patients such as you have enumerated, how many do you think it would accommodate? I should say 600.
605. That will be 200 less than the number you have there now? Afflicted patients require larger space than healthy patients. The number I have given would include cancer patients. A few people of the town object strongly to the presence of cancer patients. But this objection only arises from a prejudice, and an ignorant prejudice.
606. Is there any danger to the town from the presence of these cancer patients? Certainly not.
607. Do you think there would be any danger to the public if they were planked down within an easy distance of the water supply? No; I do not think so. I regard consumption as a more dangerous disease in that respect.
608. How many patients are there in the cancer ward? There were forty-two on the date of the last report, and we have accommodation for over 100.
609. How many consumptive patients are there? Over 100 at present; the average is from 100 to 120.
610. How long have the new wards been erected? One pavilion has been erected for about twelve months, and the other for nearly two years.
611. In dealing with the return of the Director of Government Asylums as to the number of inmates remaining at Liverpool, it is necessary, is it not, to take into account the number admitted during the course of the year? I presume so.
612. For instance, although Liverpool started the year with 887, and ended the year with 785, it admitted during the course of the year 868. So that as many inmates as those remaining at the close of the year passed through the institution during the year? Yes. We have also an average of about 100 inmates at an institution in connection with Liverpool about 2 miles distant, called the Glenfield Farm. This farm is rented by the Government, for the purpose of supplying the institution with milk, poultry, and eggs and of enabling the pigs to be removed from the vicinity of the Liverpool Hospital to a less objectionable place.
613. Is it proposed to continue this other institution or to close it? That I could not say. It supplies the inmates of the Liverpool Asylum and the Glenfield patients with milk, of which we use a very large quantity. It also supplies poultry, and of course the pigs are disposed of. It is practically a farm, and is very largely self supporting, being worked principally by the inmates.
614. In the event of the Liverpool Asylum being continued for the class of inmates to which reference has just been made, would it be necessary to maintain the present staff. I refer more particularly to the nurses and attendants? I think you should re-arrange the nursing department altogether—not have so many inmate wardsmen, who are male nurses practically, and introduce perhaps some women nurses into the institution. Our nursing at present is defective.
615. Would the cost of management be thus reduced or increased? Rather increased.
616. Would it be necessary to build any additional buildings or repair any of the existing ones? I think some slight alterations in the details of the buildings would be necessary. Nurses quarters would have to be erected.
617. Any outhouses, weather-sheds, or anything of that kind? Our shelter sheds are certainly insufficient for the present number of inmates. But for those who would be able to go about and avail themselves of outside walks and so on under the conditions you have indicated I think the sheds we have would be ample.
618. What is the system of drainage adopted at Liverpool? We use dry earth closets, and the sewage is regularly removed and buried at the back of the cancer ward. It is removed by the inmates, under the supervision of one of the attendants. It is buried near the bank of George's River.
619. In pits of what depth? From 4 feet to 6 feet.
620. Is it treated chemically before it is deposited there? No, it is simply covered in with earth. It is removed from the pans, and with it there is of course a percentage of chloride of lime and other disinfectant and deodorants in ordinary use in hospital wards.
621. And what eventually becomes of it. Is it removed from the pit? No, it remains there.
622. And that has been going on for many years? Yes.
623. How are the liquids disposed of? The liquids and solids are all emptied by a tip-cart into those pits every day.
624. And is that the only system of drainage? That is the only system. In regard to the spittle of the consumptive patients, we treat that with a solution of bi-chloride of mercury. That also goes in with the others.
625. I presume that would be taken from the vessels in the wards? Yes.
626. How do you dispose of the sewage from the cancer wards? In the same way.
627. Have you any suggestion to make with reference to a more complete treatment of the sewage? The present plan, of course, represents a very elementary method of dealing with sewage, and especially hospital sewage. I suppose the most modern method would be by burning.
628. If the institution were maintained, do you think it would be necessary to adopt some other system of dealing with the sewage? No, not in the absence of consumptive cases. Those are the cases that I dread.
629. Do you think that the depositing of the excreta in pits in a position adjacent to the asylum has contributed to the high death rate? Certainly not. I think the presence of the grave-yard on the other side of the town is just as objectionable.
630. Have you had any cases of typhoid? Not in the asylum.
631. It appears somewhat remarkable that in an institution through which so many patients have been passed since the year 1890 there has not been a single death from typhoid. How do you avoid the disease? The age of the patients of course minimises the danger of typhoid infection. It is almost exclusively a disease

- J. A. Beattie, disease of youth or early life. Then I suppose the general cleanliness of the institution and the tolerable sanitary arrangements have something to do with it.
- Esq.,
L.R.C.S.I.,
M.K.Q.C.P.I.
7 Feb., 1896.
632. Where do you get your water supply? Until the last two years principally from an underground tank inside the front centre gate, and from the roofs of all the buildings. The drinking water is now chiefly obtained from this source. For lavatory and culinary purposes we obtained water from the railway tank. There was a pump above the dam by means of which tolerably pure water was obtained from George's River. We have now a good supply from the Nepean source.
633. *Mr. Davies.*] The water that is supplied to the city of Sydney is also supplied to Liverpool? Yes, I believe it is the same water.
634. *Mr. Lee.*] Is this water available all through the building? Yes.
635. And through the upper storeys? Yes.
636. Is there any hydrant or other service in case of fire? Yes, we are provided with those. I regularly have exercises amongst the inmates, under the attendants, in case of fire.
637. And is the pressure of water sufficient to cover the roof? Yes, that has been tested I believe.
638. In what state of repair are the main buildings? A very fair state of repair. Some of the floors of the older buildings are a bit shaky, but I do not know to what it is attributable.
639. And with regard to the additions or the wings? They are in tolerable repair.
640. Is the building dry throughout? Yes.
641. I gather that the only objection you have is that the institution being so largely used for consumptive patients the bed space or air space is insufficient? That is the principal objection.
642. In every other respect you think it answers the purpose very well? It is quite on a par with the county hospitals in England—the county hospitals for general cases.
643. Is not the accommodation there now much superior to what it was ten years ago? Very much indeed.
644. I suppose in arranging your patients you place the stronger ones in the upper storeys? Yes; the epileptics and cripples and very aged inmates are placed in the lower storey.
645. As far as possible you keep your hospital patients on the lower floors? Yes.
646. If there was a serious outbreak of fire at night what possibility of escape would there be for the inmates? I think the means of egress would be tolerably good.
647. Would the patients in the upper storeys be able to get down themselves? Yes: there might be one or two exceptions, but I do not think there is very much danger from fire. During the ten years I have been there, there has not been the slightest danger. The cancer wards and the long room are, however, built of wood, the former being detached from the main building and an old structure.
648. There is a large number of very old inmates in the block? Yes.
649. That is somewhat a danger, is it not? Well, of course, a stupid old man lighting his pipe might do some damage. The present Director of Asylums has altered the conditions altogether and improved them in various ways. He has appointed a night watchman who has to go round each ward and at every hour of the night touch a tell-tale clock.
650. At the present time the institution I understand is taxed to its full capacity for accommodation? It is overtaxed.
651. You would not have room for three hundred more? Oh no.
652. What is the custom in other countries with regard to the treatment of pauper patients? In this Colony we are very much more liberal in our allowance of food. We give the paupers a more generous dietary scale, and a more liberal allowance all round. The conditions of life in an institution such as the Liverpool Asylum are very much less irksome than they are in a parish poor-house in the old country.
653. Does the same system prevail in other countries of admitting almost every applicant and permitting inmates to leave whenever they like? Yes, I think so. The methods of application may be different. I think in England, an applicant must obtain an order from a clergyman in the parish, a magistrate, or some other influential person.
654. In other institutions with which you have been connected, are the patients permitted to leave whenever they desire? No, they have to go through a certain form. I think there is a greater delay in that respect than is the case here. They are more readily admitted and discharged in this Colony than is the case in similar institutions at home.
655. Have you found that any of the discharged inmates have returned to Liverpool for re-admission? Yes, they have done so frequently. One of the evils of the present system is that if a man is insubordinate, or renders himself objectionable by pecculation, drunkenness, or the use of abusive or vile language, and he is discharged from the institution, he can change his name and be admitted to another one. For instance, he may be discharged from Parramatta and admitted into Liverpool.
656. If he were discharged from Liverpool and applied to be admitted at Parramatta, without changing his name, would he be admitted there? No, the ordinary channel of admission is the officer in Cleveland-street, but practically we are at the mercy of such inmates in the matter of admission.
657. What is the ordinary method of gaining admission? A man is unable to get employment; he has bronchitis, is 70 years of age, and unable to procure food, and would be taken up by the police if he were found begging. Perhaps this man has slept for a fortnight in the Domain. A policeman tells him to go to the Government office at Cleveland-street, or to the Government Medical Officer. He presents himself there, and his name, religion, nationality, occupation, and social condition are entered in a book. He is then sent by an official in Cleveland-street to one of the asylums for indigent and destitute persons. I cannot exactly say what reason guides the official in selecting the particular institution, unless it may be that one may be less crowded than the others, or may require the services of the particular trade to which the man may belong.
658. When he reaches the asylum what takes place? If he comes to Liverpool I examine him to see if he requires the ordinary house diet, or if he wants medical comforts; and if he is ill I see what medicines are suitable to his case. He is either a hospital case, or he is an inmate. If he is an inmate I ascertain whether he is able to do any work, and, if he is, I put him into one of the wards to clean up, or be employed in some domestic duty, or in the garden. If he is a hospital case I give him special diet and the requisite medicines.
659. When he presents himself from Cleveland-street, have you the power to admit or reject him? If he were an objectionable character, or if he came in a state of drunkenness or smashed the windows, as one man did—he broke every pane of glass in my windows—I should not admit him.

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660. Practically on presentation of the order from Cleveland-street, and after the necessary medical examination, you admit such applicants? Yes.
661. All you have to do as medical superintendent is to see that the man is not bringing in some disease, and you classify him accordingly? Quite so. I have also to ascertain his mental condition. Then there are cases where a man would come to the asylum who had been found travelling along the road with a rupture or stricture, or some disability of that kind. It would be an act of cruelty to send such a man down to Sydney to get an order, and I take the responsibility of admitting such a case myself.
662. Have you, during your term of office, found many cases of loafing where men would make a convenience of the institution for a month or two? Yes. We have some of the most objectionable class of ruffians of the kind. They have come out of gaol and been too clever to find their way back there again.
663. I presume this class of men are not necessarily over 70 years of age? We have some old terrors even at that age.
664. Have you not many under that age? Yes.
665. I suppose the question of age does not guide you altogether in deciding applications for admission? No.
666. These people are then at liberty to leave the institution at any time they think proper? I do not know what may be the practice in the other asylums, but at Liverpool when a man says "I am going out" he is detained until I ascertain what are his motives for leaving.
667. As a matter of fact you have had many applications for re-admission, and the men have been again taken in? Yes.
668. Can you suggest any means by which undesirable applicants could be dealt with and refused re-admission? I think that where a man has been admitted and re-admitted several times, and has proved of a recalcitrant character, the hands of the medical superintendent or local head of the institution ought to be strengthened in the direction of compelling him to work.
669. Do you ever find any of the old men leave for a week or two and have a gentle spree and then come back again? Yes.
670. Considering the large number of paupers compared with our limited population, can you suggest any means by which the number admitted to these institutions might be limited? I think ships coming into the harbour sometimes bring cases that are only fit for hospital treatment. I have several cases under treatment now—consumptive sailors—Norwegians and others. The native born who seek hospital treatment in the asylum bear a very small proportion to the total number of patients.
671. Have you reason to suppose that we are housing more than our fair proportion of paupers? Yes. It seems an anomaly that people from Ireland, Scotland, England, Sweden, Germany, or any other European country should come out here to be a tax upon the Government.
672. Have you any reason to suppose that any proportion of the population of the adjoining colonies come here for admission to these asylums? Yes; we have people that have drifted in here from Victoria, Queensland, South Australia, Tasmania, and New Zealand. I have cases in my mind from all those places.
673. Leaving out of view merely casual cases, do you think there is any concerted action on the part of the people of the other colonies to send their relatives here to be taken care of? If the conditions of eleemosynary existence are less irksome here than in other colonies it is only human nature that people will get rid of the weaklings and send them here.
674. Is there any better system of housing the indigent in any of the other colonies than we have here? I am not in a position to say.
675. Have you noted any large number of colonists from Victoria, or any other of the colonies, as applicants for admission? No, not a very large number.
676. As a medical superintendent of large experience and many years standing, must it not have occurred to you that there is some outside reason for the enormous number of applications for admission to benevolent institutions in this Colony? Yes.
677. How do you account for it? One fact is the comparatively wandering life of many of the poorer classes here. They go from mining centre to mining centre—they never settle down anywhere—they have no home as it were. And then the conditions of depression have been so marked within the last few years that the number of applications would naturally be increased on that account.
678. I presume if an applicant said he was from any of the adjoining colonies that would not be a bar to his entering the asylum? I do not think so. The Director of Asylums has initiated a system of inquiry from reputable people as to the correctness of the statements made personally by every applicant for admission. For instance, if a man says he comes from Victoria, and his father was a squatter or a large grocer, the Department makes inquiries at the place mentioned as to whether or not the relations of the applicant are able to pay, and, if so, how much they are able to pay. These inquiries are probably made through the police.
679. And do any of them pay? Yes.
680. Many? I must refer you to the Secretary of the Department for that information.
681. Do you happen to know whether there are in your asylum any inmates whose relatives are in a position to contribute towards their support? Yes; that is the case.
682. Do you consider it would be wise in the interest of our institutions to legislate for the protection of the really indigent, and for compelling relatives to pay towards the support of inmates, and also to prohibit the landing of pauper patients in the Colony? Yes; I have held that opinion for a considerable time.
683. *Mr. Hassall.*] Do you not think a material saving would be effected if all the chronic cases now in the various institutions were concentrated in one particular place? I should say, obviously so.
684. And, in addition, to have a convalescent hospital attached, where patients who were on the road to recovery might be further treated, and be able then to pass out of the institution altogether? Quite so.
685. You think that would be beneficial, and be a great saving in the cost of administration? I am quite satisfied of that.
686. In an institution like Liverpool Asylum, where there are about 900 inmates, the majority of whom, as most bushmen do, carry swags, do you not think it would be advisable to have a disinfecting room erected in which these swags could be fumigated, so as to prevent the introduction of contagious diseases? Quite so. I have upon many occasions suggested this.

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687. You think that in the interests of public health such a thing is absolutely necessary? Yes; and obviously for purposes of personal cleanliness.
688. Do you think it would be advisable to concentrate the whole of these patients at a place like Rookwood, so close to the water supply of the city of Sydney, on the ground of public health? Certainly not on the ground of public sentiment.
689. Or on the ground of public health? Well, I think it would be difficult to establish a scientific base of objection with any degree of certainty; but as a matter of sentiment such a proposal is repugnant, and I can only answer generally, that if it were a question between two sites, the one more remote from a water supply would be the more desirable.
690. Would Liverpool, in your opinion, be a good site on which to concentrate these chronic cases? I do not see any objection to Liverpool at all for such cases referred to by Mr. Leo.
691. At Liverpool you get your water supply from the Nepean River? Yes.
692. You are not dependent on George's River? No.
693. Does the drainage from the asylum go into the river? Yes, partly.
694. And is partly dealt with on the surface, I suppose? Yes; the fluid excreta, I should say, percolates through the earth towards the river, and that is one of the most perfect conditions of drainage. The asylum drainage goes into the river below the dam, and up to the dam there is a tidal stream.
695. In an institution of the kind at Liverpool the sewage could be suitably discharged into the tidal waters of the river, and no additional expense would be required in disposing of the sewage? That is my opinion.
696. There is no danger of polluting the water supply above the dam? No.
697. The drainage from the town and the drainage from the hospital both go into the river below the dam? Yes.
698. There is thus no danger to the population of Liverpool in regard to the water supply from the river? Certainly not.
699. In the event of steps being taken to concentrate the class of cases referred to at the Liverpool Asylum you would recommend that certain additions be made to the hospital ward in the shape of balconies and verandahs? Yes; I believe we can get land round about, and we want a little more space for walks and gardens and that kind of thing.
700. Additional breathing space? Quite so. There is a strong feeling against the presence of the hospital in the town on the part of a few of the Liverpool aldermen.
701. You think that land might be acquired at a reasonable cost to give you sufficient space so as to enable the inmates of the institution to breathe fresh air when opportunity offers? Quite so.
702. It would not be necessary to go beyond the limits of the institution, or to interfere with the town? No; we should go towards the river.
703. Would that additional accommodation enable you to increase the number of your patients? Yes. I have said that there is accommodation for about 600 ordinary hospital cases, exclusive of consumptive cases. There is space for the erection of pavilions in the paddocks attached to the institutions. There is a paddock there where the old fellows sit down in the intervals between meals, and it is capable of extension on two sides.
704. Crown lands adjoining? Yes, and other unused land to the extent of, say, 30 acres, which might be bought at the price for which it was sold by the Government.
705. So that you have ample space there for the erection of one or two additional pavilions if the number of patients were increased? Yes; there would be space for four pavilions.
706. I think you said that every precaution was taken to ascertain whether the relatives of patients were in a position to contribute towards their support? Yes.
707. Are you in a position to state whether this liability on the part of relatives is evaded? Yes, it is attempted to be evaded. I admitted a man on Wednesday last who came under the name of Beresford, and that was his sixth alias; he had five other names.
708. Did you find out whom his relatives were? He is a chronic old loafer.
709. I presume you have a good percentage of these men? Yes, a large percentage.
710. In your experience you know for a fact that many people apply for admission to the institution whose relatives are in a position to support them? Yes, many. As an illustration, I may say that there is at present very keen competition among the undertakers in Liverpool. When I went to Liverpool there was only one undertaker, who was employed at intervals, and now there are four. These persons have got into the habit of making inquiries surreptitiously from the wardsmen, and in any way they can, in reference to the relatives of inmates who are about to die. Acting on the weakness of these people a letter is sent somewhat to this effect: "Surely you would not like your brother to be buried as a pauper." The result is that money is forwarded, and the defunct pauper has a grand burial, sometimes as much as £10 or £15 being paid, and there is a most imposing funeral ceremony. Last Sunday fortnight a man was buried with military honors.
711. This goes conclusively to show that there are men taking advantage of the privileges of the institution who have a better claim upon their relatives? Yes. At the same time, I may repeat that the Department, as arranged by Mr. Maxted, take every precaution to find out the social position of the relatives with a view to making them contribute.
712. Can you give us any idea how many additional pavilions would be required if all the chronic cases were concentrated at Liverpool--I mean the bed-ridden cases, those who would never go out of the institution? I do not know the exact number in the other asylums. We should also have to make allowance for the increase of population.
713. Have you a sufficient staff in the institution to deal with violent and unruly inmates? Yes; we are able, if necessary, to expel them.
714. *Mr. Fegan.*] Does it not seem rather a contradiction that with so many bad characters in the institution, as would appear from your evidence, up to the present time you have had no trouble whatever with them? We have had trouble. For instance, as I told you, one man smashed all my windows. My house was burnt down, and I believe this was done by two men whom I put out for being drunk, although I have no proof of that.
715. During the ten years you have been at Liverpool, I believe you have had no cases before the Police Court? Yes, I have.
716. How many? About a dozen.
717. And on an average you have had 700 or 800 people there? Yes.

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718. Considering that these men come from the most depraved and the lowest stratum of society, do you not think that fact speaks well for their conduct? Yes; as a general rule, I think so.
719. In the unions in Ireland, with which you are well acquainted, I suppose a greater number of cases of breach of discipline occur? I think so.
720. Even under the strict rule of the Board of Guardians? As a general rule, the conduct of the inmates at Liverpool is exceptionally good.
721. Creditable considering the class of society to which the men belong? We have some malingerers and some mischief-making people who are constantly writing and fault-finding and inciting others to insubordination. The recent committees of inquiry and so forth, which have placed a premium upon the information of such worthless characters as these, have done a good deal of damage in this direction.
722. It is not the only class of society where the same thing is observed? No; but we meet a very vicious class of individuals in these asylums, floating from one to the other, capable of any rascality.
723. A class you would really expect to find, I suppose, from the bitterness of their lives? Yes, and more especially from their own innate perversity.
724. Caused by their surroundings I suppose? Well there are some of them of whom it might be said they have not one good element in their character.
725. But those are very few I suppose? They are very few.
726. You would not say that of the institution as a rule? No; among the inmates are many most respectable and well-conducted people. I have seen some amongst them who were gentlemen in every way, including lawyers, doctors, and clergymen.
727. And some of the poorest who have not been educated to that extent? Yes; many are most amiable, and lead good, Christian lives.
728. And, therefore, some consideration should be given to these persons in their old age when they need assistance? Every consideration, of course.
729. Have you an assistant at the asylum? I have a dispenser.
730. And you have to look after these asylums at Glenfield and Liverpool, as well as the cancer room without any medical assistance? Except a dispenser.
731. The dispenser does not deal with patients? No; he merely mixes the medicines. I have to sign certificates for everything.
732. Therefore, as far as that is concerned, whether at Rookwood or elsewhere, the work could not be done cheaper than at present? I do not think so.
733. Do you not feel, sometimes, when you have so many cases to deal with, that you could do with an assistant? Yes.
734. In answer to Mr. Lee you said that the nursing at the institution was not as good as it ought to be, and that although it might be a little more costly the work would be more efficiently done if you had more nurses? Yes.
735. That is really necessary for the comfort of the patients? Yes, absolutely necessary if the consumptive patients are to be retained at the institution.
736. Do you know the system in vogue in England and Ireland in regard to the admission of patients? I believe an application has to be made to the relieving officer, backed up by a testimonial or recommendation from a clergyman or magistrate or some other person. As far as I remember, in the South Dublin Union, the practice was, for the applicant to be first placed in the casual ward, where he had a bath and his physical requirements were attended to. After a period of probation he is brought before the Master or the Board of Guardians.
737. Who can refuse him admission? Certainly.
738. But you think our system is better and more humane? I think so.
739. Have you ever made any representations to the authorities that your space or accommodation is not sufficient? Yes, repeatedly.
740. Dealing with the question of convenience or efficiency, you would not under any circumstance recommend a consumptive ward or pavilion to be erected either at Liverpool or at Rookwood? I would not go quite that length. I would not recommend it at Liverpool at all. With regard to Rookwood I suppose there would be a difference of opinion amongst doctors. I thought I had made myself understood in reference to that.
741. You said there would be a danger by reason of the reservoir being so close to the institution at Rookwood? I think it would be considered hazardous by a number of people.
742. And by yourself I suppose? Well, I think in view of the possible increase of hospital accommodation necessary there, the proximity of the reservoir would be an objection.
743. Therefore as a medical man you could not recommend such a building to be erected at Rookwood? I think a more eligible site might perhaps be obtained.
744. You would only build there if you were unable to obtain a more suitable place? Quite so.
745. Only for that reason? That is my opinion.
746. But if a more suitable place could be got with a little expense, you would be entirely in favour of that? The possibility of pollution of the water would be entirely through the medium of either the earth or the air. I believe the altitude of the dam at Potts' Hill makes the former impossible. There is another little matter that comes into my mind. I had three cases of suicide by drowning in the Liverpool Asylum. We shall always have an occasional suicide in these institutions. I have had three, and there have been a good many more at Parramatta. If one or two of these cases occurred at the dam—if that is possible, I do not know whether it is possible or not—it certainly would be an objection.
747. There would also be the danger of microbes getting into the water in the dam? As I said before, it would be difficult to prove scientifically that there is really a danger in that respect. But there is a very widespread sentiment on the subject, and there is a natural repugnance to the idea. I can only go the length I have gone and say that if a more eligible site is obtainable I think it ought to be selected.
748. Do you think there is any danger from the burying of solid excreta? No, I think it can be treated chemically so as to realise the minimum of danger. I do not apprehend any danger.
749. I suppose you have given the matter a great deal of consideration? In a general way—not in reference to Rookwood. Clay soil is the worst soil for that purpose, and I believe it is clay soil at Rookwood.
750. And would there be danger in the case of clay soil? I do not think so, under conditions of safe-guard.

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751. Therefore, as far as that phase of the matter is concerned, there is not so much danger as some people think? No.
752. I suppose in dealing with these people with various diseases you would prefer a building on the pavilion plan, instead of a building of one or two storeys? Yes, I think the pavilion is more generally approved by the latest medical authorities.
753. I suppose you know it is proposed to build pavilions at Rookwood instead of buildings of one or two storeys? Yes.
754. Therefore, that proposal has your approval? Yes.
755. The pavilion style of building is much more convenient? It is much more convenient, and is easier of egress in case of emergency, and it involves the least physical exertion on the part of debilitated inmates.
756. And after the first cost it is less expensive? Yes.
757. Do you know that it is proposed to build hollow walls for the pavilion? I think that a very great improvement.
758. In nearly all the hospitals built in England, or anywhere else where science is supposed to have made anything like rapid strides, they pursue that course? Yes.
759. It provides against dampness and is better for ventilation? Quite so, and produces a more even temperature inside.
760. Reference was made yesterday to the question of the absorption of poisons by hospital buildings—will you give us your opinion with regard to that? The incaustic tiles proposed to be used are now usually adopted in the erection of buildings of this kind. I saw them in the London hospitals four or five years ago.
761. Is it correct, as pointed out by Mr. Vernon in his evidence, that without some such preventive hospital buildings are liable to absorb the germs of disease? Yes; medical analysts have scraped the lining of the walls of hospitals, and have found there different varieties of these spores.
762. *Mr. Black.*] I gather from something you said with regard to the management of these asylums that a little more power should be given to the superintendent? I meant the Department generally with regard to the exclusion of objectionable characters.
763. Have you any heating appliances at Liverpool for warming the buildings in cold weather? We have large open grates.
764. You find those sufficient? Yes; they are better than steam, as they cause a draught.
765. With regard to patients who have well-to-do friends outside, I believe you have in Liverpool the brother of a manager of a city bank? Yes.
766. Has that gentleman been applied to? That is a matter as to which the Secretary would be able to speak.
767. Still I suppose you report in these cases? Yes. On the occasion of the visit of the Director or Secretary or any other of the officials, I mention anything in reference to any particular inmate or patient that seems to me worthy of notice.
768. I gather from what you said to Mr. Fegan that you think the use of incaustic tiles in hospitals is an advantage? Yes.
769. It would do away with the necessity for the continual renewal of the inner skin of the hospital? Yes, of the walls.
770. Except, perhaps, so far as the floor is concerned? Yes.
771. I suppose the spores are likely to get into the floors? Yes; but we wash our floors with chloride of lime in solution of boiling water.
772. Do you think that destroys the spores? Yes, practically.
773. What is your opinion of the system of destroying excreta by combustion? I think, after direct removal, it is the best. It is the best of all destructive processes.
774. You think removal by water carriage is preferable? Yes, where practicable.
775. Do you think there is no danger of contamination of the water supply at Rookwood by the liberation of noxious gases, or the falling of soot from the chimney? The air which in the summer time, I believe, blows from the asylum towards the reservoir, would take up a certain proportion of dust of all kinds, and the most dangerous dust that could be taken up and borne anywhere would be the desiccated sputum of consumptive patients—dried and pulverised spittle.
776. *Mr. Hoskins.*] I suppose you know that the adjacent reservoir is uncovered? I should suppose so.
777. *Mr. Black.*] You think that independently altogether of the combustion system there is always danger of the water supply being sullied by the presence of sick people in large numbers in close proximity? I think it is an objectionable condition of affairs if it can be obviated. As to the exact degree of danger I am not prepared to speak.
778. If it were considered inadvisable to have cancerous, consumptive, or ophthalmic patients at Rookwood, do you think the presence of large bodies of fairly healthy paupers would be objectionable? I do not think so—less objectionable than the indiscriminate, motley collection of a rural town.
779. It would not be more objectionable than an extension of the town of Rookwood on the other side? No; probably not so objectionable, because there would be supervision of the sanitary surroundings.
780. Then if Rookwood were reserved merely for the reception and maintenance of the indigent and infirm poor, you think that, so far as the water supply is concerned, there would be no great objection to it? That is exactly my opinion.
781. Do you not think your hands would be very much strengthened if some legislation were passed for the purpose of preventing the admission of people sent here from the other colonies, as Mr. Lee hints, in some cases, with the knowledge of the pauper authorities in the other colonies, and which would also compel well-to-do people to support their pauper relatives;—do you not think legislation of that character is urgently required? Yes. I remember the Inspector-General of the Insane reading a paper before the Royal Society on that subject with a view to the introduction of some measure of prohibition against undesirable people who are simply deposited upon our shores to be maintained at the expense of the Government.
782. *Mr. Hoskins.*] I suppose you are aware that in America a law prevails by which persons not being able to obtain employment and maintain themselves, can be sent back to the country from which they came? Yes.

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783. In the event of its being determined to clear out the asylums at Parramatta, and make other arrangements, do you not think that the asylum at Liverpool would suffice for the satisfactory housing, as regards healthy inmates, of a fair and reasonable proportion of the indigent poor of the Colony—I refer to the indigent poor generally? Yes. It would be desirable to separate the hospital cases from the others, and to have a hospital, pure and simple, and an asylum, pure and simple. The objection to the institution of which I have charge is that at present it is half and half.

784. *Mr. Humphery.*] Were you in charge when the most recent addition to the building at Liverpool was erected? I was in charge during the erection of the cancer wards, but not during the erection of the brick building.

785. The most recently erected brick building, I think, is of two storeys, with a ground floor and one floor above? Yes.

786. As far as you are able to express an opinion from long experience of Liverpool, do you think that that building is suitable, both in regard to economy of administration and convenience, for the purpose to which it is now applied? I do not think it is as suitable as the pavilions proposed to be erected at Rookwood. For instance, there are stairs, and it is difficult for these old fellows to get up-stairs, and it would be difficult for them to get down-stairs in case of fire. Although I believe there would be ample time for them to get out, still I think, considering the difficulty which old people with stiffened joints, gouty legs, defective sight, and so on, would experience in mounting the stairs—supposing, for instance, they had to go out to the closet at night—a pavilion with one floor would be better.

787. How many inmates are there in the most recently erected building? I should say there are 200 or 300.

788. Is that too many in your opinion? We are generally overcrowded, and especially in the hospital division.

789. For the purpose of supervision, would it be more convenient to have 200 inmates in one building than to have them spread over four pavilions? I think for the purposes of administration, and for the comfort of the inmates, the one-storey pavilion is the more desirable.

790. I am not speaking with regard to the first cost, but as to convenience and economy of administration? I do not think the difference in that respect is at all appreciable.

791. Would you not require a larger number of nurses for the one-storey building? You would not require nurses at all if there were inmates. I do not think that the difference in the expense of administration, as between a double-storey building and a number of pavilions within a reasonable distance of each other, is appreciable.

792. Could the accommodation at Liverpool be increased? Yes.

793. Having regard to the area of land attached to the institution? Yes; it is capable of extension.

794. To the extent of how many acres of land? I am not in a position to tell you the acreage. We have not many acres. That is the one objection to Liverpool—that it is so near the town, and there is so little land round about it. There is, nevertheless, quite enough space for the erection of two or three hospital buildings—I think I said up to four—because, of course, these people do not take a long range in their walking.

795. What is the maximum number of inmates that you think could be suitably provided for at Liverpool, having regard to the additional buildings which you think might be erected there? I should think you could provide for miscellaneous hospital cases up to 600.

796. Mixed patients? Ordinary cases.

797. Such cases as you could not deal with at the present time? At present we have no proper classification, and patients with different diseases are huddled together. I have no doubt that ordinary cases—that is, excluding consumptive cases, and including cancer cases—could be treated in the present buildings with whatever additions were considered necessary up to 600.

798. How would you propose to treat the consumptive cases, which I observe are very numerous, and also the cancer cases? The consumptive cases are very numerous, and should be treated specially in a separate hospital replete with every modern appliance. Cancer patients are not objectionable. They are objectionable, of course, but they can be treated there, because, as a rule, they only come in to die.

799. *Chairman.*] It is laid down by medical authorities that the danger of infection from smallpox exists for a distance of 1,500 yards;—I suppose you think we might reasonably believe that to be the case? Yes.

800. That being so, and as the Potts' Hill Reservoir is situated within a quarter of a mile of the site of the proposed hospitals, there is a possibility of the water becoming contaminated? I think the possibility is very remote; but there is a prejudice, with more or less ground for it. I think it would be a very difficult matter for medical experts to prove. Going through the Red Sea, you will often notice, if you are sitting on the quarter-deck any length of time, that there is a deposit of sand on your clothes, and even on your face, so that it is evident that particles of dust are carried in the air. With regard to Glenfield, although the situation is more bucolic and more in the country, surrounded by trees, I would not allow a consumptive patient to go there, as I should be afraid that his spittle on the grass might give consumption to the cows.

801. *Mr. Black.*] It struck me from time to time, when you were speaking, that you thought that, although medical science did not at the present time perhaps sufficiently understand how infection is conveyed, yet, it was within the bounds of possibility that discoveries might be so extended in the future that, after having established such a hospital at Rookwood, we might find out that we were in reality contaminating our water supply? That is exactly what I meant.

802. *Chairman.*] Your evidence in regard to the pollution of the water, put in general terms, is “better not”? That expresses my opinion.

803. *Mr. Humphery.*] In your view, then, it would be undesirable to concentrate as many patients as proposed in close proximity to the water supply—mixed patients? I do not think there is any objection to that. I think it is probable that the conditions of life in an institution of that kind would be less detrimental than the conditions of an ordinary township.

TUESDAY, 11 FEBRUARY, 1896.

Present:—

THOMAS THOMSON EWING, Esq., (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.

The Hon. JOHN DAVIES, C.M.G.

The Hon. JAMES HOSKINS.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Erection of Buildings at Rookwood, for Infirm and Destitute Persons.

Isaac Waugh, Esq., M.B., Medical Superintendent, Parramatta Asylums, sworn, and examined:—

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804. *Chairman.*] Are you Medical Superintendent of the Hospital for Infirm and Destitute at Parramatta? Yes.

805. How long have you been in charge? Since the 1st May, 1892.

806. *Mr. Clarke.*] Have any complaints been made by the public against the asylums at Macquarie and George Streets, Parramatta? I am not aware. I know nothing officially except what comes to me from the head of the Department.

807. Are you of opinion that the asylums of which you are Medical Superintendent are suitable for the inmates? I decidedly think that the George-street Asylum is perfectly unsuitable. It was formerly a flour store, it was afterwards a woollen mill, and it is totally unfit for the purpose for which it is at present used.

808. Why? On account of the height of the building, and the number of old inmates who cannot get up and down stairs. They are virtually imprisoned.

809. What is your opinion with regard to the Macquarie-street Asylum? There might be objections to it on account of its being in the centre of the town; but it could be made useful for a certain class of patients.

810. Are the buildings suitable? They are very low, and they are not at all in accordance with modern ideas as to what such an institution ought to be.

811. For what class of patients would either of the asylums be suitable? I do not think they are suitable as asylums at all. The Macquarie-street Asylum might be useful as a central hospital for the reception of certain cases.

812. You are aware that it is intended to build near Rookwood? I have heard of that for a long time.

813. It is proposed to have buildings erected on the pavilion system to accommodate about 3,000 people? I have been over the proposed site, which is near the present asylum. I have been attending at that asylum as medical officer.

814. Do you consider the site a good one for the purpose? Taking into consideration all the surroundings, I consider it is a suitable position. I could offer some objections to it; but taking it round and round it is a suitable site.

815. Are you aware that there will be some difficulty with reference to drainage at Rookwood? The site could be very easily drained; but objections might be taken by the owners of private property which might be injured by the drainage being taken through it.

816. Can you suggest the way in which the drainage could be carried out from the present site? That is a very difficult question, and it is one more for an engineer than for me.

817. What are your objections to the proposed site at Rookwood? I know from personal experience that it is an exposed position; in strong westerly wind it is exceedingly bleak. There is not sufficient shelter, and in cold wintry weather the inmates would have to remain very much indoors.

818. Are these the only objections you have to the proposed site? I have no objection to the site. I am certain the drainage could be made good.

819. Are you aware that at the present time the refuse at Rookwood is utilised in gardens and orchards? I have heard of it, but I do not know personally.

820. If the proposed buildings were erected, do you think they would be injurious to the water supply at Potts' Hill, which is in the immediate vicinity? I do not see how it could be injurious to Potts' Hill Reservoir, so long as there is no drainage from the institution to Potts' Hill.

821. Is it intended to have a hospital within a quarter of a mile of the reservoir at Potts' Hill;—would not that be objectionable? I do not see that there could be any objection if it were certain there would be no contamination through drainage. It might be said that the water would be contaminated by microbes floating in the atmosphere; I do not pay much attention to that. Judging from what I have seen in connection with the metropolitan hospitals at home, I do not believe there would be any appreciable danger.

822. Would it not be better to have the hospital erected in some other portion of the ground, instead of where it is now proposed? If the hospital could be separated from the other buildings it would be much better.

823. Is it possible to erect the hospital on any other portion of the ground? I have been over the ground with Mr. Vernon, and I went over it myself. I think the site actually fixed upon is the best. That is the elevated ground some distance away from the main building on the spur of the hill.

824. *Mr. Fegan.*] Do many deaths occur at the Parramatta Asylum? Taking everything into account there are comparatively few. I think they are only equal to the ordinary death-rate outside.

825. Under better conditions would there be a smaller number of deaths? That might be the case. Of course if persons were removed to a better position the number of deaths would probably be reduced.

826. Is any nuisance caused by the river near the existing institutions? Yes; the smell from the river is sometimes very objectionable.

827. Is that caused by refuse from the asylums? No; it is caused by the town, and not by the asylums.

828. Have you heard that the residents of the town charge the asylums with causing the stench from the river? If they do so it is not correct.

829. Have you heard of that charge? I may have heard it said, but I took no notice of it. I have heard nothing officially about it.

830. Then it is really the people of the town, and not your asylum, who create the nuisance? I am certain that the George-street Asylum does not create the nuisance.

831.

831. Have you a large number of cases in the upper storeys of the George-street Asylum? Yes; they are equally distributed. There are five storeys. I. Waugh,
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832. Is it a fact that some of these people have not been downstairs for twelve months? Yes; some of them are bedridden, and even if they were on the ground floor, they could not get out. 11 Feb., 1896.
833. Are there some not bedridden who cannot get down very easily? Yes.
834. Therefore, they cannot get the fresh air which the old and infirm should get? They get plenty of fresh air through the windows.
835. Can that properly be called fresh air? The wards above are exceedingly well ventilated, as there are plenty of windows. The patients very often do not like fresh air, and we find it difficult to get them to keep the windows open. On account of the height they undoubtedly get the purest and best air.
836. Would you favour the pavilion system or the one-storey building? Undoubtedly. A great many of these men are practically in prison by not being able to get in and out.
837. Have you been consulted with reference to the plans of the new buildings at Rookwood, or as to the necessity for removing patients from Parramatta to Rookwood? I have heard that that was intended, and I got notice that after a certain time the patients would be removed together from Parramatta, and that I would have to reside at Rookwood. That is a long time ago.*
838. Have you ever been consulted as to the suitability of the place, or as to the buildings proposed to be erected at Rookwood? I am not aware that I ever wrote a report on the subject. I have only inspected the ground in a general way. I do not remember that I was ever asked to put anything in writing.*
839. Have you ever made complaints about the unsuitableness of the buildings at Parramatta? Yes; I made constant complaints. The question has given me a great deal of anxiety, particularly on account of the danger of fire.
840. What would be the consequence if a fire broke out? Many of the inmates would be burnt to death before they could be saved. That is, if a fire once got hold of the building properly. We have the very best appliances for dealing with fire, and if the water supply lasted, I do not anticipate that there would be much danger. But if a fire got hold of the building, I am almost afraid to say what would be the result.
841. Considering how disastrous the results might be, do you think that better provision should be made for housing the inmates of your asylum? I have not the slightest hesitation in saying that the George-street Asylum is not a fit place to house over 1,000 people.
842. Being Superintendent of these large asylums, do you not think that you should have been consulted before any serious steps were taken to remove the patients? I think my opinion might be asked; I might be consulted.
843. You were not consulted? I cannot quite say whether I was or not—I cannot remember. I have no written document to prove that.
844. Have you any record in your books that you were called upon to consult as to the best methods of housing the infirm and destitute people in your asylums? The only way in which that would be done would be by calling me before a Board as in the present instance. I have been asked over and over again if I could discharge certain inmates, because the place was over-crowded. Of course, I always answer that it is impossible to discharge inmates, who were incapable of earning their living, and who would have to starve in the streets or go to gaol. The place is over-crowded, but I know that there are very few old men in George-street Asylum who could be turned out into the streets.
845. Seeing that this question has been before Parliament, that plans have been prepared, and a scheme proposed, do you not think it very strange that your opinion was not obtained with reference to a system which it seems some people are ready to adopt? I may have been asked in that way, but I am not aware that I ever wrote any communication on the subject. I have no record that I have ever been asked to put my views on paper.
846. If you were asked would you say that Rookwood was a suitable place for housing the poor? Yes.
847. Would you say that from every point of view? No, I consider that it is a very exposed position for people of chest complaints—consumptive cases might suffer in winter.
848. Do you think good drains could be obtained at Rookwood? Yes.
849. Do you think there would be any danger to the reservoir if consumptive cases were kept in the neighbourhood? I do not think so so long as there is no drainage or effete matter conveyed from the asylum to the reservoir. It would be most dangerous if any of the effete matter from the patients escaped into the reservoir.
850. Supposing the excreta were buried in the soil near the reservoir would there be any danger then? I am afraid there might be percolation through the soil. There is a danger of soakage.
851. Might germs be conveyed through the atmosphere to the reservoir? That would almost altogether depend on the closeness to the water.
852. You can see on the plan where the hospital for consumptives is to be placed. It is about a quarter of a mile from the reservoir. Do you think there would be any danger of germs being conveyed through the atmosphere to the reservoir? I do not think so.
853. You are aware that there is a proposal to bury the excreta. When the land in which the night-soil is buried, is disturbed, will there be any danger of the atmosphere conveying germs to the water? When the offensive matter is buried and particular vegetation takes place the offensive matter is decomposed, and it becomes perfectly harmless.
854. What would be the proper depth at which that matter should be buried? About 4 or 5 feet. If that were cropped over with a green crop the offensive matter would become so decomposed as to become perfectly innocuous.
855. Are there a large number of eye patients in your hospital? Yes.
856. Are they treated separately from the other patients? Yes, they have their own bath-rooms and so on. We keep the really bad cases in Macquarie-street, because there is an ophthalmic surgeon appointed by the Government to attend to these cases. They get separate treatment there.
857. But are they not kept in the same yards as the other patients? At Macquarie-street they are kept pretty well apart, but under the present circumstances it is impossible to keep them entirely apart from the other patients.

858.

* NOTE (on revision):—In December last I was requested by the Director to visit Rookwood, in conjunction with Dr. Beattie and Dr. W. S. Brown, to inspect and give my opinion as to the proposed site of the new buildings.

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858. Has it not been recommended that a separate asylum should be built for these special cases? In my opinion if there was an ophthalmic hospital so as to keep all the ophthalmic cases apart, it would be more in keeping with the times. It is impossible to isolate cases in a large building such as we have got.

859. Are not a great many of these eye diseases contagious? Yes.

860. Therefore, it is necessary to have separate treatment? It is very dangerous to have patients mixing together, because you cannot prevent healthy patients from using towels which have also been used by ophthalmic patients.

861. *Mr. Hassall.*] Why do you condemn the George-street Asylum? In the first place it was never built for a hospital. It was built in a straggling way, the buildings are too high, and a large number of the inmates are in such a condition that they cannot go up and down stairs.

862. How many storeys high is the building? There are five storeys altogether, and four storeys we use for patients.

863. In case of fire there would be an appalling loss of life? Yes.

864. How many storeys are there in the Macquarie-street Asylum? Only two—the basement and one storey. It was built originally as a military barracks. I think it was built in the time of George III. It is something like the building at Liverpool, only that the building at Liverpool is much more modern.

865. Is there any room for building increased accommodation at Macquarie-street? No.

866. Would it be possible to retain either of the buildings at Parramatta? Under certain circumstances, if the Macquarie-street Asylum were retained, it might be of advantage as a sort of depôt for receiving certain patients. There is a certain class of patients which could be kept there without detriment to the town.

867. What class of patients could be kept there? There are some of the old pensioners of known good character who would be perfectly harmless to the town, and if they were allowed to remain they would not feel that they were being exiled, as will be the case if they are taken to another place.

868. Are there any men whose health is fairly good? Yes; they are only suffering from the infirmities of old age.

869. Could the men you refer to go up and down stairs at the Macquarie-street Asylum? Yes.

870. With regard to people suffering from disease, do you think that the pavilion system would be preferable to the buildings at present used? If I had the building of a place I would prefer building two storeys. I believe that it is healthy to sleep in a second storey. I would keep the basement for those who could not get up and down stairs.

871. Would you recommend a two-storey building on the grounds of health and economy? Most undoubtedly. You could accommodate twice the number of people in the same space, and under equally good conditions.

872. Could you supervise them with a smaller number of attendants? Yes; I could supervise them better than if all the patients were on the ground floor.

873. Do you think it would be desirable to concentrate the chronic cases of disease at one particular spot, instead of having so many cases at one asylum, and so many cases at another;—do you think it would be better to concentrate the whole of the cases of disease at one spot? I think it would be better to concentrate all cases simply of old age and the infirmities arising from old age at one place, leaving out all cases of cancer and things of that kind. It would save considerable expense.

874. Could such cases be concentrated at Macquarie-street Asylum? I should say that Macquarie-street Asylum would be a very suitable place for those who are not suffering from actual disease.

875. Do you think that chronic cases of disease, such as cancer, consumption, and so on, could be concentrated at another place, say, Liverpool? At present all cases of cancer are sent on to Liverpool. There is an order to that effect.

876. Do you think that course would be advisable? My opinion is that all cancer cases should be treated in one hospital—that is done in the old country.

877. Which would be the best place to concentrate such cases, Rookwood or Liverpool? I think Liverpool is very suitable for cancer cases.

878. Do you think that consumptive cases should be treated at Liverpool, rather than at Rookwood? At some periods of the year Liverpool is exceedingly close and debilitating. The heat is very oppressive, and would be injurious in advanced cases of phthisis. The position at Rookwood would be good for such cases except for the cold in the winter. It is very hard to draw the line, but taking it altogether, with proper buildings, Rookwood would be a suitable site.

879. Would the George-street property be of any value? I do not think it is of much value. As far as the buildings are concerned they have no value, and I doubt whether the land would bring much money. It might sell if it were cut up into small allotments.

880. Have you any fear of contagion through being in the same atmosphere as the patients? No; it is my profession, and I take precautions.

881. Do you think that the fear of contagion through germs being carried by the wind to the water supply is more a matter of sentiment than anything else? I think it is greatly exaggerated, and it is mostly sentiment.

882. If germs did get into the Potts' Hill Reservoir, would they not float on the top of the water? They would float in the air, or become absorbed before they reached the reservoir. I would not hesitate to use the water.

883. The water supply being obtained at a considerable depth below the surface, is not the fear of contagion groundless? I do not believe there would be any danger. I would have no fear for my family if they used the water. It cannot be proved that the germs would float for that distance. The ozone in the atmosphere and other constituents would decompose or neutralise the poison.

884. Do you think that the only danger would be from defective drainage? Yes. The only danger would be if there was any chance of the drainage going direct into the water supply.

885. *Mr. Black.*] Do you think that cancerous and consumptive cases should be isolated from the ordinary destitute people? Yes, particularly cancer cases.

886. Do you think that Rookwood would be unsuitable for consumptives because of its exposure? I say it is very much exposed to cold winds from the west.

887. Do you not think that popular opinion would be very much against the planting of any hospital for the treatment of cancer or consumptive patients in the vicinity of the water supply? I do not know what

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what prejudices might be entertained. In the old cities of the world you will find the hospitals in much closer proximity.

888. In the old cities they have no alternative—here we have. Do you not think that popular prejudice should be considered in this matter, when it is likely that a scare would arise among the people. Is it not even possible that people may contract disease through fear? I do not see how they can contract disease in that way—it is a mere matter of funk.

889. If some site could be discovered which would not be so much exposed as is the Rookwood site, and which would not be near the water supply, would it not be preferable to the Rookwood site? If you can get a better place of course it would be preferable.

890. Would you be inclined to recommend Liverpool as a site for a cancer and consumptive hospital? In the summer months Liverpool is very hot and oppressive, and that would be injurious to many consumptive cases.

891. Would Liverpool be a good site for ordinary hospital cases? Yes, a very fair place.

892. If a scheme were brought under your notice which proposed to somewhat increase the accommodation at Rookwood, for the housing of the infirm, and destitute poor, closing up both the Parramatta asylums and taking patients from there to Rookwood, and if that scheme also proposed the housing of ordinary hospital cases at Liverpool, and in addition the securing of a favourable site for cancer and consumptive patients, in some climate which had the advantage not only of elevation, but of protection from extremely cold winds, would that scheme have your approval? Yes.

893. Do you know if many persons come from the other colonies for admission to our asylums? Yes, I know that many come from Victoria and Queensland, and a few from New Zealand. They come particularly from Victoria.

894. Do you think that those people were sent from Victoria by their relatives, or have you any reason to believe that any of them were sent over here by some body of the people in Victoria, whether connected with charitable institutions or not? I do not know, and it would be unfair for me to say so. I have this knowledge that people come from Victoria to New South Wales knowing that they will be better treated in our asylums.

895. Do you know if the expenses of these people as far as the New South Wales border, were provided for them by their friends or other people interested in having them taken out of Victoria? I cannot say that. I know that very often they cross the border and shortly afterwards they are found destitute. They then get a railway pass from Albury in to Parramatta.

896. You say that you are in favour of the erection of a two-storey building; would you propose to house the more vigorous patients overhead? Yes. I prefer to have hospital cases on the second floor for health's sake.

897. Is there not an objection to that system in the fact that those underneath would be exposed to the noise, and a certain amount of vibration caused by people moving about overhead? I do not think those things can be taken into account. If the building were properly constructed and proper discipline were maintained I do not think any inconvenience would arise from that source.

898. *Mr. Wright.*] What previous experience had you of these institutions before you were appointed in 1892? In some of the principal hospitals in Dublin. In the Richmond, Whitworth, and Hardwich hospitals in Dublin. They are three large hospitals. One was a special surgical hospital. There was a hospital for mixed diseases, the other hospital was for fevers and all sorts of infectious diseases. The three institutions were separate, although they were in the same ground.

899. Were you ever in a similar institution where the patients were exclusively confined to the aged and infirm? No; but I was in one of her Majesty's Naval hospitals.

900. Did you ever have any experience of work-houses? No, except for a short time when I was on duty for another. I know something of the working of the Irish poor-houses.

901. Is our system of housing the poor as good as, or is it worse than the Irish system? I think it is very superior here. The poor here have much to be thankful for, especially in the matter of food.

902. Was there any difference between the housing of the patients? The work-houses I have seen at home were good substantial stone buildings, and no fault could be found with them. I am speaking of the year 1860. They were far and away better than the buildings in George-street. They were new and properly built.

903. You say that the percentage of deaths in the Parramatta Asylums was very small? Yes; taking into account the ages of the patients. If you compare them with the general death-rate outside, you will find that they compare very favourably.

904. Is the percentage 14 per cent. less than the average percentage of the whole Colony? Yes. But of course you have to take into account the fact that there is great infant mortality outside.

905. But then, there is a great deal of mortality in the asylums from senile decay? Yes; there are a great many broken down men.

906. Does not that show that the provision made for these people is not very inadequate? I think the provision made for the poor, with the exception of the building in George-street, is very adequate and liberal.

907. Even taking the state of the buildings into consideration, does it not show that the poor are well treated? Yes; even under present circumstances I think the poor have nothing to complain of.

908. Is cancer an infectious disease? I think that an open sore inoculated by cancerous matter would probably take on a cancerous character. There is a great objection to other people associating with cancer patients.

909. According to medical science cancer is not infectious? It may not be considered infectious; but I believe you can inoculate it.

910. Would it not be possible for flies to convey poison from a cancerous patient to a comparatively sound person? Yes. I knew a case myself of a skilful surgeon who operated in a cancer case, and who died within a fortnight through becoming inoculated.

911. Because you think it is possible to inoculate persons with cancer, you are of opinion that cancer cases should be treated separately? Yes.

912. Does not one of the highest authorities in the world say that cancer is not infectious, and cannot be communicated in any way except by direct contact with the blood? There are differences of opinion, and there is a great difference between infection and contagion. In the case of infection there must be a

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medium. Contagion is where a person is brought into direct contact. A disease may be contagious and not infectious. I do not believe cancer is infectious.

913. With regard to consumption you said that you saw no objection to a hospital for consumptives being erected within a reasonable distance of the water supply of Sydney. The Potts' Hill Reservoir covers several acres, and the water is open and exposed. Is it not a fact that the expectorations of consumptive patients are always carefully destroyed by medical men? Yes; and they ought to be.

914. When you cannot destroy the expectorations of consumptive patients, when they dry and become exposed to the wind, what is the consequence? My argument is that it should not be allowed in a well-regulated place. No matter of that kind should be allowed to get into the atmosphere in any place, much less near a water supply.

915. But it is proposed here to have a consumptive hospital, with patients in various degrees of illness—some would be in bed, but others would be taking daily exercise. How could you possibly guard against the danger to other people outside? You cannot prevent them from spitting on the ground.

916. Do you contend that the germs or spores contained in the expectorations of patients walking about the grounds, could not by any possibility be carried by the wind into the water supply? That is a very large question. I doubt it very much. I know that dry expectoration will float for some distance in the atmosphere, according to the way the wind blows, but it is very difficult to say whether the oxygen in the air will not render it harmless.

917. It is stated by very high class men, that these spores in the atmosphere may enter the lungs of sound persons and infect them with tuberculosis? It certainly would be injurious for healthy persons to inhale the breath of a consumptive.

918. But I am speaking of dry expectoration? I think the ozone and oxygen in the atmosphere would so decompose the injurious matter that it would be rendered harmless.

919. Supposing that medical scientists hold the opinions that I have stated, would it be satisfactory to a population of 400,000 in Sydney and its neighbourhood, to know that in the immediate vicinity of their water supply there was a number of consumptive patients who might possibly infect that water? I think that wiser men than myself will have to answer that question.

920. If scientists and medical men make such assertions as I refer to, what would be the sentiments of the people on the subject? I do not know. But I know that public sentiment runs very high sometimes on very trifling questions, when there is no reason for it.

921. Do you think that, notwithstanding the danger of having consumptive and cancer hospitals close to the water supply, we should be justified in erecting these buildings on the proposed site? I am only giving my own opinion on the subject, and I do not believe the purity of the water would be affected.

922. Have you given any attention to the question of sanitation and the treatment of disease germs? I have read all the best books on the subject. I get the *Lancet* and the *Medical Journal*, and I read the views of all the best men of the time on the subject.

923. Do you say that if excreta is buried 4 or 5 feet deep, and the ground on the surface is cultivated, there will be no possible danger? Yes; vegetation would convert the poison into its component parts and render it harmless. It is only by combination of certain component parts that poison is produced.

924. Are you aware that recent scientific researches have proved that the germs of anthrax and typhoid exist for twenty years under the surface of the soil, and are as virulent as ever? I am not aware of that; but if the oxygen, nitrogen, hydrogen, and other component parts are separated, the injurious matter is rendered innocuous.

925. Would you modify your opinion if you were informed that the subsoil at Rookwood is known to be impermeable clay? I never inquired into the geological formation there.

926. Are you quite clear in your opinion that the establishment of a cancer hospital and consumptive hospital on the proposed site at Rookwood would not be injurious to the water supply of Sydney? That is my opinion.

927. If you had the direction of this proposal would you have a separate hospital for ophthalmic patients, another for cancer patients, and another for consumptive patients? Yes, that would be much better; there should be a fair distance between them.

928. Would the hospitals shown on the plan be far enough away to procure isolation. In the main building there would not be sufficient isolation—the hospital ward should be further away. The patients should be prevented from coming into contact with the other inmates.

929. Would you have them a mile or two apart? No; a quarter of a mile would be sufficient.

930. If the hospitals were a quarter of a mile apart, do you think there would be no risk of infection? Yes, it would be much safer.

931. Let me point out again that the Potts' Hill Reservoir is only 10 chains from one of the hospitals, and 22 chains from the furthest one? If you have a block of buildings you must take into account the space that there will be around them. If you take the recreation grounds of the two buildings there will not be that distance between them. I am taking the distance between the two blocks of buildings.

932. Do you approve of concentrating 3,200 patients, with all the administrative force, on this particular site? I would not concentrate them all there; it would be better to have some separation and isolation. It is not a good system to create a town consisting of diseased and infirm persons.

933. If a counter proposal were made that the asylum at Liverpool should be retained as a hospital for the most serious cases of cancer and consumption, and to have all the other patients removed to Rookwood, would you approve of that? I do not think it would be well to take all the cases on to the one site. For a certain class of cases Liverpool should be retained, and Macquarie-street Asylum should be retained for receiving another class of patients. Then I think the present buildings at Rookwood would meet the requirements of the case.

934. Is it necessary to have a casual place at Rookwood? There must always be some place of that kind where patients can be kept under observation.

935. But this is a casual ward for newcomers? I do not see any necessity for that.

936. I understand the patients are treated first as casuals; they are examined and properly cleaned before they are admitted to the main building? That system prevails everywhere.

937. Personally, you see no necessity for this casual pavilion? Not in that way. I do not see that people needing charity should be kept under observation unless for some particular reason.

938. Do you think there should be any classification of the inmates of these institutions who are comparatively healthy? I think it would be very difficult to do so.

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939. Do you think it would be possible to keep away the vicious and criminal from the others? If a man is a criminal he is not kept in the institution.

940. A man may have been a criminal? I do not think he should be branded on that account. The moment I find that a man commits an offence against the law, I turn him out and inform the police, and he is then tried before the Bench.

941. Do you say that none of the inmates of the Parramatta asylums are able to earn their living? I have gone over them carefully, and the only men who could earn a living are those who are employed in doing some work, such as cleaning up, and so on.

942. Are they not earning their living? They are paupers; but they are actually assisting to do the work of the institution.

943. Do not patients in the Parramatta Asylum earn their living by doing gardening work outside? I do not permit it; I am not aware of it. If a man was earning money outside, I would give him something to do inside.

944. If it is generally stated that such is the case, do you consider that it is untrue? Yes. If it is done it is without my knowledge or permission.

945. Do not the patients go in and out at their own pleasure? No.

946. Cannot they leave whenever they like? A man can get his discharge if he pleases by putting down his name. If a man asks his discharge I give it to him; but I have to certify that he is fit to travel.

947. What proportion of the men obtain discharges at one period of the year and come back again? They are constantly coming in and out. A large proportion go out in the summer months; but they come back tattered and torn in the winter.

948. In that case some of them attempt to earn their living? They wander all over the country. I cannot say whether they attempt to earn their living.

949. Do you give those men who do work in the institution any extra pay? They get extra tobacco and a few perquisites.

950. *Mr. Hoskins.*] Do you know whether any provision is made in the colony of Victoria for suitably housing the indigent and sick poor? I do not know anything about the provision made there. The people who come across from Victoria have acknowledged to me that they do so because they are so much better treated here than in Victoria. I believe they have no institutions in Victoria similar to what we have here.

951. Is not the Macquarie-street Asylum very much overcrowded at present;—are not the beds too close together, and are not beds made up on the floor? We have to put beds on the floor. It is overcrowded according to proper hygienic principles.

952. How many patients are there in the Macquarie-street Asylum at present? Three hundred and two.

953. You admit that it is overcrowded? Yes.

954. Are not the ceilings in the Macquarie-street Asylum very low? Yes.

955. Are not the windows very small? Yes.

956. Is not the ventilation very defective? Owing to the way in which the windows are placed, and the number of windows, there is a fair amount of ventilation. There is not sufficient ventilation according to the views of the present day. It is a very old building.

957. When the Government are making fresh provision for housing the infirm and destitute, do you think it would be wise to continue the occupation of these asylums at Parramatta? With a little expenditure, I think, the Macquarie-street Asylum could be made very useful as a receiving place, and for keeping a certain class of inmates.

958. Supposing your views were carried out, how many persons do you think ought to be housed at Macquarie-street Asylum with due regard to health? Two hundred and forty or two hundred and fifty.

959. Are you not aware that there is a special pavilion in the asylum, at Liverpool, for housing cancerous patients? Yes; I do not know how many are there.

960. Is not that the only place where cancerous patients are housed? I forward all cancer cases to Liverpool. I do not know what is done elsewhere.

961. *Mr. Humphery.*] Will you look at the plan on the table. It is a design by Mr. Vernon for a building to accommodate about 240. You will observe there are two wards on the ground floor, and two wards above, with a passage in the centre;—in your opinion would a design of that kind be more economical as to cost and for purposes of administration than the proposed pavilion system, each pavilion containing sixty beds? I should say it would be much more economical, and I would much prefer this plan to the other system.

962. Will you state your reasons? In the first place, it would be more economical in the general administration; in the second place, in a great many instances it is much better for patients to sleep on the floor above the basement, so far as health is concerned. I am speaking from a hospital point of view.

963. About what proportion of the inmates of the Macquarie-street and George-street Asylums would be able to use the second floor? One half of the inmates of the George-street and Macquarie-street Asylums could use the second floor.

964. Would there be any objection to a second floor on the ground of difficulty in ascending? No, I prefer to see a second floor myself.

965. *Mr. Davies.*] Were you and the rest of the medical officers in connection with these asylums, consulted with reference to the proposed concentration of the whole of the pauper patients at Rookwood? I am not aware that we ever were consulted together. I do not remember that there was any official communication. If there had been we would have had to send in a report in writing.

966. Have there been no representations made by the medical staff? There may have been representations made separately but there was no meeting where the matter was argued out.

967. There was no medical board or conference as far as you know? I am not aware of any.

968. As far as you know has any representation been made by the officials or medical superintendents of the different institutions to the Government as to the inadequate space for housing the poor? I think I have on more than one occasion remarked as to the unsuitableness of the George-street Asylum as a Government institution. I have put it pretty strongly.

969. In writing? I think so.*

970. Have you seen the plans on the pavilion system to accommodate 3,500 people, and do you favour the principle of concentration in that way? I do not favour it. 971.

* NOTE (on revision):—I can find no record amongst my papers of having communicated in writing re the unsuitableness of George-street Asylum, therefore I wish to qualify my reply to that question. The unsuitableness of the building has on many occasions been the subject of conversation, and I feel certain that no one recognises the fact more than the head of the Department to which I have the honor to belong.

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971. If the matter had been referred to you, as one of the medical officers, would you have protested against such a proposal? I think on general principles the housing of such a great pauper population in that radius would not be advisable.

972. Do you think that the site at Rookwood could be drained effectively? Yes, but there might be detriment to private property.

973. In what direction should the drainage take place to be effective? It should follow the natural gulleys and be conveyed by a tunnel or something of that kind to some place. There is considerable natural drainage there, and it should be followed.

974. Would that be through the cemetery? It would run somewhere near the cemetery.

975. Does not the creek at present run right through the end of the cemetery? I am not certain, but I think it does.

976. Do you know where it empties itself? No.

977. In connection with provision for housing so large a population of poor old men, suffering from all kinds of disease and decay, would it not be necessary to provide, first of all, a thorough system of drainage and sewerage, not only for the safety of the patients but of the population round about? One of the principal things before the place is built is to provide for a drainage.

978. In the absence of a thorough system of sewerage, what is your opinion with reference to destroying all the fecal matter by fire? That is a very effectual way, but it is very troublesome.

979. Is there any other system next to a good system of drainage with a good outfall which is equal to the system of destruction by fire? There are systems which I have seen in some parts of England where they have sewage farms;—they convey the drainage to a suitable place, where they grow green crops, which decompose the fecal matter and render it innocuous.

980. But that leaves the microbes behind? I do not think so.

981. Would you be surprised to learn that at the sewage farm on Webb's Grant there are millions of microbes to be found? That is because the matter was never properly decomposed.

982. Would you recommend a sewage farm at Rookwood, with a population of 3,500? No.

983. What do you think would be most likely to be effective, supposing this project is carried out? I would favour a proper system of drainage, following as nearly as possible the natural drainage from the site to some suitable place.

984. Supposing that is impracticable, what would you propose? Unless there is some means of that kind it would be very difficult.

985. What is the character of the soil there? Stiff clay.

986. Is that suitable for a sewage farm? It is not very porous.

987. Unless the officers of the Department can find the means of carrying out a thorough system of drainage for the proposed building, would you be favourable to the erection of these buildings at Rookwood? No; a proper system of drainage from this large and crowded place is absolutely necessary for the comfort and health, not only of the inmates, but of the people in the neighbourhood.

988. Have there been any complaints about the sewage from the George and Macquarie-street Asylums? People are constantly making complaints.

989. Have the municipal authorities made complaints? No; I do not think they can. We do not pollute the town, we are more likely to be polluted by water flowing from the town. I have found very bad effluvia from the water coming from the town. When the wind backs up the tide we very often get offensive odours in the George-street Asylum. I have seen offensive matter thrown up on the foreshore.

990. What is your system at George-street and Macquarie-street with regard to fecal matter? It is carried away by the council in pans.

991. Do you know what it costs? I will supply the figures afterwards.*

992. To what extent are you overcrowded at George-street Asylum? By fully 150.

993. Have you not 1,125 inmates there at present? Yes; I think it will accommodate at least 950. I think the place is unsuitable, but if it were to be continued 950 could be accommodated.

994. Do you not think the number ought to be reduced by one half, who should be removed to some temporary shelter until permanent buildings are erected? I do not know how that could be managed.

995. Would it not be advisable in the interests of these poor people? If 150 or 200 could be taken out it would be better every way.

996. Who is your assistant? I have none—only a dispenser.

997. Is your time absolutely devoted to the two institutions? Yes.

998. Does it take up the whole of your time? Yes.

999. Are you allowed to enter into private practice? No; I am allowed to go into consultation, but I am not supposed to do any private practice, and if I were I would not have time to do it.

1000. *Mr. Lee.*] Did I understand you to say that the mortality at the Parramatta asylums was about the same as the mortality of the general community? I have not looked up the matter, but I do not think you will find that it is greater than the general mortality.

1001. I would draw your attention to these figures, so that you may make a further statement if you wish. In the Statistical Register for 1893-4, the mean mortality of the Colony is given at 18.56 per 1,000, whereas the last printed report of the Department of Charitable Institutions gives for the George-street Asylum an average of 15.79 per cent. of deaths for that year. You will see that one is based on per 1,000 of the population, while the mortality in the asylum is based upon per 100 of the inmates. Consequently to put them both on the same level the death-rate in the asylum per 1,000 would be 158? But you have to take in all the ages. In the general community you have a large healthy population. What I meant to say when I was questioned on that subject was that if you take into consideration the ages of the inmates, the mortality in the asylums would compare favourably with the general mortality.

1002. But that would be misleading? If the Committee will give me an opportunity I will provide the figures at a later stage.

1003. You have stated that you have charge of the George-street and Macquarie-street Asylums. Is there not another building in Parramatta in which the poor are housed? There are several small buildings that I have nothing to do with.

1004. The places I refer to are in Harris-street? Yes; they come under the George-street Asylum.

1005. In Harris-street there is a terrace of houses consisting of ten buildings, which are used in connection with the George-street Asylum? Yes.

1006.

* NOTE (on revision);—I have ascertained that the cost is about £250 per annum.

1006. Do you know what rent is paid per annum for that place? No.
1007. To what purposes do you devote that building? Principally for isolation purposes. Scabies principally, commonly known as the itch.
1008. Are there some occupants there at present? Yes; we always have some cases.
1009. Do you not also use it as a sleeping apartment? Yes; but the beds are separate.
1010. Do from 100 to 120 sleep there? About that.
1011. Are they provided from the George-street Asylum? They actually belong to the George-street Asylum.
1012. What is the system of drainage for those buildings? That is done by the Municipality. Some runs into the gutter, and there is a nasty creek at the back.
1013. Does not the bulk of that drainage run into the open drains of the town, and thence into some receptacle? Yes.
1014. At whose suggestion was that building rented for the purpose? I have no idea.
1015. Did you recommend it? No.
1016. Do you think it is a proper thing that in the heart of the town there should be a hospital of that kind for infectious disease? Certainly not. It would not be there if I could help it.
1017. Do you suggest that George-street Asylum should be abolished? Yes, I would abolish Harris-street first and the other afterwards.
1018. Is it not an eyesore? Yes, and a menace to the public health. It should be dispensed with. There is a danger of scabies being spread among the surrounding population on account of it.
1019. Questions have been asked about the concentration of the sick and destitute at Rookwood. Let me put before you these figures. At the commencement of 1894 you had in the George and Macquarie Streets Asylums 1,316 inmates. You passed 1,416 through both institutions during the year, making a total of 2,732. Of these 733 passed through the hospital, or 27 per cent. Do you not think that under conditions of that kind it would be wiser and more humane to have some special building set apart for the sole treatment of the sick? That ought to be done. At present we have hospitals at various parts of the institution at George-street. They are not actually separated.
1020. As medical officer are you prepared to suggest any plan, or do you approve of concentrating these sick people in one central hospital. If so perhaps you will suggest how it could be done? A great many of these hospital cases are men with deformities, and unremoved dislocations. They are treated as hospital patients.
1021. That is not the answer I want. Are you prepared to suggest or do you approve of a proposition for concentrating the sick in a central hospital instead of having hospitals attached to every asylum? There are hospitals attached to every asylum.
1022. Do you approve of that? Each asylum must have a hospital.
1023. Is it not possible to classify cases and draft them to a hospital? It would be very difficult to manage. You would have the ambulance going from noon to night. It would be impracticable except at very great expense.
1024. Therefore, you are not prepared to make any suggestion? I am not prepared to make a suggestion. If cases occur that I cannot deal with I have power now to make application to have those cases transferred to the Prince Alfred or Sydney Hospitals.
1025. Is it not a fact that the asylums are largely used as benevolent asylums for incurables? Yes.
1026. Under these circumstances, do you not think it would be advisable to have some central and permanent hospital where these people could be treated? Of course it would be desirable if it could be done.
1027. Would it not be more economical and desirable? I doubt that very much. The more places you have the greater would be the expense.
1028. *Chairman.*] How many paupers could a competent staff supervise? With proper buildings and accommodation, with the class of cases which I have at present at George-street, I could supervise 1,000 or 1,200 men with four good hospital attendants. I could manage all the medical work of the place myself with that assistance. Of course I would also have the assistance of inmates in cleaning up.
1029. Would there be any great saving by abandoning the present institutions and housing the whole of the paupers together—some 3,000 of them? I think there would be some saving, but I do not think there would be a great deal. There would be some saving on account of the staff. The more scattered the thing is the greater the expense. Concentration might save something in the expense of management. It would be hard to work it out, but I do not think it would be very much.

WEDNESDAY, 12 FEBRUARY, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHREY,
The Hon. JOHN DAVIES, C.M.G.
The Hon. JAMES HOSKINS.
HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.
JOHN LIONEL FEGAN, Esq.
THOMAS HENRY HASSALL, Esq.
GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Erection of Buildings at Rookwood for Infirm and Destitute Persons.

John Ashburton Thompson, Esq., M.D., Deputy Medical Adviser to the Government, sworn, and examined:—

1030. *Chairman.*] Are you Deputy Medical Adviser to the Government? Yes.
1031. Have you had an opportunity to see the proposal now before us with regard to Government asylums? For the first time, yesterday.
1032. Have you a knowledge of the proposal in general terms? In quite general terms.
1033. Have you been consulted with regard to this scheme? No.

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1034. Although you hold the position of Deputy Medical Adviser to the Government? Yes.

1035. What is your opinion with regard to utilising professional experience when matters of this kind are under consideration? I think a very important scheme such as this, which touches medical matters, and is based upon medical considerations at bottom, ought to be referred to the chief medical officer to the Government.

1036. And your Department has no knowledge whatever of this? That is the case.

1037. From the plan you see that the buildings are contiguous to the Potts' Hill Reservoir? Yes; I am now aware of the locality in its general features. On the whole I do not think there would be any objection to placing the institution some where on that block of 54 acres; but I do think that it would be quite wrong to place it in the position shown on the plan, that is so near to the reservoir.

1038. What are your reasons? There is always a certain amount of uncontrolled waste and excreta however carefully you may deal with the matter, and I think it would be more prudent to place the buildings at a greater distance.

1039. Do you believe there is a possibility of some contamination by the wind carrying matters to the reservoir? Yes.

1040. Do you believe it might be possible to place the buildings on that site of 64 acres at a sufficient distance from the reservoir to be tolerably safe? Yes.

1041. Can you offer us your opinion as to whether there are sites available on that land? No.

1042. Do you take it for granted that there are? Yes.

1043. Have you seen the land? I have never been there.

1044. You are speaking now purely as a matter of distance that it should be moved further away if possible? Certainly.

1045. You believe, then, that there is a practical objection in having a large body of buildings, and especially hospitals, in a position where the easterly winds might blow anything objectionable into the reservoir? I quite agree with that view.

1046. Going into the question of drainage, there is no proposal with regard to drainage set before us; but the Departmental proposal is to bury the solids, and to burn the more objectionable matter that comes from the consumptive, ophthalmic, and other hospitals;—do you approve of that? Generally speaking, yes.

1047. There is a clayey subsoil;—do you think that that proposal could be safely adopted? I think that is a very bad feature about the site—not with regard to the disposal of sewage, but as a place for erecting an institution of this kind.

1048. Do you believe that the solids from a large population of between 3,000 and 4,000 can be safely buried in a clayey subsoil? If I understand what is proposed to be done is to have a triple method of disposal. From the hospital wards, and especially from the consumption wards, the solids are to be burnt. Then with regard to the ordinary inmates the solids are to be buried, and the slop waters are to be disposed of by irrigation. Perhaps that is unnecessarily complicated. I agree upon the whole that it is better to burn the solids which come from such a hospital ward as that for consumptives. But an institution for 3,000 people is rather a large place, and there is no reason why the sewage should not be water-carried, and why the solids and the slop waters should not together go to a little filtration area.

1049. Therefore in general terms you agree with the Departmental proposal, except that it appears a little complicated? Yes; but that is rather an important point. The difference between burying and disposing by water-carriage is considerable as regards cost.

1050. Do you believe that that could be safely dealt with locally? Yes.

1051. But you prefer to have it water-borne to an irrigation area? Yes; for all reasons.

1052. Do you know the character of the soil at Rookwood? Yes.

1053. Do you believe that soil is suitable for an institution of this kind? I think in casting about for a site for an important institution of this kind, one should consider soil among other features guiding to a decision; and unless one is obliged to go to a clay soil no one would think of doing so. It is less healthy than any other sort of soil.

1054. Do you regard that as an important matter? Yes; when there are to be 3,000 people there, all told, all susceptible, and some chronically ill.

1055. Is it sufficient to condemn the site if a more suitable one is available? It is sufficient to govern the decision; it is an important point.

1056. What is the objection to a clay subsoil compared to any other soil? Sand is a good subsoil; clay is cold and wet—it is not porous.

1057. *Mr. Hoskins.*] Is there not this danger to be apprehended, that with a clay subsoil the constant use of excreta and sewage water from a large congregation of people would so poison the soil as to render it a danger to the locality? Not if the disposal were carried out according to reason, and intelligently.

1058. *Chairman.*] Could that process be carried out satisfactorily with a clay-soil such as you have at Rookwood? Not without preparation and breaking-up the ground. There would have to be under-draining, and a rather costly preparation in all probability.

1059. The proposal is to mass some 3,300 paupers in one institution—does that meet with your approval? No.

1060. Why? Such an aggregation of persons who are either sick or in feeble health, who may be considered as invalids, is almost universally condemned. It is rather a mistake to think that good ventilation, ample cubic space, and ample floor space, within the buildings, will compensate want of external space, and external natural aeration. It is observed that if, under whatever hygienic and scientific principles of architecture you adopt, you accumulate more than an indefinite number of persons to the acre, your hospital or institution will not keep the inmates in the same health that they can be kept in if the proportion of inmates to total area is something less.

1061. What do you believe would be a fair number to house in one of these institutions? For hospitals 50 metres of the total area to each bed is considered a fair proportion—that is about 60 square yards; but it is very seldom observed. In referring to that question it must be taken that I only point out that the preliminary matter to be considered is whether you ought to accumulate on the same area about 3,000 people.

1062. In your opinion you should not? Yes. My opinion further is that the chronic sick—the incurables—ought to be separated entirely from those who are merely aged and infirm.

1063. Do you suggest that there should be a separate asylum for the chronic sick? Yes.

1064. The proposal before us is to build pavilions necessarily spreading the occupied area considerably. If these buildings were two-storied it would be possible to concentrate the occupants, and it would not be necessary

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necessary to go so far for administrative purposes. Do you think it would be wise to have single or two-storied buildings? I can only tell you as regards sick people it is considered best to have one storey for surgical and infectious cases, and that as regards medical cases that are not infectious, two storeys are admissible. But I think one storey is justly preferred, and the objection you raise is really a matter for the architect and the administrator. I do not think there need be any real difficulty on that score. By grouping the wards, and by arranging the day-rooms and eating-rooms near the kitchens, by sub-dividing the kitchens, and so forth, without increasing the expense of administration, one could, I think, supply buildings covering a very large area.

1065. They might be grouped around the kitchen instead of having the kitchen at one end? Yes; something of that kind.

1066. As a general principle, do you think the pavilion system is the best for sick people? Yes.

1067. In the case of the hale paupers do you object to two storeys? No. I should have thought that one storey would be cheaper; but that is a question for the architect. For the chronic invalids, for the bedridden, I think it is very important that they should be all on the ground floor.

1068. *Mr. Fegan.* How long have you held your present appointment? Eight or nine years.

1069. In speaking about the drainage you said you had no objection to part of the solids being burnt. Have you ever been called upon by the Government to inspect any part of the Colony where crematory works of this description have been erected? Yes, at Orange, Katoomba, and Newcastle.

1070. Have you found that there were any bad effects from the burning of the solids, or that it was injurious to the people in the vicinity? Certainly not.

1071. Do you remember the report you sent in with reference to the crematory at Newcastle? Yes.

1072. Was it not condemned after that? It was given up; there was a continued local dispute.

1073. Not on your report? No.

1074. When you went up there did you find that it was a matter of sentiment more than anything else with a number of people? I should not say that. It is very difficult to satisfy one's self as to whether a nuisance is being caused.

1075. Do you think a nuisance was caused? I was not satisfied on the point. I do not know whether it was the case or not. I do not know that when the apparatus was in good working order there was a nuisance.

1076. Were some very reliable witnesses—persons of high character—called with regard to the question of nuisance? Yes.

1077. Was their evidence to the effect that a nuisance had been created to the detriment of the health of the people? Yes.

1078. Do you not think that the same thing would occur here? That was a particular kind of apparatus. There are many different patterns, and I do not know that the same objection would apply to all of them. I am satisfied that the crematory at Katoomba does not cause any nuisance. It is quite different from the one that was erected at Newcastle.

1079. Do you believe that such works can be carried on without causing any nuisance to the people in the immediate vicinity? Yes.

1080. Were you never consulted with reference to the proposed site for this institution? I was not.

1081. Do you know whether your chief was consulted? I am sure that he was not.

1082. Do you not think it is rather strange seeing that you are the advisers of the Government, that your opinion was not taken on a matter like this? I do.

1083. Do you say that medical cases should be separated entirely from the healthy patients? Yes.

1084. Is there any site in your mind's eye that you think would be suitable? No; because I do not know what land is available. But somewhere on the Church and School lands, within a short distance of Sydney would, I think, be a suitable situation.

1085. Do you know that it was recommended by a previous Medical Adviser to the Government to use the Randwick Asylum for such cases? I remember that about eighteen months ago something of that kind was said.

1086. Do you remember that Dr. MacLaurin, when he was Medical Adviser to the Government, recommended that very strongly? Yes.

1087. Do you think that would be a suitable place? It would be a suitable place; but I do not know whether it would be a suitable building—probably it would not be. It would be a bad plan to begin an establishment of that kind by taking an old building erected for some other purpose. However, I have not considered it from that point of view.

1088. You have not given any consideration to the question as to whether or not Randwick would be a fit place for carrying out the recommendations made by Dr. MacLaurin? I have not.

1089. Do you think that building would suit the aged and infirm who are not sick? I do not know the building well enough to say. I have never considered the building, in relation to its conversion to either of these uses. I have not been over the building for seven or eight years.

1090. Was not this suggestion made as far back as 1887? The suggestion for separating the chronic sick from the aged and infirm was first made, as far as I know, by the late Mr. T. K. Abbott and myself, who sat as a Committee of Inquiry into the Benevolent Asylums, which were at that date being mismanaged in some respects. One of our recommendations—perhaps the most important—was that all the sick should be gathered in one building together, and dealt with quite differently from the aged and infirm.

1091. Do you think that Liverpool would be a good site for a chronic hospital? I cannot help saying that this very important proposal is, or ought to be, rather far-reaching, and really concerns the medical administration of the Colony.

1092. Of which you are the representative? Undoubtedly, as far as we are referred to.

1093. Do you believe that the consumptive cases should be kept apart from all others? Yes.

1094. And that Rookwood is not a very fit place for consumptives for the reasons you have given? I do not think that the particular situation chosen on the available land at Rookwood is quite suitable.

1095. More especially on account of the soil? On account of the soil. I think the whole site is not as suitable as some sites which might be found.

1096. Do you think that Thirlmere or some other place there would be more suitable? There are many points to be considered which are not merely medical. Thirlmere is in the mountains, but I do not know whether that would be a suitable place for these old people in the winter.

1097.

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1097. It is proposed here to have a consumptive ward; under the circumstances do you approve of that? I think not.

1098. Therefore this plan does not receive your approval as a whole? I think not. I say, I think not, because I have never seen the site itself; and I have seen this plan for the first time to-day—half an hour ago.

1099. Do you approve of the pavilion buildings for the housing of the poor and destitute, instead of two-storied buildings? I have no objection to two-storey buildings for the infirm and destitute.

1100. Do you not think it would be rather a strange recommendation to put the sick in a two-storied building, and to put them in the second storey instead of on the ground-floor? That would be quite wrong.

1101. Do you not think they would get purer air on the second storey? Yes; but they would certainly have less of it than on the ground-floor, where they could walk out or be wheeled out on to the verandah.

1102. Do you give that evidence on the condition that the soil is suitable? That is a very important matter to consider.

1103. *Mr. Black.*] Would not the erection of balconies on the second storey get over your objection to some extent, because they could then be wheeled out or walk out on to the balcony? I do not think so, because these sick people are rather a peculiar class. They are there for their lives, and I do not think it would be well to confine them to a room and a balcony. A great many of them could be wheeled out into the grounds, if they were on the ground-floor.

1104. *Mr. Fegan.*] Would not that be far better than being wheeled out on to a balcony? It would make all the difference in the world.

1105. And the extra cost would not be so great when we consider that the erection of staircases would be avoided? No; but that is a question for the architect.

1106. *Mr. Hassall.*] Do you consider it would be advisable in the interests of economy and efficient administration to concentrate all the chronic cases in one particular spot? Yes.

1107. Do you think it would be advisable to concentrate them as far as possible in what you might call a hospital asylum to which might be attached a convalescent ward in which they might hope to regain their health, and when fit that they should be drafted to other institutions? I am strongly of that opinion. I formed it after long inquiry seven or eight years ago, and I have held it ever since.

1108. Do you know the Liverpool Asylum? Not so well as the others, but I do know it.

1109. Do you think that that would be a desirable site on which to concentrate the chronic cases of disease;—it has been proved by evidence here that the drainage from the asylum goes into George's River below the dam so that there would be no danger of pollution of the water supply? In the abstract I think that Liverpool would be a suitable place for the purpose. When I say in the abstract, I mean apart from all consideration of cost and administration and having to pull down old buildings and to erect new ones, because I do not think the buildings at Liverpool are suitable for the sick.

1110. We had the evidence of the Medical Superintendent that the buildings at Liverpool will very fairly answer the purpose, and that there is room to build additional accommodation there—on the ground attached to the asylum? I am of opinion that the chronic cases should be concentrated in one institution.

1111. Do you think that the George-street Asylum, Parramatta, is a suitable site for the purposes for which it is occupied? The Committee, which I have already mentioned, and of which I was a member, condemned the George-street Asylum eight or nine years ago.

1112. Do you think the Macquarie-street Asylum buildings could be retained if the very old and chronic cases of disease were removed, leaving it to be used by men who, although gradually dying from old age, are not altogether incapable? The buildings have been used for a number of years, and I do not know that anybody's life has been shortened; but it is a very unsuitable place, it is not a creditable place.

1113. Do you think it would be better to remove the inmates from both the George-street and Macquarie-street Asylums? I think it would be much better. But I quite agree that the Macquarie-street Asylum is much better than the George-street Asylum. The buildings at George-street are not suitable for use as an asylum.

1114. With regard to the site at Rookwood, do you think it would be better, instead of keeping the site near the Potts' Hill Reservoir, to go further north towards the proposed site for a medical superintendent's house? I should like to walk over the site first before giving a strong opinion. But if that alteration were made I think it would remove the objection I have as to the proximity to the reservoir.

1115. In your opinion is there any great danger of pollution of the water supply on account of germs being carried through the atmosphere? There is no great danger.

1116. Is it more a matter of sentiment than anything else? I think it is purely a matter of prudence.

1117. Is it necessary to take precautionary measures, lest such a thing should be possible? Yes; certainly.

1118. *Mr. Black.*] I gather from your evidence that you are in favour as far as possible of the concentration of the indigent and infirm poor in one group, in order that administration and inspection should be more perfect than if they are left in their present scattered state? No; I do not think I expressed any opinion as to the desirableness of concentrating the aged and infirm in one place; but I am quite clear that the sick should be separated from the aged and infirm, and the sick should be on one separate site. As for the aged and infirm, it may or may not be better to separate them or put them in different places.

1119. Why do you think that the sick poor should be concentrated as much as possible? Because they require different treatment from the simply infirm.

1120. But why have them concentrated in one place? Their number, for the present at all events, is only enough to make a manageable institution.

1121. Would the number who would remain after the sick were taken away be in excess of those who would be manageable in one institution? As this is not in my office, I really do not know what the number would be.

1122. After removing all the chronic cases, there might be about 3,000 others;—do you think that would be too great a number to concentrate in one spot consistently with good management and administration? I do not know that I do.

1123. But the fact is that there are certain institutions in a sufficiently good condition for housing the merely infirm, namely, Liverpool and Newington. But Newington is for women, and they are not included

included in the 2,000;—I believe you are of opinion that decency, sanitation, and other reasons demand the closing of the three institutions at Parramatta? I can say "yes" without hesitation with regard to George-street.

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1124. Do you think there would be any objection to the housing of these people who would thus be rendered homeless at Rookwood in the fashion proposed in the scheme now before the Committee? No.

1125. If both of those institutions were closed there would be between 1,300 and 1,400 people who would have to be provided for. Do you know of any objection to their being situated at Rookwood? No.

1126. You do not think that such a great increase of population there, considering that they would be fairly healthy people, would be more likely to prejudice the water supply in any way, or excite popular feeling against the water supply than would the extension of the suburb of Rookwood on the other side? I think I should like to place them a little further from the reservoir—on the other side of the reservoir. I do not know whether they could be put there or not.

1127. Do you think that there would be no objection to the placing of 1,300 men who are merely suffering from the infirmities of old age, or through being worn out by overtoil, on the Rookwood site, providing that the buildings in which they are to be housed were not erected within a distance of half a mile of the reservoir? Yes.

1128. Your objection to placing them in proximity to the water supply, is, not because you are aware or positively certain that such proximity will result in poisoning or polluting the water supply? No.

1129. But because you think that there is a danger that under such circumstances the water supply might be polluted? I think it would be more prudent to place the buildings at a greater distance.

1130. I suppose you argue that, although science does not directly say that the presence of human beings in close proximity to open water, must result in poisoning that water, yet eventually, science may be able to discover that, under certain circumstances, it does result in such contamination? I do not know whether I should put it in that way, and I do not quite know whether it is really necessary to be very definite about it. The fact is that in the older cities of the world, the water reservoirs are usually open and in the cities in the very middle of the houses. I should be inclined to say that I think it is a very reasonable suggestion or requirement, that a large institution should not approach a water reservoir nearer than half a mile. I cannot give any very definite reason for that. Wherever you have a large number of persons there is a good deal of waste of one sort and another, excremental in part, which as a rule is gathered up and taken away, but which also no doubt is liable in part to dry upon the surface and thus be blown about. Now the reservoir in question is the sole source of water supply for the whole of this city—for 400,000 people and more. I think a requirement of half a mile of distance is merely reasonable, and I do not care to say more than that.

1131. I inferred from something you said just now, that you thought a better site than Liverpool might be obtained for the housing of chronic cases of illness; but I also thought that you were of opinion that that building being in existence, and in fair repair, for the saving of expense and other reasons it would, perhaps, be advisable to use it as a place for the concentration of such cases? No; I do not think it is suitable for concentrating the chronic sick. I think that very likely it is suitable for housing the mere aged and infirm; but I do not know it very well.

1132. Would you prefer to recommend the retention of Liverpool as a place merely for the housing of the aged and infirm, and the erection of a hospital group at Rookwood for the concentration of the chronic cases? I think I may be allowed to say that when you asked me whether I recommend, it embarrasses me a little, because I am well aware that the whole question is a very large one, and I am not seized of the necessary details. I fear I can only properly answer general questions.

1133. I do not want to place you in a delicate position; but we want accurate information? May I explain that it is not a delicate position that I am contemplating, but merely the fact that I have not the information. The chief medical officer to the Government should, no doubt, be one of the first persons consulted when such a move as this is to be made; but he has not been, and I do not know anything about the details of the proposition. All I know about it I have learned in this room.

1134. *Chairman.*] Do you think that if you went to see this proposed site to-morrow morning you would be able to give us more valuable information? Yes.

THURSDAY, 13 FEBRUARY, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHREY.

The Hon. JOHN DAVIES, C.M.G.

The Hon. JAMES HOSKINS.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Erection of Buildings at Rookwood for Infirm and Destitute Persons.

John Ashburton Thompson, Esq., M.D., Deputy Medical Adviser to the Government, sworn, and further examined:—

1135. *Chairman.*] Have you a statement to make? Yes, I have drawn up the following statement:—

I visited Rookwood Asylum this morning, in company with Mr. Green and Mr. Dickson the outdoor overseer. The following are remarks on special points mentioned by members of the Committee which they desired me to consider:—

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Aspect, Exposure, Site, &c.—Although the area (which I was informed measures more than 500 acres) is undulating, the variations in level are apparently not great. It is but little sheltered by bush, the clearing being very extensive. The buildings are consequently exposed to prevailing winds, and westerly winds must be much felt in the winter. The soil is a rather stiff clay, which is not, as a rule, more than 18 inches or 2 feet in depth; the subsoil is either of shale or dense clay-beds; I was informed that on the whole estate there were probably not so many as 50 acres of good (or loose) soil 3 feet or more in depth, and this amount existed in small patches widely scattered. If the conditions of climate were free a site having these characters would not be selected for the purpose under consideration.

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Sewerage and Drainage.—This is a very important matter which should be thoroughly considered, and even worked out, before proceeding to examine other points. Supposing 2,500 or 3,000 people to be housed at this place, and connection with the Western Suburbs Sewerage Scheme to be for the present impossible, then a scheme for disposing of the liquid and solid wastes must be shown to be economically practicable, or else the position will be untenable. I think there can be no difference of opinion that so large an establishment should be systematically sewered on the water-carriage system, and that disposal should be by filtration, arrangements being made to draw off as much of the flow as might be required on cultivation areas. All surface and roof waters should be conveyed by separate gutters to any natural outfall; and then the sewage to be dealt with would be nearly invariable in quantity. I do not suppose it could be less than 14 gallons a head a day, or about 50,000 gallons from a population of 3,000. On this plan there would be water-closets or latrines, which, if they can be had, are vastly preferable on all counts to pail-closets. I know of no alternative to this plan; the liquid wastes must be thus provided for, and to deal otherwise with the solid wastes appears to me a complication for which there is nothing to be said. If the filter-beds were scientifically laid out and managed, the effluent would be fit to enter any natural watercourse not drawn upon for drinking purposes. But if there be no alternative, then it is a prime necessity to ascertain whether this plan can be carried out on this area. There is no doubt that it could not be done on an area of soil such as has been described without a great deal of expensive preparation. But, of course, it could be done; the governing consideration is cost, and that is one on which engineers alone can speak.

Relation of Buildings to the Reservoir.—Through the balance reservoir at Potts' Hill passes the whole of the water for Sydney; it has an exposed water-surface of 1,200 x 600 feet. According to the plan the corner of the cancer hospital block would be about 5 chains from the foot of the reservoir embankment; and many others of the buildings would be at a much less distance therefrom than the existing buildings, which are themselves not so much as half a mile distant. The screening-tank will be nearer still to some of the projected buildings. In other words, the proposed extension of the existing buildings is to be towards the reservoir. I was not able to see anything in the appearance of the estate to prevent the extension from being made to the east or thereabouts of the existing blocks—that is, away from the reservoir. After viewing the site, I find that I must object in terms stronger than I used before, when I had seen the plans only, to the arrangements thereon shown. If the asylum is to be erected on this site at all it should certainly be placed on land farther from the reservoir than the existing buildings, and not nearer. I base the objection in part only on grounds which may be called sentimental, and mainly on others which are more properly described as prudential. I do not feel inclined to speak more exactly; but many things are done perforce in old and crowded cities which are, nevertheless, not what would be chosen were the circumstances such as ours, and which would probably be altered there were it possible or practicable.

As to retention of Liverpool Asylum.—I was desired to consider, as I understood, whether Liverpool Asylum might not be continued in use for one of two purposes—either to be turned into a hospital where the sick might be massed and separately treated from the merely aged and infirm, or whether it might not be utilised for housing a part of the merely aged and infirm, the rest of them and the sick being otherwise disposed. I have the honor to repeat the opinion I have already expressed on the first proposal: Liverpool Asylum is entirely unsuitable for use as, or conversion into, a chronic hospital. But I know of no reason—though I have not lately visited it—why it should not continue to be used for housing the merely aged and infirm. Perhaps I may add, since the question has already been put, that, after reflection, I think it would not be wise to continue to use Macquarie-street Asylum for this purpose; I think it should be relinquished. As to George-street, I joined in condemning that asylum in 1887; and I am still of opinion that it is entirely unfit for the use to which it is put, and should now be condemned without any reserve whatever.

Whether the proposed Eye, Consumption, and Cancer Wards are suitable.—I do not think they are suitably placed with reference to the reservoir; but I am not aware of the details of the plan of these or any other wards proposed to be erected. The position is, in my opinion, as suitable as any for treatment of cancer and eye cases. I do not think it is unsuitable for consumption, the class of cases which will be received being considered. What is under consideration now is not a hospital for consumption; it is a refuge for consumptives who are beyond hope—of whom, at all events, but very few ever leave the asylums, once they have entered them. Were the proposal to treat consumptives with a view to recovery, three or four differently situated hospitals would probably be thought necessary—for the same climate does not suit all such cases.

Economy from Centralisation.—The question was: Would there be much saving effected by massing the whole number on one area, over a distribution of them among institutions erected at three or more different points? A rough guess can alone be given without going into details, not of numbers merely, but of management. I have already expressed a strong opinion, both in 1887 and yesterday, that the sick should be treated apart from the merely aged. But, of course, they might be treated on the same estate, only their establishments would be practically independent. Then, supposing there were 2,000 merely aged and infirm to be dealt with besides the sick, it would be either necessary or expedient to divide them into two bodies at all events, which, though housed on the same estate, would still be managed independently. Under these circumstances I scarcely think that any remarkable saving would be effected by massing them on one estate. There would, no doubt, be but one chief superintendent or manager on the spot, one superintendent of works, one large laundry, one large bake-house, and so forth; but, generally speaking, the actual executive staff in all branches must be proportioned to the numbers dealt with, and one large laundry, &c., in place of three or four, would, as it seems to me, save but an almost insignificant capital sum. But a hasty opinion such as this necessarily is cannot be relied upon;—a careful consideration of details, and, besides that, of the requirements of the work to be effected, of the persons to be served, and of the details of management, is necessary.

In conclusion, I beg leave to mention two points which the Committee have no doubt had in mind, by way of memoranda; and in order to avoid being taken to concur in this scheme—I do not either wish to be thought to express dissent from it,—but merely to say that I have had no opportunity of examining it in detail. The first point is, that I am satisfied from my knowledge of the asylums that it is very desirable that the indigent should be brought under legal control; this was actually done for a time just thirty years ago—it was recommended by my late colleague and myself in 1887, and it has been strongly urged lately by the Director of Government Asylums. The other point is, that the medical and quasi-medical relief of the sick poor of the Colony is not sufficiently organised, and that so important a departure as the present should, perhaps, not be taken until a comprehensive view of the present state of affairs has been had.

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M.D., D.P.H.

1136. *Mr. Black.*] On such a large area of ground as there is at Rookwood, would it be possible to construct hospitals sufficiently isolated for the treatment of cancer and consumption? Certainly.

1137. Do you think that they could be constructed so as not to be dangerous in any way to the other aged and infirm? There is no doubt at all about that.

1138. Do you think that as the consumptive poor in most cases are too far gone when they reach the hospitals to be capable of cure, the site is not a matter of very much moment? From observation and information given to me this morning by Mr. Green, I know that almost all of the consumptives who reach the asylum go there to die. They are already in a hopeless condition.

1139. Therefore, under the most favourable circumstances, compared with those less favourable, the difference would probably be merely the extension of life for a few weeks? I doubt very much whether their condition is not already beyond any consideration of that sort. What they want is a home until they die.

1140. Do you not think that this site is somewhat too exposed for the treatment of such cases? I should not choose that site for the treatment of such cases.

1141. Do you not think there would be an alleviation of suffering with a less exposed site? I do not think so.

1142. You do not think the exposed site would aggravate the symptoms? I do not think so.

1143. Do you think it would be advisable, with all the disadvantages of soil, and the difficulties about connection with the water supply, to increase the number of infirm poor now situated at Rookwood, and

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if you do think so, to what extent would it be advisable to increase their number? That is a very difficult question for me to answer, because one wants to know what is the object in view. I do not know that the need for pumping water in order to supply the wants of the institution is a very serious objection. There would be a little extra expense.

1141. Without the advantage of water carriage for the solids, what number of inmates do you think could be safely massed at Rookwood if a compulsory system of destroying the solids by fire is adopted? I scarcely think that is an important point, because what I have shown is that you must have sewers for the slop waters, and in that case there is no reason why water closets should not be attached to them.

1145. But the proposal before us is to use the liquids for irrigation purposes, as at present? The solids all break down in the course of a very short run, and there is nothing to see but grey liquid.

1146. With a continuance of the present system, and with a slight alteration in the direction of burning the solids, if that were deemed preferable, how many people would it be safe to place at Rookwood? There is no limit to the number if you like to choose that way of doing it. It is only a question of money.

1147. Do you think there is no objection to the destroying of the solids by combustion except on the score of expense? Yes.

1148. Water carriage, if possible, would be cheaper? Yes.

1149. Leaving combustion out of consideration, would it be advisable to increase by 500 or 600 the present population at Rookwood, disposing of the faecal matter after the fashion now in vogue there? I do not see any objection to that.

1150. Would the matter be more complicated if the consumptive and cancerous patients were also housed at Rookwood? Not at all.

1151. You do not think their excreta requires special treatment? That would be applied on the spot by disinfectants. That is done at the Coast Hospital.

1152. Do you know of any site in the neighbourhood of Sydney, or within reach of railway communication, and possessed of a water supply, which would be more adapted to the concentration of the aged and infirm poor than Rookwood? The sole objection I see to Rookwood is the soil. If the choice were free, and without knowing what areas are available, I should say that any area possessing the qualifications you mention, and having a more open soil, would be more suitable.

1153. You would prefer a sandy soil? Yes, or gravel.

1154. Do you think the Church and School lands between Kensington and Maroubra Bay would be suitable for such a purpose? Yes.

1155. Do you think the air there would be too strong for the aged and those suffering from pulmonary complaints? I do not think they would do well at Maroubra Bay. We have never been able to keep consumptives at the Coast Hospital.

1156. I do not allude specially to consumptives, but to those who suffer from chest and bronchial trouble? They would do fairly well there if placed away from the sea front.

1157. Such a site could be connected with the tram system? Easily, I should think.

1158. *Mr. Wright.*] Are you of opinion that if the new buildings were placed on the present proposed site of the doctor's residence, there would be no objection as far as the water supply is concerned? Yes.

1159. From the features of the ground, do you think that would be a suitable site? Apparently it is just as good as the other site where it is proposed to put those buildings.

1160. Is there any objection to Rookwood so far as the suitability of the approach is concerned? When people are old and very sick you do not want to move them at all; but you have to do it in these cases. In the case of ordinary chronic disease the consideration, perhaps, is what sort of vehicle you have to carry them in, rather than the distance. If you have a good ambulance for such a purpose it does not make much difference practically whether you have to go 4 miles or 8 or 12.

1161. You do not apprehend any difficulty so far as the short journey to Rookwood is concerned? I think the evidence of the manager would be more valuable than mine on that point.

1162. Do you think the surroundings of Rookwood, with the Necropolis in front of it, would be conducive to the longevity of the patients? One sees very little of the Necropolis from this site.

1163. *Mr. Hoskins.*] Supposing the number of people at Rookwood is increased to 2,000, and supposing the Works Department report that it is impossible to connect the institution with the Western Suburbs Sewerage Scheme, how would you dispose of the sewage from the institution? I do not know whether I should choose that site; but if I were obliged to choose it, I should call in an engineer and ask him to estimate the cost of constructing the necessary filter-beds. I should also want to know the cost of finding an outfall for the effluent, which might go anywhere where it would not be drawn upon for drinking. There would be no difficulty about doing that. It would cost more on that soil at Rookwood than it would on sandy and other sorts of soil. So that if the place could not be connected with a sewer, there would not be any practical difficulty, only a question of cost.

1164. Supposing your views could not be carried out in consequence of physical difficulties, such as differences of level, and so on, so that the sewage could not be conveyed by water, how would you propose to dispose of the sewage? It could not be done.

1165. *Chairman.*] You must abandon the site? Certainly.

1166. *Mr. Hoskins.*] If there were 3,000 people on that site, how would you dispose of the sewage, the liquids and solids, if you could not connect with the Western Suburbs Sewerage Scheme? In the manner I have mentioned, by filtration. It would be done very much as you do with drinking water in water-works filter-beds.

1167. Would not that necessitate the erection of expensive works for filtration? It would not be expensive, except in as far as the soil of this particular site might entail an expense that would not be experienced on another site. This soil is peculiar. The filter-beds would have to be 6 feet deep, and you must have an outfall at 6 feet below the surface.

1168. Do you think that the sewage of that establishment, with the large number of people proposed to be placed there, could be safely disposed of by conveying the slop water by pipe and below the surface, using it perhaps for a garden and farm, and disposing of the excreta by fire? Yes; it could be safely done.

1169. Do you think the fumes from the fire consuming the excreta would have a prejudicial effect on the water reservoir? I think it would not have such an effect.

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1170. *Mr. Humohery.*] After treating the sewage by filtration, how would you deal with the effluent? It would be pure enough to run in any ditch or natural watercourse.

1171. Upon the assumption that the drainage must reach the Parramatta River on the one hand, or Cook's River on the other, according to a report which has been submitted to us, if there were objections to such a course being taken, would you deem this site altogether unsuitable? Yes; because I do not know of any other way of dealing with the sewage. You must deal with it by filtration, and, therefore, you must have an effluent.

1172. Is it your opinion that the effluent must be carried away from the ground, either to Parramatta River or Cook's River? Yes; undoubtedly.

1173. Assuming that as many as 3,000 people would be on this site, would you consider it wise to deal with all the fluids upon the ground itself? I assume that all the liquid wastes should be brought into one outfall sewer, and that that should be delivered at the filtration-beds. The effluent from the filtration-beds would be so pure that it could, quite harmlessly, be allowed to flow away. In other words, it could be treated as flood-water.

1174. Would that do away with any proposal for irrigation? No. What I mean is that the backbone of the plan should be to dispose of these wastes by filtration, because a filter can be constructed according to size which will deal with all you have to deal with. When, as you are doing now, you try to dispose of the sewage by irrigation, and when you make irrigation the backbone of your plan, you will find that it constantly happens that you have more sewage to deal with than you can dispose of in that way, and consequently you will be compelled to allow unpurified sewage to escape from your estate. The filter-bed must be the foundation and backbone, because that will deal with all that you can possibly have. They do at present dispose of their slop waters, but not the solids, at Rookwood, by irrigation. The land is laid out in little shallow tanks, which are planted, and according to the needs of the plants the carriers are opened and the tanks are flooded. As far as that process goes it results in giving as pure an effluent as anyone could wish for. But the quantity coming down is much greater than the land can use under all conditions of weather. Sometimes it may, perhaps, be able to take up the whole of it, but to-day it was not able to take up more than a very small proportion—I do not know how much—consequently the rest of the sewage is allowed to flow through the irrigation area, and pass over an uncultivated slope, which extends down towards Cook's River. As long as there are only 400 or 500 people there, and there is no local offence, the neighbours have nothing to say about it; but when you get 2,000 or 3,000 people there it will be different. You must be able to make sure of dealing with all the sewage at all times. If it is found that one filter-bed is not sufficient you can have two or three. But under this plan you can also take advantage of the sewage for cultivation by having a cultivation area along the line of flow, and by having means of tapping the sewer, and taking off exactly what you want for cultivation; then agricultural exigencies no longer interfere with the main object.

1175. *Mr. Davies.*] I gather that you are most emphatic in your opinion in condemning this site for massing the whole of the pauper patients? Merely as far as the character of the soil goes.

1176. Do you approve of having twenty-four or twenty-five pavilions erected on that site in order to concentrate there the whole of the pauper patients? I see no objection to erecting twenty-four or twenty-five pavilions there for that purpose on that area, except with regard to the soil, which is not what I should choose. But I regard that point as a minor objection, and not one which is to block an important scheme.*

1177. Supposing the site were all that could be desired, and it could be well drained, do you favour the erection of buildings to house people from all the institutions, making this a pauper town? I have carefully guarded myself against being taken as either approving or disapproving of the scheme as a whole. My reason is that I have not the information. I do not know enough of the facts on which a decision should rest.

1178. Have you not always advocated the classification of the inmates of these institutions? Yes.

1179. You still hold to that opinion? Certainly.

1180. Would not that be much more preferable than to concentrate the whole of the inmates of these institutions at Rookwood? I do not see why they could not be classified on this large estate. You could have groups of buildings for the different classes, and they would be practically separate institutions. For instance, the chronic sick would go to the hospital group, and that would be complete in itself. It would be under one management, it would have one superintendent, it would get its bread from a single bakery which supplied the whole institution perhaps, but it would be a separate establishment for all practical purposes.

1181. Am I to understand that you would favour one great institution or number of pavilions for housing all the poor from Liverpool and Parramatta at Rookwood? No; that is precisely the point on which I guarded myself.

1182. I want your opinion? I must reply that I have not the necessary information, and I do not see how I could get it in a short time. I should want to know the requirements of the class to be dealt with, and some of the results of dealing with them in separate institutions as at present; what was the benefit expected to be obtained from putting them on one spot. I should also like to know something about the method of construction and cost. It might possibly be that methods of construction might be chosen which would show a very small capital cost at this stage, and which would, perhaps, turn out not to be suitable.

1183. Are you aware that it is contemplated to spend £108,000 on this proposal when complete? Yes; I have noticed that.

1184. Are you of opinion that a much less costly building could be erected than is proposed? No; so far as I know, it is a moderate sum for 3,000 people.

1185. Do you come directly into contact with the administration of these different institutions? I do not; that is my difficulty.

1186. Having visited the Rookwood site to-day, are you in favour of that site? Upon the whole, I am not.

1187. Do you believe that a more suitable site could be obtained? Yes.

1188. And quite as convenient? Yes.

1189.

* NOTE (on revision):—I should withdraw this sentence, which must have been in answer to a further question. I think the soil and exposure of this site a major objection, as my earlier replies show. Rheumatism and chest complaints would probably become very frequent there among the inmates. However, four or five hundred people have now been kept there a long time. On this point the visiting surgeon could speak with some authority.

J. A.
Thompson,
Esq., M.D.

13 Feb., 1896.

1189. Would it be possible to move the whole group of buildings further away from the water supply so as to prevent any possibility of contamination? As far as I can see, it would.
1190. To move them further down in the direction of the railway? Yes.
1191. Would that remove the objection you have to the possible contamination of the water? Yes.
1192. Would it only partially remove that objection? I think it would remove it.
1193. *Mr. Clarke.*] You say that this site is rather exposed;—would you prefer some other site in the neighbourhood of Sydney, say, near Little Bay, fronting the sea? No; not so far over as that. I should prefer a site near Kensington, at the Randwick end of the Church and School Lands.
1194. At Maroubra Bay, or near Little Bay, or Long Bay, would it not be easier to drain into the sea than on the western side of the range above Kensington? I think not. As far as I remember, you could effect a junction there quite easily.
1195. You could connect with the present water supply? Yes.
1196. If it was not possible to drain the Rookwood site to the sewerage system at Cook's River, what would you suggest? I think that would be a fatal objection.*
1197. If the sewage of the 408 people who are at Rookwood can be disposed of at present by using it for an orchard and garden, would it not be possible on that large area to dispose of all the sewage when there is a large number of inmates there by an extension of the present irrigation system? I have already explained that that plan is defective, and that the whole of the liquid waste from the people at present on the ground is not purified. If you had 1,000 people there instead of 450, the present system with the solids could still be carried out quite safely. You can do away with any solid waste by the present system, but it is the liquid waste that would give you trouble if you had a large number of people there.
1198. Do you think that the proposed site for the hospital being within 5 chains of the Potts' Hill Reservoir might be dangerous to the public health through germs or microbes being blown into the reservoir? Yes; there would be a risk of that.
1199. Do you think there would be any such danger if they were erected half a mile away? I do not think so.
1200. You are aware that all the sweepings and decayed vegetable matter from the streets of Sydney are deposited at the back of Mount Rennie, near the Randwick Road? I know that very well, and I am very glad when it all goes there, instead of being used as foundations for houses.
1201. Ought not that to be more dangerous than the present state of affairs at Rookwood? It might be; but there is no open reservoir near Mount Rennie.
1202. Have you heard of any disease arising from the refuse at Mount Rennie? I can say that the neighbourhood is not as healthy as it might be.
1203. *Chairman.*] Are we justified in believing in general terms that you object to the site at Rookwood on account of its being rather too exposed? Yes.
1204. Do you also believe that the soil there is unsuitable? Yes.
1205. Do you think that the question of dealing with the sewage is surrounded with considerable doubt? Yes.
1206. Do you regard the proposal as objectionable on account of the contiguity of the Potts' Hill Reservoir? Yes; as at present arranged.
1207. Do you regard the system of concentration of all the paupers of the Colony as being of very doubtful advantage? I should prefer to say that it is unascertained. I have no information before me.
1208. A large number of those in the asylums are consumptives? Yes.
1209. A site on the sea-coast or adjacent to it would be unsuitable for consumptives? Certainly.
1210. If you were given the choice of two good sites—one on the sea board and one inland—which would you take? Inland, of course. I thought you asked the question with reference to consumptives.
1211. Is the number of consumptives in these institutions sufficient to cause you to choose an inland site? I do not think so, because I repeat that the consumptives are already hopelessly ill, and we are not projecting an hospital for consumption, but merely a refuge for people who know their fate, and who are there to die. We are not treating consumption, and although that point has some importance, it has not very much. If it were proposed to place 180 consumptives who are in these asylums on the cliffs facing the sea, I should object very much, because although they are going to die that would distress them. There would be no choice between 10 miles and 30 miles from the sea.
1212. Supposing the choice were 1½ mile back from the sea, and 30 miles back from the sea, and a number of these people were suffering from consumption and chronic illness, which site would you choose, other things being equal? That is cutting it rather fine, 1½ mile is rather close. If it were a choice between 10 miles from the sea and 30 miles, then I should say there was no choice for the class of cases we are speaking of.
1213. Supposing a site could be obtained some distance inland within a mile or two of the railway, with tolerably good soil and water supply, would you say that that was a suitable place on which to put an establishment of this kind? On hygienic grounds alone, I should say, "yes."
1214. From an administrative standpoint, would you see any great difference between an establishment at Rookwood, 19 miles away from Sydney, and an establishment at, say, 30 miles distance? Most of the inmates would have to start from Sydney; they come to Sydney first, and then they go to the institution. They would have to be carried the whole distance.
1215. Would they not go by train? No doubt.
1216. So that the difference in a journey once in a lifetime, say between Liverpool and Rookwood, would not be very great? No.

William Bradley Violette, Esq., M.B., Government Medical Officer, Parramatta, sworn, and examined:—

1217. *Chairman.*] Are you Government Medical Officer for the Parramatta district? Yes.
1218. How long? Since 1887.
1219. What institutions have you charge of? The Cottage Homes, the Industrial School for Girls, the Gaol, the Police, and I visit the Rookwood Asylum.
1220. Have you anything to do with the George and Macquarie Street Asylums? No; but I had charge of them at one time.

W. B.
Violette, Esq.,
M.B.

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1221.

* NOTE (on revision):—My recollection is that the question included the words "and if the sewage could not be disposed of on the estate" after the words "Cook's River."

- W. B.
Violette, Esq.,
M.B.
18 Feb., 1896.
1221. *Mr. Hoskins.*] Are the Cottage Homes tenanted by aged people? Yes, married couples; there are twenty cottages which are occupied at present.
1222. Is it intended that they should be removed from those homes? I have not heard of any proposal of the kind.
1223. Do you not think that the George and Macquarie Street Asylums are excessively overcrowded? Certainly. In 1889 I reported that they were overcrowded. At that time in George-street there were only 730, and in Macquarie-street 240.*
1224. Do you not think that those asylums are unsuitable for housing aged and infirm persons? Certainly.
1225. Therefore it would be in the interests of humanity to remove those people, if possible? Yes, from both asylums.
1226. Are you in favour of having so large a number as 3,000 indigent and sick persons concentrated at a place like Rookwood? I do not; I do not see any advantage in it.
1227. What disadvantages do you see in the proposal? I do not think it is well to have them altogether in one place. There should also be more inquiry before persons are admitted. At present they are all sent out from Sydney, and it is impossible to obtain information.
1228. Do you think that the liberality of the Government, in providing refuges for the aged and infirm, is abused because sufficient inquiry is not made? I have no doubt that is the case.
1229. Do you not think that the number of persons who are receiving such aid is excessive for the small population? Yes; and recently the numbers have grown enormously.
1230. Do you think that arises primarily from abuses in granting admission to the asylums? Yes.
1231. Do you know what means are provided in Victoria for dealing with the indigent and sick? There are several establishments there, but they are in different districts—in the Ovens, Ballarat, and other districts. A local Board makes inquiry into each application.
1232. What kind of buildings have they? Very fair. The Ballarat buildings are very good.
1233. Do they deal with them in the matter of food as liberally as we do? I think so. I have seen the inmates, and they seemed to be hearty and well, and to compare favourably with ours, man for man.
1234. Is there as large a percentage of recoveries from illness and weakness in asylums, where there are not so many grouped together, as there is in asylums where the inmates are concentrated, as is proposed here? I think that is necessarily the case, because they get more attention in small institutions.
1235. In the George-street Asylum there are 1,125 patients;—is the number of assistants there much in excess, compared with the number of inmates of the Macquarie-street Asylum? No; numerically there are more, but not taking the number of patients.
1236. Does not that go to show that concentration leads to economy in administration? I do not think so, because you must have a certain number of attendants. The only economy would be in the building space.
1237. Do you say from experience that the concentration of inmates does not necessarily imply more economical administration? Not over a certain number. You could work, say, 1,000 inmates, with a few more attendants than you could work 500 inmates. But when you go over 1,000, you have to increase your number of attendants proportionately, so that you would lose.
1238. Does that show that the number of persons in the asylums should not exceed a specified number, say, 1,000? Yes; you will find that that is the case with regard to hospitals for the insane. They are scattered about in different places, and the inmates do not exceed 1,000 in each institution.
1239. *Chairman.*] Do you fix the limit for competent administration at 1,000 inmates? Yes.
1240. *Mr. Hoskins.*] Do you think it is probable that the number of persons who would regain their strength and health would be larger in an institution where the inmates would not exceed 1,000? Yes.
1241. Do you visit the Rookwood Asylum at present? Yes; twice a week.
1242. Do you consider that that is a good site for grouping together a large number of persons, having regard to the contour of the land? I dare say a more eligible site could be found, but we are committed to that site to a certain extent, as the buildings are there now.
1243. Is the health of the patients at Rookwood at present pretty good? It is fairly good.
1244. Is the mortality there very great? During the hot weather I have been very fortunate. In some of the asylums they have complained that the hot weather affected the inmates very disastrously.
1245. Do you ascribe the good health of the inmates at Rookwood to the fact that the buildings are of a modern character? Yes; it is well ventilated, and we have never had any fault to find with the structure.
1246. What is your view in regard to pavilions of one storey, such as you have at Rookwood, or having buildings of two storeys? I see no objection to two-storied buildings. I think they are preferable, they are more economical, and they are more beneficial to the inmates, because there is a purer atmosphere.
1247. Do you think there should be some two-storied buildings at Rookwood? Yes.
1248. Would you like to see the number of inmates at Rookwood increased to 2,500 or 3,000? No.
1249. Why? There is certainly a large area of ground there, but I do not think it would be well for all classes of inmates to increase the number too largely. I do not think that cases of phthisis do well at Rookwood. Cases of cancer are always sent away to Liverpool, and there is a very good cancer ward there. I have to send away many cases of chest complaints, such as asthma, from Rookwood. I have to send some to Parramatta, and Liverpool, where they are further away from the sea air, and the bleak air at Rookwood.
1250. If the number of patients at Rookwood were increased five-fold, would there be any great difficulty in dealing with the sewage? That is an engineering question. A defective system of drainage would impair the health of the inmates.
1251. If the number of inmates at Rookwood was largely increased, would the present system of disposing of the sewage be suitable, having regard to the health of the people in the neighbourhood, and the proximity of the water supply? No, they could not use up all their sewage under the present system.
1252. Then the original proposal to bury the excrement would be absurd in your view? The excrement is not all you have to deal with, you have the fluid matter.
1253. The last witness told us the fluid matter could be dealt with by filtration beds, and that the effluent would be pure or clear? It would be pure to the view.
1254. Do you think that there would be any possible fear of contagion or injury to the health of the inhabitants of Sydney from the poisoning of the water supply at Potts' Hill Reservoir if the excreta were disposed

* NOTE (on revision):—My answer to this question should be "At that time there were in the George-street Asylum 885 inmates, and 303 inmates in the Macquarie-street Asylum, whereas there was only accommodation for 730 in the former, and for 240 in the latter asylum."

W. D.
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M. B.

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disposed of by fire, and the liquid conveyed away as at present, or to filter beds? I do not think there would be any danger to the water supply from the burning of the solid matter.

1255. Have you any experience of the disposal of solid matter by fire? No.

1256. On the whole, do you consider that it would be wise to largely increase the present number of persons located at Rookwood? No.

1257. *Mr. Davies.*] How long have you been medical officer for Rookwood? Since the beginning of 1895.

1258. Were you consulted by the Government or the Inspector of Charities, or by any other official with reference to the proposal before the Committee? No.

1259. Did you ever see the plans before you saw them in this room to-day? No.

1260. Were you absolutely ignorant of what was proposed by the Government or the Charities Department with reference to providing accommodation for housing the poor? I never heard of it except in the newspapers.

1261. From what you know of Rookwood, would you recommend the concentration of all the inmates of the asylums there? No.

1262. If typhoid, or any other epidemic, broke out there, would it not be very dangerous? The age of the patients precludes the possibility of typhoid. The diseases we have are mostly skin diseases, and they are noted and isolated at once.

1263. Have you any cases of consumption among your patients? I suppose there are about thirty-five or forty cases in the asylum.

1264. Do you retain them at Rookwood? Yes.

1265. What cases, as a rule, are transferred from your institution, and from the George and Macquarie Streets Asylums? Cancer cases always go to Liverpool. Occasionally phthisical and asthmatic cases are transferred. Rheumatic patients occasionally complain that Rookwood is too bleak.

1266. Have the patients under your control been withdrawn from George and Macquarie Streets? Yes, a great many of them.

1267. How are other inmates, who are not inmates of the other asylums, sent to you? They first appear before the Government Medical Officer of Sydney who examines them, and sends them to the Department of Charities, they then receive an order and a railway pass up to Rookwood.

1268. Would it not be more convenient to have the examination made by the medical officer of each of the institutions, rather than to send them to Sydney and back again? They find their way to Sydney first, except in the case of those who are sent in by country magistrates. About 1 in 15 is sent in from the country.

1269. *Mr. Lee.*] Have you had occasion to report for or against the buildings used for the poor in Harris-street? No; I believe they were only taken while I was there, to accommodate the excess in George-street. I had remonstrated against the overcrowded condition of George-street, and those buildings were then taken to relieve George-street temporarily.

1270. Since then have they gone into permanent use, and is a portion of them now used for a skin-disease hospital? I do not know any thing about that. When I first went to George-street, there were 550 inmates there. In 1889 there were 889, and it was overcrowded then. The number in George-street is now very much in excess of that.

1271. In consequence of the imperfect drainage in Harris-street and the surroundings, generally, do you think it is dangerous to the inhabitants of the town to retain those Harris-street buildings? It is from the drainage, but not from the inmates. That part of the town is very badly drained.

1272. Could you suggest where the inmates of the Parramatta Asylum could be sent? My own opinion is that there should be subdivisions of the Colony. In the northern district the people would know the condition of the applicant better than we can, and there could be more scrutiny with regard to the admission of patients. Then, there could be a southern division and a western division.

1273. Are you altogether opposed to the concentration of the pauper population? Yes.

1274. You are aware that the present proposal is to extend the pavilion system now existing at Rookwood? Yes.

1275. In a return dated 31st December, 1894, I notice that the number of inmates at Rookwood for the year was stated to be 293, and the cost was £7,516, whereas at Macquarie-street Asylum, which is a two-storied building, there were 348 patients and the cost was only £5,443? Yes; the Macquarie-street Asylum is an old established place, whereas the Rookwood Asylum is only developing.

1276. Can you offer any opinion as to why the cost was so much greater at Rookwood? No.

1277. Do you think it has anything to do with the pavilion system? There are a great many more attendants at Rookwood, in proportion to the number of inmates, than at Macquarie-street? I noticed that when I went there at the beginning of the year.

1278. Supposing we had to consider the question at its inception, and we were not committed to several places, as at present, would you favour the idea of concentrating the inmates on a large area of land 20 or 30 miles in the interior, or would you favour their being treated in smaller numbers in their respective districts? I would prefer the district system.

1279. Would not that prove more expensive? Not necessarily.

1280. Do you not think that for want of competent supervision abuses might grow up in a number of smaller institutions? I do not think it would be much more expensive. The prisons are situated in different centres, and I do not think the cost is much higher in one centre than in another.

1281. Have you considered the question of the proximity of the water supply at Rookwood? Yes.

1282. What are your views on that question? There is the question of sentiment on the part of the public.

1283. Do you think it is safe or unsafe? As many of the consumptive patients can walk about, and get near the water supply, and as their expectorations are contagious, and might possibly contaminate the water, I do not think it is desirable that they should be there.

1284. That being the case, and the country being partly committed to the Rookwood scheme, do you think it would be desirable to have some central place where the consumptive and chronic cases should be treated? Yes.

1285. Do you know anything of the Liverpool Asylum? I do not know it intimately.

1286. Would it be suitable for the concentration of consumptives? It is a good building, and I do not see the necessity for doing away with it, like the George and Macquarie Streets Asylums; but I do not think Liverpool is a good place for consumptives. I do not think any place near the coast is good for consumption.

1287.

- W. B. Violette, Esq., M.B.
18 Feb., 1896.
1287. Do you think it would be better to go further away in the country for consumptive cases? Yes; and also for chest complaints.
1288. If asked, would you submit such a scheme as that now before us? No.
1289. Although there may be a certain amount of sentiment about the matter, do you think there is a certain amount of unknown danger? Yes; there is a possible danger.
1290. When you say there is a question of sentiment about it, do you keep in view the fact that the 400,000 residents in the city and suburbs contribute very largely towards the support of the pauper population? Yes.
1291. And that they might be supporting the pauper population at Rookwood to poison themselves? Yes.
1292. *Mr. Fegan.*] In answer to Mr. Lee, you said that the cost at Rookwood is a little higher than at the other asylums? I said that from the figures given by Mr. Lee.
1293. Have you not a lower average of deaths at Rookwood than at the other asylums? I do not know, but I see that is the case from the figures you hand to me with regard to 1894.
1294. Then the statistics will be much more in your favour this year, because you say that very few died at Rookwood during the hot weather? Yes; very few from heat.
1295. What is your reason for preferring two-storied buildings to one storey? They are more compact, and I prefer the second floor for many cases of sickness. They get a purer and lighter atmosphere than is obtained in the denser atmosphere on the lower levels.
1296. Do you not think there is a great deal of imposition in district asylums, and that there is a number of people in them who have no right to be there? There is a number of people in the institutions with regard to whom there has not been sufficient inquiry. Cases have come under my notice where inmates should not be there, as their relatives were in a position to support them.
1297. Do you know that in nearly all of the large cities and towns of the colony they have their own institutions? Yes.
1298. Have you heard many complaints against them? No.
1299. Do you think that such institutions should be left to the management of a ladies' committee? Certainly.
1300. When you speak of the Victorian institutions, do you speak from intimate knowledge? I only speak of them from my experience as a visitor three or four times, when I have gone on trips to that colony.
1301. Apart from sentiment, do you think that the burning of night-soil would be injurious to the people in close proximity to the institution? No.
1302. *Mr. Black.*] In reply to Mr. Lee you said that you thought the only economy arising from the concentration of large bodies of paupers would be in the building space; do you not think that there would be more economy in superintendence? No; a certain number of men require a certain number to look after them.
1303. If you have three asylums with 1,000 inmates in each, if you do away with them and group them into one asylum, do you not think that the man who has to manage and superintend any one of those asylums would be competent to manage the amalgamated institution? He would want more assistants.
1304. But in saving the salaries of two superintendents, would there not be a great deal of money saved? More assistants would be required. You would save a few pounds, but nothing considerable.
1305. *Chairman.*] I find by a return that there were 170 deaths in the asylums last year from such diseases as phthisis, asthma, bronchitis, pneumonia, and complaints of that character. It is evident, therefore, that the proportion of patients suffering from those ailments must be considerable in the asylums? Yes; but those cases have less chance of recovery than others.
1306. Still the number affected in that way must be considerable? Yes.
1307. With a knowledge of that fact, if you were called upon to find a home for these people, would you go for a site near the sea or inland? Inland, beyond doubt.

FRIDAY, 14 FEBRUARY, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.

The Hon. JOHN DAVIES, C.M.G.

The Hon. JAMES HOSKINS.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Erection of Buildings at Rookwood for Infirm and Destitute Persons.

James Burt, Esq., Draftsman-in-charge, Information Bureau, Department of Lands, sworn, and examined:—

- J. Burt, Esq.
14 Feb., 1896.
1308. *Chairman.*] Are you Draftsman-in-charge of the Information Bureau of the Lands Department? Yes.
1309. Do you produce certain maps which the Committee desire to obtain from your Department, and what are they? Yes; a map showing the situation of the Newington Asylum and the Asylum for the Infirm and Destitute at Rookwood; another, showing the situation of the Government Asylums at Parramatta, and the Benevolent Asylum in the same place; also, the Benevolent Asylum at Liverpool; also, a map of the county of Cumberland, showing, by green tint, the reserved land, and by pink tint, the vacant Crown land in that county.
1310. What is the area of the land at Campbelltown? The plan shows all the areas; but, roughly speaking, there are about 2,500 acres.

Cecil West Darley, Esq., President of the Metropolitan Board of Water Supply and Sewerage, sworn, and examined:—

- C. W. Darley, Esq.
14 Feb., 1896.
1311. *Chairman.*] You are a civil engineer, and President of the Metropolitan Water Supply and Sewerage Board? Yes.
1312. *Mr. Davies.*] Do you know the site on which it is proposed to erect a pile of buildings for housing the destitute sick and poor at Rookwood? Yes.

1313. Do you think it is desirable to erect a cancer hospital, and a hospital for incurables suffering from contagious diseases, on the site shown on the plan, and so close to the Potts' Hill Reservoir? As a matter of sentiment, I do not think it is. C. W. Darley,
Esq.

1314. Do you think it would create alarm in the minds of the people living in the city and suburbs? I think, as a matter of sentiment, it would be unwise to put those hospitals so close to the reservoir. Personally, I do not believe that it would be likely to do harm; but sentiment must be respected in a case of this kind. You cannot be too particular in the case of a water supply in keeping any appearance of contamination away from it. 14 Feb., 1896.

1315. Would there be a possibility of contamination owing to the close proximity of these hospitals? I take it that is to a great extent a medical question; but I think that the most danger would be from the consumptives. I do not think that there is anything contagious about cancer that could be transmitted in water. We know that with dust blowing about the microbes of consumption might be carried into the water at night-time. In the day-time my opinion is that the sun would destroy the microbes.

1316. But cannot microbes stand great heat? Sunlight destroys them very rapidly. I do not favour those three hospitals being put in the position marked on the plan.

1317. As head of the Water and Sewerage Board, are you entirely opposed to that proposal? Yes; seeing that there is plenty of space for the three blocks in question to be put further north of the present buildings.

1318. Do you favour the removal of those buildings to a greater distance from the water supply? Yes.

1319. What is the nature of the soil on the proposed site? It is clay soil overlying Waianamatta shale.

1320. Would it be possible on that soil, without enormous expenditure, to provide for a system of irrigation and sewage farms? It would not necessarily require great expense. It would only require under-drainage. It is not the best sort of ground, of course, but it could be used for that purpose.

1321. Could it be made suitable for the purpose of a sewage farm? It would have to be under-drained. There are such farms in the same sort of soil.

1322. Are you of opinion that the sewage from over 3,000 patients could be properly and safely treated on that area? I would sooner see it taken away by water carriage from the site—that would be more desirable.

1323. Do you know of any means by which the sewage could be taken from that site into the existing sewerage system? The present system of sewerage was only designed to be extended to Burwood. It would be costly to connect with the sewerage there. I think the nearest sewer would be about $2\frac{1}{2}$ or 3 miles from the proposed site.

1324. What would be the probable cost? I cannot give any idea, as I have not considered that question.

1325. From your knowledge of the sewage farm at Webb's Grant, which is in sandy soil, would you advocate the treatment of sewage and refuse at Rookwood from 3,500 patients in the same manner as at Webb's Grant? At Webb's Grant the downward filtration system is adopted, but there are plenty of towns in England where large quantities of sewage are dealt with on very limited areas by other processes equally as applicable as the downward filtration system. That system is only adopted where you have suitable soil. There are other processes of chemical treatment and precipitation, running off the effluent water, and burning or calcining the solids. That is very easily done.

1326. Have you any experience of the cost of treating sewage matter, especially solids, by fire? No personal knowledge.

1327. Do you know whether it is an expensive process? Where there is a large population it is not very expensive. The sewage in many large towns in England is treated by companies in that way, and the taxation is not higher than where there is water carriage.

1328. For a place such as Rookwood, which would be the most inexpensive system of drainage next to the ordinary system of sewage? I should say a system of precipitation and filtration. Filtration through coke-beds is found to be one of the best methods.

1329. Which would be the most economical method? It would be cheaper to treat the sewage locally than to take it away and connect it with the southern outfall sewer. It would be cheaper to treat it locally by a system of precipitation and filtration than to connect it at Burwood and take it out to Cook's River.

1330. Do you favour the concentration of 3,000 or 4,000 paupers at Rookwood? I do not see any objection to it myself, so long as the buildings are kept sufficiently far away from the water supply.

1331. Would it not possibly imperil the lives or health of those living in the locality to mass such a large number of people there suffering from all kinds of diseases? I do not think so. To commence with, it is a very sparsely-populated district.

1332. Would not a population of 3,500 paupers at Rookwood be equal to the population of many inland towns? The pauper population at Rookwood would be under proper regulations. Cleanliness would be properly attended to, and, therefore, I do not see that there would be any objection to having them there. Sanitary matters will be properly attended to, and the place will be far healthier than many inland towns where sanitary matters are decidedly neglected.

1333. Should it not be one of the first principles that in providing for the housing of the poor, and for those suffering from chronic disease, that the site chosen should be one that can be thoroughly well drained by an efficient system of sewerage? Yes.

1334. The next thing would be a thoroughly good supply of water? Yes.

1335. In this case you have the water supply, but not a system of drainage? A system of drainage does not exist there at present, but it could be provided.

1336. As far as you know, there is no possibility of connecting this place with the general system of sewerage until the completion of the Burwood sewer? That would be the nearest point.

1337. In the absence of a thorough system of sewerage, would you advocate the construction of these buildings on the Rookwood site? I see no objection to the site, because naturally the drainage system would be carried out as you were erecting the buildings, which will take some time to erect.

1338. *Mr. Lee.*] Where would you suggest that the hospitals should be erected? I think the three hospitals could be erected immediately to the north of the present buildings. There is a fine high spur there suitable for buildings. There is a large area of land there between the present buildings and the place marked on the plan for the Medical Superintendent. His building could be moved to another site.

1339. Do you think those buildings would then be a sufficient distance from the water supply? Yes.

C. W. Darley, 1340. Do you take any other objection to the plan generally? No.

Esq. 1341. Take the question as a whole. Here is a proposal to concentrate all the male destitute people at Rookwood, within a short distance of the Potts' Hill Reservoir. There is no system of drainage proposed at the present time, and no system of dealing with the solid matter. Under these conditions, would you advocate the erection of these buildings and the massing of these people on that site? I take it that common sense would dictate that sufficient provision for sewerage would be made in the scheme. I take it for granted that such provision would be made. I would not approve of the congregation of the paupers there unless proper provision were made for drainage.

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1342. If a proper system of sewerage were provided, and these hospitals were moved to a greater distance from the reservoir, you would have no objection to the proposal? Yes.

1343. Supposing a system of sewerage were not carried out, and the solid matter were simply collected and buried in the earth, without chemical or other treatment, would you object to the proposal then? I think it would be unwise.

1344. Do you not think it would be dangerous? I think it should be treated.

1345. *Chairman.*] Would it not be unwise to bury all the solids in the ground at Rookwood without previous treatment? It should be done carefully. It should only be done for a limited time.

1346. *Mr. Lee.*] If that plan is carried out with 3,500 patients on the ground, would not the soil become absolutely poisoned in fifteen or twenty years? I think it is desirable to remove the sewage from the site. It should either be treated or removed.

1347. What will be the danger of contagion twenty years hence when the whole surface will be poisoned? The soil would really not become poisoned. The air and sunlight destroy all the organic matter. At the same time it would be an unwise thing to bury all nightsoil continually over that area. It is better to remove it away from the site, and treat it at a special place. At the same time I wish it to be understood that a large quantity of nightsoil can be buried in a very limited space if properly done. Nature acts as a destroyer of the germs.

1348. It is held by medical authorities that some germs do not perish when buried in the ordinary soil, and they retain their vitality for many years? That may be the case with some.

1349. That being the case, every time the earth was disturbed would there not be a danger of the germs being scattered and finding their way to the water? I do not favour keeping everything on the premises. Where there is a large population it is better to remove it and treat it.

1350. In the absence of a proper sewerage system, what system would you advocate for dealing with the solid matter? There are several modern systems which are very good. By adding lime and proto-sulphate of iron to the water, the sludge is precipitated, and you can run off an effluent into coke filter-beds. The water can then be safely sent down the nearest creek. Then the sludge can be mixed either with sawdust to burn it, or with ashes, and thus cremated.

1351. That would be partially a crematory system? Yes.

1352. It has been shown that consumptive patients would necessarily be in various stages of convalescence, that some would be moving about the ground and expectorating;—would there not thus be a danger of germs finding their way into the water supply? I took that into consideration when I recommended that the hospital buildings should be removed to a site further away from the reservoir.

1353. Supposing you were called upon to give an opinion upon the whole proposal, and the country were not partially committed to the Rookwood scheme, would you select Rookwood as a suitable site for the concentration of all the paupers of the country? I cannot call to mind any site within a reasonable distance of Sydney which is equally suitable.

1354. Viewing it from an engineering point, and with regard to sewerage and water supply, would you select Rookwood? I do not see any particular objection to Rookwood if the buildings I refer to are removed a little from the reservoir.

1355. Do you think you will ever be able to disabuse the public mind of the idea that their water supply is impaired on account of this institution being placed alongside of it? I do not see that any person of sense would have any objection to it. The main reservoir of New York is in the middle of a dense population, with houses built up closely on two sides of it.

1356. But possibly the sewerage requirements are complete there? Yes; they have underground drainage, but they have houses alongside of the reservoir. Of course, I assume that this scheme will be carried out with proper sewerage. Common sense dictates that you must have sewerage for 3,000 people.

1357. There is some question about the pressure of water at Rookwood;—could the present pressure be increased? Water will have to be pumped up to an elevated tank. The pressure there at present is not sufficient.

1358. Would direct communication with the reservoir give greater pressure? No.

1359. *Mr. Clarke.*] Would it be possible to connect at some future time with the ordinary sewerage at Burwood? No survey is made, but I have no hesitation in saying that it would be quite possible to do so.

1360. Would it cause greater expense to connect with the sewer at Burwood than to deal with the matter locally? I think so. At first, at any rate, it would be cheaper to treat it locally.

1361. Would it be possible by trenching the land, and utilising the liquid sewage, to treat the sewage in the same way as is done at Webb's Grant without causing any offence? Yes.

1362. Could the faecal matter be destroyed by that means? Yes.

1363. Is the site at Rookwood bleak and cold, or in any way unsuitable for an asylum? I do not think it is unsuitable. It is on a hill top, but that is desirable, in order to get the breezes.

1364. *Mr. Hassall.*] With regard to drainage, would the asylum now existing at Randwick be equal or superior to any other site you know of? The advantage of the site at Randwick would be that we have got the drainage there already, or very close to it. I am not quite sure whether it is connected at present, but it is intended to be connected.

1365. If that site were connected with the drainage, do you think it would be a good site for an asylum for the aged poor? No; I think that would be bringing the people into a more dense population. It would not be so desirable as Rookwood, which is more remote.

1366. Would the facilities for drainage at Rookwood be so good as at Randwick? Of course, Randwick could be regulated more readily, because the sewer is closer to it, but when the drainage is extended to Rookwood it will be equally good.

1367. But it would be more expensive at Rookwood? It would be more expensive in the first instance.

1368. *Chairman.*] Are you roofing the Centennial Park Reservoir? Yes.

1369. Why are you doing that? Because it is so close to the street and houses, and there is so much dust blowing about. C. W. Darley, Esq.
1370. Then you think the water might be contaminated by the wind-borne substances? Yes; within towns it is always desirable to roof in reservoirs. 14 Feb., 1896.
1371. Are you roofing the Centennial Park Reservoir because you fear contamination from wind-borne particles? There is a further reason. We had no right to the ground, and there was a promise made that a roof would be put on that reservoir to enable the people to have the use of the surface. In any case it would have been necessary to fence off the reservoir to prevent dead cats and other objectionable things being thrown into it. There is no fear of that at Potts' Hill, because we allow no trespass there.
1372. When a reservoir is placed in the middle of a town is there not a certainty of contamination, unless it is covered? Yes.
1373. The further you get away from population the purer the air is likely to be? Yes.
1374. That being so, is it a wise thing to place within a quarter of a mile of a great reservoir, supplying 400,000 people, a population of 4,000 composed of the most decayed and broken down portion of the community? I think, if the buildings I have referred to were moved as I have suggested, they would be kept at least half a mile from the water. I would not object to that. I think the present buildings are rather more than half a mile away—about three quarters of a mile.
1375. Do you say that half a mile away would be sufficient? Yes; about that. If dangerous cases were not kept within that distance, I think there would be no risk.
- 1376-7. As head of the Water and Sewerage Board, do you disapprove of any population being brought within half a mile of that reservoir if it can possibly be helped? I do not say any population, but a limited population.
1378. Would you have no objection to little tenements being built just on the other side of the reservoir? We have got two caretakers there as it is living close to the water. We do not object to that.
1379. Is it your opinion that it does not matter whether population surrounds an open reservoir or not? There is an objection to people living too close to the reservoir, but if they are kept a certain distance away, and sanitary matters are attended to, I do not object.
1380. Do you fix the limit at half a mile? Anything over a quarter of a mile for ordinary houses would be quite sufficient.
1381. You say a quarter of a mile for ordinary houses, but for such buildings as you refer to on this plan you would say half a mile? Yes, for infectious cases.

Hon. Sir Arthur Renwick, M.D., M.L.C., President of the State Children's Relief Board, sworn, and examined:—

1382. *Chairman.*] Are you President of the State Children's Relief Board, and of the Benevolent Society of New South Wales? Yes, also of the Sydney Hospital and the Deaf Dumb and Blind Institutions. Hon. Sir Arthur Renwick, M.D., M.L.C.
1383. *Mr. Lee.*] Have you had a very long experience in connection with our charitable institutions and asylums? Yes. 14 Feb., 1896.
1384. Are you acquainted with the proposal now before the Committee to concentrate all the male paupers at Rookwood? Yes.
1385. Do you know the Parramatta Asylums? I have been in both of them, and I remember when they were first instituted. I was then honorary physician to the Benevolent Society of New South Wales, and the buildings in Sydney being overcrowded, it was determined by the Government to still further remove the patients to Parramatta and Liverpool. They were then taken from under the control of the Benevolent Society and placed under the control of the Government.
1386. Have you seen those asylums recently? Not within the last three or four years.
1387. What was your opinion at that time as to their suitability? That they were not first-class buildings for the purposes for which they were used.
1388. Are you aware that the pauper population has increased very much of late? Yes.
1389. Can you ascribe any reason for that? In the first place there is the increase in population generally; in the next place, during recent years there has been a great deal more hardship and suffering amongst the working class of the community; but I do not know of any special reason.
1390. Have you any reason to suspect that we are keeping more than our fair share of the poor? That is very difficult to answer. There is no doubt the proportion is now much greater than it used to be ten or twelve years ago.
1391. In dealing with State children have you found that the system of boarding-out is a success? It has been an eminent success.
1392. Do you think that that system could be applied to old men and women? It would have to be applied with very great discretion to their case; but there are allied schemes which might be more suitable.
1393. For what purpose is the Randwick Asylum used at present? For the purpose of maintaining orphans, or the children of people who are able to pay some small portion of the maintenance money.
1394. Are the children kept there until they are old enough to board out? No; the Randwick Asylum does not at present come under the provisions of the State Children's Relief Act. In the first place, the Randwick Asylum has certain funds of its own by which it is able to maintain a certain number of children. While those children can be maintained there with those funds, which could not be otherwise applied, we have felt that it would be injudicious to remove the children at present.
1395. Are the whole of the premises used? No, only a small portion.
1396. Would there be any objection on the part of the authorities to lease a portion of that building to the Government for the temporary housing of the poor? So far from that being the case, I understand that a few years ago a proposal was made to the Government in connection with that matter, but I do not remember the precise terms.
1397. Are you aware of any local objection to housing the poor there? There might possibly be an objection on the part of the inhabitants in the neighbourhood. I think they would object under any circumstances to paupers going there.
1398. Providing that difficulty were got over, would it be possible to come to terms with the directors? I have no doubt whatever that it could be done.

Hon.
Sir Arthur
Renwick,
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1399. What are your views as to the best method of dealing with our paupers? I may state that some few days ago I had a conversation on this subject with Mr. Maxted, who I think is at present in charge of most of the charitable institutions of the country. He was introduced to the Service in his present prominent position in connection with the State Children's Relief Board, and I have always been in most confidential relations with him. It is with very great regret indeed, knowing the ability and experience of Mr. Maxted, that I disagree with him on this particular matter. I disagree with him first of all, because, even when the proposal was made by Sir Alexander Stuart that Rookwood should be employed as a kind of reformatory for children, I then thought the site unsuitable. I think that it would be still more unsuitable as a site for adults, on account first of all of its exposure, on account of the character of the soil, which is clay, and also on account of its proximity to the water supply of a great city. On these grounds, as well as some others, I explained to Mr. Maxted that my views were entirely out of harmony with his. Of course, Mr. Maxted, as an official, looks at the matter more from the standpoint of management and expense, but a country like ours, in treating questions of this character, should look at something beyond that. That is another reason why I disagree with him. My own idea is that it is a mistake to herd together so many persons in one building who are so dissimilar in their characters, so different in their experiences, and so different in the nature of the diseases to which they may be subject at the period of life when they are placed there. I think it is extremely desirable in all cases when people are massed together that they should be classified and separately treated and attended to. I think it is very unwise to place people affected with cancer near those affected with consumption, and especially to place either of those near people who are healthy and only affected by senility. The great drawback in connection with the management of a large institution of this kind is always the want of classification. That is really the great blot on our present system in connection with the barrack treatment of our aged male paupers, and the treatment of females too for that matter. I think the best course to take under the circumstances would be to relieve the present buildings which are so overcrowded and unsuitable, by removing some of the inmates, if local feeling could be done away with, to the asylum at Randwick. Those buildings are at present to a great extent unused, and they are very suitable in some respects for these very people. It would be impossible to retain the Randwick Asylum as an institution for adults and children at the same time, especially for these old men. I can foresee great dangers if these two classes are placed in the same building or in proximity to each other. Therefore, if it is intended to utilise the Randwick building in this way, the children ought to be boarded out at once, and arrangements might be made through Parliament or otherwise, for the utilisation of the funds left for the Randwick institution, not forgetting, of course, to make provision in any such Act for the recognition of the great and valuable services and claims of those who have given funds to that institution. Ultimately, it would be well for the people of this country to make provision for the old people by providing old-age pensions and separate homes for married people, and for the large proportion who can never be treated in those ways, by establishing suitable institutions. The Parramatta institution was originally a tweed factory or something of that kind. It was never intended for hospital purposes at all. These are the general suggestions that I would throw out.

1400. What is your opinion as to the advisableness of having a central hospital for the treatment of acute and chronic cases? They ought to be separated.

1401. At present is there not a large portion of the space at each asylum used for hospital purposes? Yes.

1402. What is your opinion as to having some central system for acute and chronic cases? In hospitals we always treat the acute cases only, and chronic cases are treated in convalescent hospitals, or institutions of a similar character. That is a distinction well recognised in every civilised community. It would be impossible to confine all the acute cases to one building. We must have separate buildings in separate centres. There was one remark I forgot and that is in connection with the water supply, and the dangerous proximity of these buildings at Rookwood to the reservoir. In this country we have severe dust storms, and there is no doubt that dangerous particles are carried to a far greater distance here than in other countries which are not semi-tropical. There is no doubt that would be a source of danger.

1403. *Mr. Lee.* Do you apprehend danger from the consumptive patients seeing that consumption is a communicable disease? I have no doubt about that. In Italy it is called the English disease, simply because it is supposed that the English visitors communicated the disease to each other. There is no doubt in my mind that it is communicable by touch and close proximity.

1404. Do you recognise that in a large hospital specially set apart for consumptive patients, some of them must necessarily move about the ground and they would expectorate, and that expectoration might be conveyed to the water supply? I am sure that your suggestion is perfectly correct. The sputum dries up and is blown about in all sorts of places. I am sure that the great prevalence of the disease in Australia is due to that very cause to a large extent. Phthisical people walk about the streets, they spit on the ground, the bacteria get into the lungs of healthy persons, and so the disease is established. I have known cases where individuals have become affected with consumption, although there was no trace of the disease in their families, and no doubt that has arisen from local causes such as you refer to.

1404½. You think that the Committee are bound to take into consideration the gravity of placing so large a number of people in close proximity to the water supply? Yes.

1405. If you were consulted in the first instance as to a proper site on which to place our destitute, would you have selected such a site as Rookwood? No; I am quite decided about that. I do not think it is suitable for hospital purposes under any circumstances.

1406. If you were selecting a site would you go into the interior? Yes; there are plenty of sites. This is not a small country.

1407. You do not think it would be wise to concentrate our destitute and infirm at any one place? Quite so.

1408. And you think it is very inadvisable to concentrate them at Rookwood? Yes.

1409. If the Committee determine to recommend the use of the Randwick Asylum temporarily, could the children there be dealt with? Yes; they could be boarded out within a week. We have on our books at present 500 applications of a suitable character.

1410. What arrangements would the trustees want? I know pretty well what their feelings are, and I do not believe that they would stand in the way of such a proposal.

1411. But the children at Randwick are not orphans, and they could not be boarded out without the sanction of their parents? We can board them out under the Act at present.

1412.

to 800. But I understand the proposal is to separate those affected with diseases of certain kinds, to classify the inmates, and then provide a staff. If it is a staff for poor old infirm men who occasionally get ill, I imagine one medical man would be sufficient for 800. But for 800 inmates affected with disease you would require a greater number of medical men to attend effectually to them. It is a matter of experience and can only be dealt with as it arises in each particular case.

1465. *Mr. Clarke.*] I presume you are aware that the Randwick Asylum is a semi-Government institution partly supported by private subscriptions? I am aware that the buildings were principally built with Government money, but it is not supported now by any Government money.

1466. But it used to be? Yes, until the State Children's Relief Department took out the children.

1467. You are aware that Dr. Cuthill left a very large sum of money to assist in the building of that institution? Yes.

1468. Seeing that the children there are not orphans, would it not be advisable to have an Act passed by Parliament to legalise the removal of the children? I am sure you can do nothing without an Act of Parliament in connection with that matter.

1469. Do you think that the buildings at Randwick being two or three storeys high would be as useful as the pavilion buildings? To a large extent the system at Randwick now is the pavilion system, but of course the building is of two storeys. I would have no difficulty in managing that institution, and in placing the old people there. There would be no difficulty in placing some of them upstairs and others downstairs.

1470. Do you think it would be fair to the residents of a populous suburb like Randwick to locate there 600 or 800 of these old infirm people? If I lived at Randwick I perhaps would not like it, but I am looking at the matter as a general public question. Some little time ago a proposal was made to turn that asylum into a branch of the lunatic asylum. Then there was a great popular outcry. I infer from that that there would necessarily be the same outcry if pauper patients were put there. I think the Randwick Asylum has done wonderfully good work, but I think the time has gone by for any barrack system to be applied to any poor child in this country.

TUESDAY, 18 FEBRUARY, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.

The Hon. JOHN DAVIES, C.M.G.

The Hon. JAMES HOSKINS.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL PEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Erection of Buildings at Rookwood for Infirm and Destitute Persons.

Charles Robert Scrivener, Esq., Staff Surveyor, Department of Lands, sworn, and examined:—

1471. *Chairman.*] What are you? Staff Surveyor in the Lands Department, in charge of the Metropolitan District.

1472. On the northern railway line, where does your district terminate? The Macdonald River is as near the boundary as possible. On the western railway line it extends as far as Lawson or Katoomba; on the southern line as far as Mittagong.

1473. Within those boundaries have you a fair knowledge of the country and of the Crown lands embraced therein? Yes; I produce a litho. map of homestead selections at Campbelltown.

1474. Do you know the area bounded on the north partly by the Campbellfields Estate, and running eastward to a road between portions 200 and 231, then south to portion 242, and thence along the road in a north-westerly direction towards the Campbellfields Estate? Yes.

1475. Will you describe that area? It is all sandstone country. About half or a little less than half is practically level, sandy soil with a mixture of gravel and stone. There is a patch of very deep sandy soil of about 40 or 45 acres lying within the reserve 23-266, portions 248, 249, 252, and 255, and part of portion 234. I have a coloured sketch showing the positions of these lands.

1476. How far is the site from Leumeah? From $1\frac{1}{2}$ to 2 miles—about $1\frac{1}{2}$ mile I suppose from the nearest point. About 3 miles from Campbelltown.

1477. How does it compare with Campbelltown with regard to altitude? I daresay it would be from 150 to 200 feet above the main street of Campbelltown.

1478. How far is it from George's River—the nearest point? About 25 chains.

1479. What is the area of the land, approximately? It would embrace about 450 acres. I hand in a coloured sketch showing deep sandy soil, 45 acres, at the north-western corner. The rocky portion of the area is shown by a purple tint, and the level sandy land, which embraces pretty well half the area, is shown by a blue tint. The brown tint shows the portions already selected. There are only three portions—261, 247, and 208—contiguous to the land in question.

1480. Would there be any trouble in pumping water from George's River? None that I know of.

1481. I see you have a point marked at portion 230 as being 2 miles from Leumeah? Yes; I have marked two points there, the distance is about 2 miles in each case.

1482. One going by the road east, and the other going by the road that passes through the land in question? Yes.

1483. What is your opinion in regard to the approach to Leumeah? It is very fair. The grade over the worst part would be perhaps 1 in 14, possibly 1 in 13.

1484. Could that be improved? Yes.

1485. Is it your opinion that plenty of good building ground is to be found within the area in question? Yes; at least 150 acres would be quite suitable for building.

1486. Where would the drainage from the land in question go? To Peter Meadow's Creek, and thence ultimately into George's River.

Hon.
Sir Arthur
Renwick,
M.D., M.L.C.
14 Feb., 1896.

C. R.
Scrivener,
Esq.
18 Feb., 1896.

- C. R. Scrivenor, Esq.
18 Feb., 1896.
1487. Is there any population along George's River? There is no population either near Peter Meadow's Creek or George's River—not near the banks—for some distance down.
1488. When you say near the banks, what do you mean? Within 10 chains. Usually there is none within half a mile.
1489. It is a sandstone bluff? Yes; almost impracticable.
1490. Therefore, any drainage from the land in question would pass for the first 6 or 8 miles through unoccupied country? Yes; practically unoccupied country.
1491. Could water be brought to this land from the Sydney supply? I could only give an opinion about that by running a series of levels.
1492. Where would the water come from? I suppose the nearest point would be near the crossing of the road from Campbelltown to Menangle.
1493. You regard the soil on the site in question as good, dry soil? Yes, it is a suitable soil, because it is porous throughout.
1494. Are you aware that in the county of Cumberland there are large areas of Crown lands down towards Heathcote, on the southern side of the George's River? Yes.
1495. For the purpose in contemplation by the Committee, would you regard those areas equally as satisfactory as the Campbelltown area? Certainly not.
1496. Why not? First of all, the difficulty of water supply would be much greater. Then, again, the country is much more broken, as a rule, than is the case at Campbelltown—the gorges are deeper.
1497. Then take another area—the Field of Mars—how do you view that? I think most of the land of a suitable character near the railway has been alienated.
1498. Why do you reject the rest? Up towards the Lane Cove River it is rugged country.
1499. On the northern line, towards Berowra and Cowan Creek—how do you regard that country? The country there is simply a series of spurs from the railway line.
1500. Too broken, too abrupt? Usually I should say too abrupt, and there would be a difficulty about the water supply.
1501. Then we have areas around Pitt Town? There is Mulgrave, on the road to Windsor. There are 300 acres close to the railway station.
1502. At what elevation? Most of it would be above flood-level.
1503. Only just above? Some of it I should say would be well above; but the floods rise pretty high there.
1504. What is the character of the soil? The soil is not good. It is generally a very stiff clay, and in places there are deposits of river gravel. It has been at one time the bed of a river.
1505. How would you deal with the water supply question at Mulgrave? It would have to come from the Hawkesbury, a distance, perhaps, of a couple of miles.
1506. Do you approve of Mulgrave as a site for the purpose contemplated? I think the soil would be unsuitable.
1507. And it is low-lying? No, it is not low-lying; it commands very extensive and beautiful views. But it has a stiff clay soil which would require drainage.
1508. Comparing these other sites with Campbelltown, which would be the most suitable? I prefer Campbelltown.
1509. There is a large area shown on the south side of Richmond, known as Ham Common;—what do you think of that? Most of it is some distance from the railway.
1510. And the portion close to the railway is already occupied by the Agricultural College? This land occupied by the Agricultural College is nearly all low marshy land, and Ham Common is of the same description.
1511. Low-lying, marshy country? Sandy soil—marshy here and there throughout.
1512. Would it be a wholesome site on which to place a hospital? It is marshy, and I presume that description of land would not be suitable. It would require extensive draining. It could be drained.
1513. But as it stands in its natural state it would not be a wholesome place for a hospital? I should say not.
1514. After a heavy rainfall in winter would there be a large quantity of water left upon it for any time? I have seen the water lying over a good deal of it in large quantities. With regard to the area shown north-east from Castlereagh parish and Londonderry parish, on the whole I do not approve of it. It is low-lying, and after rain the water lies for a considerable time.
1515. Comparing Campbelltown with the other sites on Crown lands with which you are acquainted, do you regard it as the best for the purpose? Yes; I know of no other so suitable.
1516. There can be no Crown lands of which you do not know? I do not know of any near the railway line that would be suitable. Of course, there is part of Pitt Town Common. This would be more than a mile from the railway by any existing road, though some of it lies pretty close to the railway. The difficulty there, however, is, that there have been alienations.
1517. It is already broken up by alienations, and has not a sufficient elevation? Some of the land at Pitt Town is very well elevated, but there would be a difficulty about water, which would have to be brought a long way.
1518. Then there is something against all these other sites more than against Campbelltown? Campbelltown appears to me to possess many advantages over any other site I know of.
1519. Passing to the county of Camden, is the village of Thirlmere in your district? I know it.
1520. How far is the hospital from the railway station? It is about 4 miles from the Picton railway station.
1521. Between the villages of Thirlmere and Couridjah there is a large area of land extending on the west around the lagoons or the lakes, and about a similar distance on the east;—do you know that area of land? I know a good deal of it.
1522. Could a site be found there? The only doubt I have is as to whether you would be able to get sufficient level land.
1523. You cannot speak definitely with regard to it, in detail? I know the railway runs along a spur, which for a good distance is very narrow. You do not go far from the railway before you get into rocky country as a rule.
1524. Is not the land level about the Picton lagoons? The Picton lagoons are a good deal below the railway line.

1525. Is the water in the lagoons good? Yes; I believe it is good enough for domestic use. The drainage from the large area coloured red, parish of Couridjah, flows into the Bargo River, below the point where the river furnishes the water supply for Sydney. Therefore, no portion of the area between Thirlmere and Couridjah finds its way into the Sydney water supply.

1526. With regard to this area of land at Thirlmere, you cannot say anything very definite? No; except with regard to the general character of the country. It is of sandstone soil, with an elevation of something like 1,000 feet.

1527. Do you know Glenbrook? Not very well: I only know the general character of the country.

C. R.
Scrivener,
Esq.

18 Feb., 1896.

Joseph Davis, Esq., M. Inst. C.E., Principal Assistant Engineer for Country Towns Water Supply and Sewerage, Department of Public Works, sworn, and examined:—

1528. *Chairman.*] What are you? Principal Assistant Engineer for Country Towns Water Supply and Sewerage. J. Davis, Esq., M.I.C.E.

1529. I believe you have prepared a proposal for dealing with the sewage from the buildings proposed to be erected at Rookwood for infirm and destitute persons? Yes. Perhaps it would be convenient if I read a statement to the Committee which I prepared for the Engineer-in-Chief for Public Works. It is as follows:—

18 Feb., 1896.

In accordance with your instructions I have gone very carefully into the question of the drainage and treatment of the sewage from the proposed Rookwood Asylum, which is now before the Parliamentary Standing Committee on Public Works, and I have the honor of submitting the following observations and recommendations thereon. As the proposed buildings are situated on high ground, if the water-carriage system be adopted, the sewage can readily be removed by gravitation; but the method of treating the sewage afterwards, is not so easily disposed of. The excrement could be collected by the ordinary dry-earth system in pans, and buried in the asylum grounds, or it might be cremated in a properly constructed destructor. The collection and disposal of large quantities of stuff of this description is very troublesome, and unless done daily and with the greatest care, must inevitably create a nuisance. Often, whatever steps may be taken to remove it quickly and regularly, it will create unpleasantness. Preference must be given to the water-carriage, if efficiently constructed, as being the cleanest and most convenient method of removing the excrement in such cases as the one under consideration, where the quantity is large and aggravated by the description of service to be performed. It is usual to adopt the dry-earth system where it is not possible to get the faeces removed by water. But it must not be forgotten that with the dry-earth system dealing with a part of the sewerage question, a set of drains for carrying off the liquid sewage and some means of treating it would have to be provided in addition to the pans. In rural districts, where the population is not concentrated, and the pans can be readily emptied, no doubt, the dry-earth system is admirably suitable, but with the conditions under review the best plan is to deal with the whole of the sewage, both liquid and solid, by one system. When it is borne in mind that the refuse from 3,300 persons has to be treated, involving something like 132,000 gallons of sewage per day, it is apparent that the prime question involved is how to get the sewage disposed of in a way so as to cause no nuisance.

I have had under consideration three methods of securing this:—

1st. An outfall sewer might be constructed from the institution to the head of the Western Branch of the Western System, at the intersection of Redmyre Road and Homebush Road, Strathfield, where it can be discharged and eventually flow into the Botany Sewage Farm.

2nd. It may be conveyed across the intervening country by means of a pipe sewer to the proposed Sewage Farm at Duck Creek, and there treated, or,

3rd. It may be intercepted by a system of drains converging at a suitable point, where the sewage could be treated by precipitation and filtration, and the effluent discharged into the Rookwood Cemetery Drain.

A longitudinal section has been taken along the line of the proposed sewer between Homebush Road and the asylum. The sewer would be 3 ft. 3 in. x 2 ft. 2 in., and 186 chains long and is estimated to cost £21,632 excluding the amount which would have to be paid for land resumptions. This expenditure would, however, provide for including a considerable area in the Western Suburbs system which is not at present drained. On the score of economy I do not favour this method. The continuation of the Western Sewer from the present termination at Strathfield to the asylum would cost more than by treating the sewage by the precipitation and filtration process in the grounds. Moreover, if the sewers of the Metropolitan Board of Water Supply and Sewerage were used, the institution would be liable to a sewerage rate which is now 7d. in the £. The asylum being 5 miles from the proposed sewage farm at Duck River, it is clear that method No. 2 is out of the question on account of the great cost it would entail. I propose that the sewage should be collected by a system of drains as shown on general plan, and that these drains should converge at a point, also shown, lying between East-street and the road dividing the asylum from the Necropolis, where it should be treated by passing it first through precipitating tanks, where the grosser particles held in suspension would be removed, and then, after it leaves the tank, passing it through coke filters. The effluent, upon leaving the filters, would be conveyed by a 9-inch stoneware pipe to the head of the Rookwood Cemetery Drain in East-street, and find its way through that drain to Haslem's Creek. Provision has been made for 132,000 gallons, half running off in eight hours. This means that 3,300 persons will be served at the rate of 40 gallons per head per day. In addition to the sewage, the sewers will be sufficiently large, and the outlet works of sufficient capacity, to admit a portion of the rain-water from the roof surfaces being carried away by the same system of drainage. The roof-water will be admirably suited for flushing the sewers. No provision has been made, however, in the capacity of the proposed works, for carrying off the water from paved and other surfaces, beyond what is admitted from the roof, for flushing purposes. Failing the flushing which will be available under ordinary circumstances from the roof surfaces, an automatic flushing chamber is to be constructed at the head of each main branch, which would be used during periods of dry weather.

DESCRIPTION OF PROPOSED WORKS.

Drains.—The drains immediately surrounding and connected with the proposed buildings, will be on the same lines as those carried out by the Metropolitan Board of Water Supply and Sewerage in Sydney and suburbs, with inlet and outlet shafts fitted with cowls for ventilation.

Outfall Sewers.—The sewage will be intercepted and conveyed to the outfall works by means of two 9-inch stoneware pipe sewers, encircling the high ground on which it is intended to put the proposed buildings, converging at a suitable point near the disposal works. These intercepting sewers will be provided with shafts for ventilation and inspection.

Sewage Disposal Works.—The two intercepting sewers discharge into a distributing chamber from which the sewage passes through inclined screens which are situated between the distributing-chamber and the settling-tanks. Before the sewage has been screened, the precipitant is added by means of compressed air. The compressed air will have the effect also of agitating the sewage and mixing the precipitant and sewage, and at the same time of breaking up the solids, as well as facilitating the absorption of oxygen. The screening-chamber is in duplicate, and controlled by valves, so that one screen may be used while the other is being cleaned.

Settling Tanks.—The settling-tanks, of which there are three, side by side, are designed on the continuous system. They are rectangular in plan, with segmental sides and bottoms, and are each divided into three compartments by cross-walls, which, being slightly lower than the weir, allows the sewage to flow over from one compartment to another in a thin film. In addition to the cross-walls, the tanks are fitted with wave and scum boards. By these means the forward movement of the sewage is sufficiently retarded to admit of the grosser portion of the solids held in suspension, being deposited. The bottom of the tank, along which runs a semi-circular channel, is graded to a fall of 1 in 80 towards the sludge tank, so that the sludge may be run off by gravitation. Along the front of the settling tanks there is a distributing trough which is fitted with sluice-boards so arranged that the sewage enters the settling tank in an even sheet. As the clarified sewage leaves the tank it falls over a series of steps or cataracts, which are designed to expose it to the air, and to facilitate the absorption of oxygen. From thence it passes through coke filters, and is discharged into an effluent drain 9 in.

J. Davis, Esq., in diameter, being a continuation of the Rookwood Cemetery Drain, and by that means eventually finds its way into Haslem's Creek, below the Parranatta-road. The capacity of the tanks is equal to 50 per cent. of the total dry weather flow, and it is intended, during periods of maximum flow, sufficient tank accommodation shall be in use to admit of the sewage being two hours in its passage through the tanks, that being the time it has been found by experience it will take for the solids to deposit. After the tank has been in use for two or three days, it will require to be cleaned. To effect this, the sewage will be shut off, and the clarified sewage in the tank drawn off by a floating arm, so as not to disturb the sludge which has settled at the bottom of the tank. After the water has been drawn off, the sludge flows into the sludge reservoir. When it has stood in the reservoir for some two hours, the fluid which rises to the surface is drained off, and the sludge is run off into the metal sludge vessels. As the sludge is lifted from the vessels to the filter press, about 4 per cent. of lime is mixed with it, to facilitate the pressing. About 70 to 75 per cent. of the liquid sewage will be strained off in the pressing process, after which the sludge will be sufficiently hard to allow of it being removed and used in the grounds as manure.

Filter Beds.—The walls and floors of the four filters are formed of concrete, each filter being 70 ft. x 25 ft. x 3 ft. deep. The filters, which are provided with the necessary inlet and outlet channels and sluice gates, will be constructed as shown on detail plans. With regard to the efficiency of coke filters, reference might be made to a report dated October, 1895, of Mr. W. J. Dibdin, Chemist to the London County Council, giving details of experiments which have been made at the London Outfall Works during 1892-3-4, and 5. There were two series of experiments made. Small filters were first used in order to ascertain the best and most economical filtering material. For this purpose "burnt ballast," "pea ballast," "coke breeze," "sand," and a "proprietary material" were respectively used. After the materials had been in use for about three months, Mr. Dibdin reported "from the results obtained it appeared that a considerable amount of purification could be effected by any filtering material, the desiderata evidently being porosity and consequent power of re-absorbing atmospheric oxygen. For foul waters sand proved too fine; whilst the burnt ballast used was too coarse. Coke breeze seemed to unite the necessary qualifications, and as it is also a cheap material it was selected for the further trials on a large scale. There can be little doubt, however, that the question of cost of material should be allowed to decide what should be used for a filter in any given place, since burnt ballast or gravel may be made much more efficient by using a greater depth of more finely granulated material combined with a slower rate. The proprietary filter excelled the coke breeze only in appearance, the actual purification not being quite so much, while the cost is prohibitory." The second series were then undertaken, and a filter was constructed covering exactly one acre of ground. The land was levelled and embanked where necessary, and perforated drains laid, meeting in a common trunk for discharge. The filtering material consisted of three feet of coke breeze, covered with three inches of gravel. After this filter had been in use up to September, 1895, Mr. Dibdin states, that "the experiments, taken as a whole, show that sewage, especially if previously clarified by precipitation, may be purified to any desired degree,—the actual amount of purification depending upon (1) the length of time during which the effluent is allowed to remain in contact with the filter; and (2) the length of time allowed for aeration. If a reduction of 75 per cent. in the oxidisable organic matters in solution be considered as sufficient, the quantity that can be treated per diem on one acre of coke breeze is 1,000,000 gallons, which gives a required area for the treatment of the whole of the metropolitan sewage—taken at 180,000,000 gallons—of 180 acres only. This rate is probably the highest that can be worked under all conditions of seasons;" or, in other words, one acre of coke-filter will purify the sewage from 25,000 persons.

His conclusions are as follows:—"The action of a filter is twofold—(1) It separates mechanically all gross particles of suspended matter, and renders the effluent clear and bright. (2) It effects the oxidation of organic matters, both those in suspension and those in solution, through the agency of living organisms. It is the preliminary establishment and subsequent cultivation of these organisms which is to be aimed at in the scientific process of purification by filtration. The ordinary putrefactive and other similar organisms commence the work by breaking down the organic compounds and converting them to less complex forms, principally water, carbonic acid, and ammonia; the nitrifying organism then acts upon the ammonia, the nitrogen being converted into nitric acid. For this process to go on, three conditions are essential. Firstly, the organisms must be supplied with plenty of air; secondly, there must be present a base, such as lime, with which the nitric acid can combine; and thirdly, the biological action must take place in the dark, i.e., in the body of the filter, and not in the water exposed to the light above the filtering material. Filtration, on biological lines, of sewage or other foul water, containing in solution but little free oxygen and a large quantity of oxidisable organic matter, therefore means:—

"(1) That the filter, by cautious increments in the quantity of effluent, which in itself contains the necessary organisms, must be gradually brought to a state of high efficiency. This condition will be shown by the existence in the filtrate of a constantly increasing proportion of nitric acid.

"(2) That the contact of the micro-organisms with the effluent to be purified must be effected by leaving such effluents at rest in a filter for a greater or lesser time according to the degree of purification required, the process being analogous to that of fermentation. The system employed at many places is to run the water straight through the filter, and thus allow insufficient time for the work, with the result that the filtrate is soon in an unsatisfactory condition.

"(3). That after each quantity of effluent has been dealt with the micro-organisms must be supplied with air, which is readily affected by emptying the filter from below, whereby air is drawn into the interstices. The filter must stand empty for one hour or more previous to another filling, and a longer period of aeration, say, twenty-four hours, must be allowed every seven or eight days.

The life of a coke-breeze filter worked in this manner is practically without a limit.

"From the general results obtained by these several trials under various actual working conditions, it is apparent that there is no difficulty in obtaining any desired degree of purification by means of a system of filtration conducted on biological principles. If a higher degree of purity be required than that indicated by the foregoing, it can be obtained by an augmentation of the filtering appliances at a comparatively small cost."

Machinery.—It is proposed to have one 7-h.p. oil-engine working an air-compressor providing power for raising and forcing the sludge from the sludge-vessels through the filter press. It also works the lime mixer which supplies lime to the sewage for precipitating the suspended matter, and supplies lime for mixing with the sludge in the sludge-vessels before it passes into the filter-press. In addition, it supplies compressed air for agitating and breaking up the sewage, and incorporating the precipitant therewith before it passes into the precipitating tanks.

Estimate.

I estimate the cost of the proposed works will be as follows:—		£	s.	d.
Intercepting sewers, including branches to buildings, and ventilation.....		4,153	0	0
Disposal works, complete		2,800	0	0
Effluent drain to join Rookwood Cemetery Drain.....		625	0	0
Add for contingencies, &c.		767	0	0
Total estimated cost.....		£8,435	0	0

The annual working expenses I estimate as follows:—		£	s.	d.
Wages.....		100	0	0
Oil, &c.		127	0	0
Precipitants		160	0	0
Repairs		33	0	0
Total		£420	0	0

The annual charges will therefore be:—		£	s.	d.
£8,435 at 3·616 per cent. interest at 3½ per cent. and repayment in 100 years		305	0	0
Working expenses		420	0	0
Total annual charge.....		£725	0	0

or equal to a yearly cost of 4s. 5d. per head with a population served of 3,300. This cannot be considered large compared with the amount at present being paid at Parramatta simply for the removal of night-soil. There the Government pay £632 17s. for a population of 1,000, or 6s. 8d. per head. A proposal is at present under the consideration of the Council in connection with the proposed Parramatta sewerage works to pay the Council, if these works be carried out, for the removal of the whole of the sewage (liquid and solid) by the proposed sewers at the rate of 10s. per head. J. Davis, Esq.,
M.I.C.E.
18 Feb., 1896.

Destructor.

As I understand a proposal is before the Committee to destroy by fire the excrement and other refuse in a suitable destructor, perhaps it might be well to refer to the matter before concluding. A suitable destructor would probably cost about £1,500 to erect, and about £339 per annum to work, made up as follows :—

Fuel	£164
Wages.....	100
Horse and cart	75
	£339

It would be costly to work a destructor at an institution of this description, where the proportion of excrement would be so great compared with the other refuse. In ordinary town destructors the garbage almost consumes itself, and requires very little fuel, whereas in the present case, about 15 cwt. of coal would be used per day. As already pointed out, a destructor would simply destroy the solids, and there would be still remaining the liquid sewage to be dealt with, which would necessitate the construction of a system of drainage such as the one I have proposed. This is obvious, as only about $\frac{1}{4}$ of sewage could be treated by the destructor, leaving $\frac{3}{4}$ to pass through the drains. If a destructor is decided upon, I would advise that instead of the excrement being destroyed it should be dried, as it could be more economically treated in this way, and at the same time the resultant dust could be used as manure on the grounds.

J. DAVIS,

Principal Assistant Engineer, C.T. Water Supply and Sewerage.

Forwarded for the information of the Works Committee. The proposal of Mr. Davis has had considerable consideration from me, and I am of opinion it would prove efficient and economical. I would refer the Committee to my pamphlet on Sewage Purification, and also to Mr. Dibdin's report referred to by Mr. Davis.

ROBT. HICKSON,

Engineer-in-Chief for Public Works.

18/2/96.

1530. *Mr. Clarke.*] Then, I presume, that of all the different plans mentioned by you in your statement, the one you there recommend is the one of which you approve? Yes; the system of treating the sewage by precipitation and filtration.

1531. Is there no other mode of getting rid of the sewage, except by such an expensive system as that? There is no other way so cheap as that in my judgment.

1532. Would it not be as cheap to connect by pipes in the ordinary way with the Metropolitan Sewerage System which has been extended to the neighbouring suburbs? No; the cost would be two and a half times greater.

1533. Then there is no other mode of getting rid of the sewage except the one you have just explained? I think that is the most economical and the wisest way of getting rid of the sewage.

1534. You have stated that some portion of the sewage might be drained into Haslem's Creek? The effluent from the disposal works would go there, through the Rookwood Cemetery Drain.

1535. And where would it go afterwards? Into the Parramatta River. Haslem's Creek flows into the Parramatta River.

1536. And would not that give cause for complaint on the part of people residing in the neighbourhood? No, because before the sewage was discharged into Haslem's Creek it would be purified; all the injurious and objectionable matter would be removed.

1537. The drainage of the sewage into Haslem's Creek is a portion of the plan you now propose? Yes; but I do not propose to discharge the sewage in its crude condition into Haslem's Creek. I propose to take from the sewage all the objectionable matter, and then discharge the effluent into it.

1538. Is there any possibility of conveying the sewage into George's River? No; I think that would be out of the question.

1539. What distance is George's River from the Rookwood site? It is certainly as far as Haslem's Creek, and then you would have to tunnel through a hill to get on George's River water-shed.

1540. But it could be done, I presume? It could be done. Before it was discharged into George's River it would be advisable to treat it in some way, and not discharge it into the river in its crude state, for it would certainly cause a nuisance there unless treated fully.

1541. I have been told that it is only about 2 miles from the proposed site at Rookwood to George's River? I should say that it was fully that distance.

1542. Have you any idea of the expense of carrying the sewage into George's River? The cost would be fully £20,000, and this sum would not provide for sewage disposal works.

1543. You think the plan you propose is the best that could possibly be adopted? I certainly think so.

1544. And the least costly? Yes.

1545. You do not recommend any other plan? No; the whole of the sewage might be turned in its crude state on to filter beds, but the area of the filter beds would have to be considerably larger than what I have proposed, and what the extra filter-beds would cost would fully equal the cost of the precipitation tanks, so that there would, in my judgment, be no advantage in treating the sewage wholly by filtration.

1546. Could the sewage be utilised in any way on a sewage farm, as is being done to a certain extent at Rookwood now? I do not regard the land as suitable for a sewage farm. I have taken that matter into consideration, and I do not think the area would be large enough, nor is the land suitable.

1547. Do you know the total area available? I do not know the total area, but I am speaking of the land that would lie below the buildings, and would be suitable to irrigation by gravitation.

1548. I believe the area is about 600 acres? Some of that would be much too high for the purpose.

1549. In what way do you consider the land unsuitable? I do not think it would absorb the sewage readily without underdraining. It is clayey, ironstone soil, that would not be likely to absorb sewage readily.

1550. Supposing it was thoroughly trenched—say three or four feet deep? Even then I would not advise that the sewage should be put on that ground, unless the clay from the excavation were first of all burnt. If the clay were subjected to fire then it might be very good filtering material, but otherwise it would not be.

1551. If it were possible for that to be done would it not be very much less expensive than that plan you propose? I do not think so. I think what I propose is the most economical way of dealing with the sewage from the institution, considering that coke breeze can be obtained so cheaply.

- J. Davie, Esq.,
M.I.C.E.
18 Feb., 1896.
1552. *Mr. Black.*] You estimate the cost of your proposed system of drainage at £8,495? Yes.
1553. That, of course, includes the whole area of the proposed scheme? It includes the drainage of the whole of the buildings shown on the plan.
1554. If a scheme were proposed which did not include the lower or isolation group, and which also omitted the casual group, your system could be carried out, I suppose, with only one arm? Yes.
1555. Would that very much lessen the cost? It would. The reason why the estimate is so high is on account of the way in which the buildings are scattered. They could not be located in a worse manner, as regards drainage, than in the way proposed.
1556. If it were proposed to increase the present number of inmates at Rookwood by only 600 or so, and to extend the buildings further north from the Potts' Hill Reservoir, I suppose that would involve a still further great reduction? It would materially reduce the cost of the drains.
1557. And I apprehend we should be so much nearer to Haslem's Creek? Yes; it would materially reduce the cost of the scheme on that account, because there would be so much less length of drains to put in.
1558. Would it reduce the cost to one-third? Scarcely, because the disposal works would not be reduced in the same proportion.
1559. The extensive system of treatment of the sewage which you have explained to us occurs at the place marked on the map as the outfall works? Yes; that is the place where the sewage would be treated.
1560. There is no independent treatment on each arm? No.
1561. You say you think the effluent which would be discharged into Haslem's Creek would be so pure as not to involve any offence to people in the vicinity? There would be no pollution. It is the standard that is generally adopted in all sewage disposal works, even when the effluent has to be discharged perhaps into a river where the water lower down is consumed by the people.
1562. Is it proposed to extend the metropolitan sewerage works to any suburb nearer Rookwood than the one to which it is at present carried? No.
1563. Are the people in the suburbs further on not desirous of being connected with the sewerage system? They are scarcely ready for it. There is not yet sufficient population there to feel the need of a sewerage scheme.
1564. You do not think that if the people in the suburbs lying between Rookwood and Strathfield took the matter up, the cost of construction would be so greatly divided that the expense in connection with the Rookwood scheme would be trifling? For many years to come the people living in the intervening district would not ask for sewerage connection, and the cost would be borne, in the first instance, by the institution.
1565. *Mr. Hassall.*] Do you think it possible to erect the proposed group of buildings at Rookwood on the more northerly portion of the land, near the medical superintendent's house? I should prefer to see them there for two reasons—in the first place, the sewage would be dealt with more economically; and secondly, it would be further away from the Potts' Hill Reservoir.
1566. It would do away practically with a great deal of the objection which might exist to the erection of buildings for the housing of consumptive, ophthalmic, and cancer patients in such close proximity to the reservoir? Yes; I should prefer to see them further north.
1567. And another result would be to materially reduce the cost of the sewerage scheme which must of necessity accompany the erection of those buildings? Yes.
1568. I think you said it would reduce the cost fully one-third? Scarcely one-third, because the disposal works would not be reduced in the same proportion.
1569. The main cost, then, would be in connection with the works for the disposal of the sewage, and not so much in the matter of drainage? The main cost would be for drainage. The sewers above the disposal works would cost, if carried out as shown on my plan, £4,153. If you can reduce the length of sewers by one-half, then the cost would be reduced one-half.
1570. By the erection of the proposed buildings, or whatever buildings might be necessary, on the site proposed for the medical superintendent's residence, the sewerage scheme would be brought very close? Very close.
1571. And it would do away with some thousands of feet of sewers? Probably if the buildings were put there the costs of sewers above the sewage disposal works would be brought down to £1,000, instead of £4,153.
1572. Have you taken any notice of that site? I walked over it.
1573. Do you think it would be too low for the erection of these buildings? I do not think so.
1574. There would be sufficient fall to allow of the drainage of the institution? Certainly.
1575. Do you think it would be too close to the Necropolis? I do not see why it should be.
1576. In the statement you have submitted to-day, you distinctly say that you embody a proposal which is the most economical for dealing with the drainage of an institution containing such a large number of men? I certainly think so, and I add further that it is absolutely necessary that some such scheme should be carried out to deal with such a large number of persons concentrated under such special conditions.
1577. Do you think it is desirable to mass such a large body of indigent persons, the majority of whom must be unhealthy, in one particular spot? I think it would be very undesirable. I simply give my opinion for what it is worth. It does not seem to me to be desirable. I have gone about these institutions a good deal during the last few years, and I would say that it is undesirable.
1578. *Mr. Humphery.*] In estimating the cost of connecting the drainage with the metropolitan sewerage system, did you take into consideration the fact that there would be no annual charge if the cost of connection were borne by the Government? I have not taken that into consideration in my estimate. I drew attention to the fact that if the Board's sewers were used below the intersection of Redmyre Road and Homebush Road, in my opinion the institution would be liable to pay a rate.
1579. Then it was upon the assumption that, although the cost of connection would not be borne by the Metropolitan Water Supply and Sewerage Board, the Government would have to pay all the same? I think so, because they would use 6 or 7 miles of the main sewer, and then the sewage from this institution, in common with that from all the other suburbs, would have to be dealt with on the Bondi farm. It seemed to me, under these circumstances, to be only fair to suppose that the institution would have to pay an annual charge to the Board.

1580. Is it not customary for the Water Supply and Sewerage Board to charge rates only where the Board incurs the cost of providing the connection? That is correct. But in this case it would not be likely that the Board would go to the expense of £21,000 in order to get revenue from this institution, when they would get nothing like a return for it. The Board acts upon the principle of getting a revenue—5 per cent. I believe—from any expenditure it incurs.

J. Davis, Esq.,
M.I.C.E.
18 Feb., 1896.

1581. Supposing that instead of a number of pavilion buildings, each containing about sixty persons, it was proposed to erect a smaller number of buildings containing 240 inmates each, and that in this way the number of buildings would be reduced—say, to one-fourth—would that lessen the cost of the sewerage system? Yes.

1582. Materially? It would depend on where the buildings were.

1583. Assuming they were placed on that portion of the ground where you see the pavilions, coloured black? It would reduce the cost of the drainage above the sewage disposal works to the extent probably of £2,000, which would make the total cost of my proposal £6,000.

1584. It would have a very material effect, therefore, upon the first cost? Yes. The buildings in the proposed scheme are so scattered as to necessitate putting down $3\frac{1}{2}$ miles of drainage.

1585. And if they were not so scattered, and fewer in number, the drainage system proposed by you would be much less costly? Yes.

1586. At present there are about 480 inmates in the buildings now on the ground;—are you aware how the sewage is disposed of? Yes.

1587. Do you see any objection to the system at present pursued? Yes, I do, certainly.

1588. Is it possible for any nuisance to arise from it? I should say there is a nuisance now, or at least there was when I visited the place.

1589. Will you describe the system at present in use, and explain how the nuisance arises? At present the ground is trenched to a depth of about 3 feet, it being composed of hard unabsorbent clay. The clay is then put back again into the excavation, in the state in which it was got out of the ground, and the sewage turned on to that. I do not think that the beds themselves are constructed as well as they might be. If the material were burnt before being put back there would be much better results. Furthermore, I do not think it is worked carefully. I noticed when I was there that sewage was ruining all about the place.

1590. You are speaking of the land upon which the sewage is deposited? I am speaking of the irrigation beds prepared at the institution to receive the fluids.

1591. How are the solids treated? They are taken away into a manure heap, and there deposited with horse manure and other manure, and then dug out as required, and put into the ground.

1592. Is that objectionable? I should think it was highly objectionable.

1593. Will you explain what way, in your opinion, the present system is a nuisance? I noticed very strong objectionable smells at the irrigation beds, as the result of sewage being allowed to run in all directions—not over the bed so much, but so as to overflow the channels, and run about the ground below the beds.

1594. Then, even supposing the number of persons at Rookwood was not increased, it would, in your opinion, still be necessary to introduce some different system of sewerage to that now adopted? Yes, certainly.

1595. Assuming that the number were increased to 1,000, I suppose it would be wholly impracticable to deal with the sewage by the present method? That is my opinion.

1596. You think it would not be a proper or safe thing to continue the present system? No, I do not think so. If the clay were burnt, and then put back again over perforated drains, the liquid sewage could, no doubt, be purified. With regard to the excrement, I should say that it is very much behind the times to deposit it in the way now being done. It would be far better to take it on to the ground at once, and bury it daily.

1597. At what depth? Well, a foot deep.

1598. Are you of opinion that we might safely house 1,000 people in that locality, and by treating the sewage as you have now suggested, dispense with an expensive system of drainage such as that described in your paper? If you come to 1,000 persons, I should say it would be necessary to carry out a scheme such as that described by me.

1599. What would be the cost of a simple method of dealing with the sewage from, say, 800 or 1,000 people? The method I would recommend would be that which I put before the Committee. That would involve an expenditure of £4,000, assuming that the buildings were erected on the northern site instead of where proposed, and assuming also that instead of having pavilion buildings containing 60 inmates, there were fewer buildings each containing 240 inmates, and being close together instead of scattered.

1600. Would there be also a reduction in your scheme in regard to the cost of maintenance under the conditions just mentioned? Yes; the cost of the working expenses would be reduced to about £200, bringing the cost down to £220, or about 4s. 5d. per head, for the working expenses, and about the same for the capital cost.

1601. *Mr. Clarke.*] You say that if the inmates were housed in fewer buildings the cost of the removal of the sewage would be much less? Yes.

1602. How can that be the case when you have precisely the same number of people to deal with? For the reason that instead of being housed in a number of small buildings scattered over a large area, they would be housed in fewer buildings of larger dimensions occupying a smaller area, and consequently the length of drainage to be constructed would not be so great.

WEDNESDAY, 19 FEBRUARY, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHREY.

The Hon. JOHN DAVIES, C.M.G.

The Hon. JAMES HOSKINS.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Erection of Buildings at Rookwood for Infirm and Destitute Persons.

Critchett Walker, Esq., C.M.G., Principal Under Secretary, sworn, and examined:—

C. Walker,
Esq., C.M.G.

19 Feb., 1896.

1603. *Chairman.*] What are you? Principal Under Secretary.

1604. Your Department deals with the whole of the charities of the Colony? Yes.

1605. *Mr. Fegan.*] You know the scheme proposed to concentrate the asylums for the infirm and destitute persons in one place at Rookwood? Yes.

1606. Were you consulted about that scheme? I was not consulted with regard to the plan of the buildings now before the Committee. I never saw the plan until I saw it here. But I may tell the Committee that I was instrumental in proposing that the majority of the poor people should be sent to Rookwood to occupy the buildings erected there some years ago for the purpose of a reformatory, but which, not having been utilised, were lying there idle for some years, going to pieces. On account of the overcrowding of the different institutions, I suggested to Sir George Dibbs when he was Colonial Secretary that these buildings might be utilised for the accommodation of some of the inmates crowded in the other asylums, and 300 or 400 of these inmates were removed to Rookwood. The step thus taken was very successful, and, as I subsequently found on going over the Parramatta asylums that they were still overcrowded to such an extent that it was cruel and inhuman to keep the unfortunate inmates there, I wrote the following minute, which I submitted to the present Chief Secretary. It is dated the 20th February, 1895:—

When visiting Parramatta recently, in company with the Chief Secretary, it was again very apparent that some change is necessary to relieve the overcrowded state of the Government asylums there. In the Mill-side establishment, a five-storied building, the inmates number over 1,000, with little more than an acre of ground for exercise and recreation. Such a state of things, I need hardly remark, is both unhealthy and dangerous, and I would therefore suggest that all the inmates be removed to Rookwood, where there is a large area of land available for asylum purposes, with more healthy and cheerful surroundings. To carry this out it would be necessary to erect two wings in addition to the existing pavilions at Rookwood, to accommodate 1,500 each. These new pavilions, I would point out, should contain 100 beds each instead of sixty, which the present ones hold, as by this means, in my opinion, there would be less trouble and care involved.

If this is done the whole of the inmates can be transferred from Parramatta and Liverpool, which I am quite sure would result in greater economy in management, as one medical superintendent would be able to supervise the whole institution, with a matron in charge of each wing.

Before taking any action I would suggest that reference be made to the Director of Government Asylums for report.

That minute was the start in regard to these additional buildings at Rookwood, and it was referred to Mr. Maxted for report. I did not see the plans that have been submitted to this Committee.

1607. Did you receive any report from the Director of Government Asylums? Yes; I have his report here, and it almost endorses what I state in my minute, and on this report a sum of £70,000 was placed on the Estimates. Mr. Maxted's minute, dated 12th March, 1895, is as follows:—

I have the honor to report, as briefly as possible, with regard to the Principal Under Secretary's recommendation, that the Government Asylums for Infirm and Destitute at Liverpool and Parramatta should be removed to Rookwood. After careful investigation, I have no doubt that if the recommendation is adopted it will result in many substantial advantages to the chronic sick and destitute classes of the community, who now largely avail themselves of these asylums, and also, under a proper system of classification and industrial employment, effect a very large saving in actual maintenance cost and the expenses of the administrative staff. Before dealing with statistics, I may point out that the matter which I have been directed to report upon has become one of extreme urgency, particularly as far as it concerns the institutions at Parramatta. The Government Asylums for Infirm and Destitute, which were formerly refuges for the aged poor only, have during the past few years been so far diverted from their original purposes that they are now hospitals for chronic and incurable diseases, as well as homes for the infirm and indigent. They are also relieving-houses for the metropolitan and country hospitals, from which, in order to save the larger general hospital cost to the Government, many patients are transferred when they are partially convalescent; and they further deal with all the consumptive and cancer patients in the Colony. It is thus apparent that buildings and conditions of management which might have been suitable enough for these institutions a few years ago are now obsolete and inadequate to their present requirements. It is, therefore, desirable that the lines of a comprehensive and permanent system of administering relief to the dependent adults of the Colony should be laid down with as little delay as possible, in order that their condition may be improved, and also to avoid further useless expenditure in several of the existing institutions, which are all very much overcrowded. This applies specially to the Parramatta asylums, which the Chief Secretary has recently visited, and if the proposals now under consideration are approved, I would suggest that these institutions be the first dealt with under the new policy. In the male division of all the Government asylums there are at present 2,740 inmates, who are distributed at the following institutions in the numbers stated:—George-street, Parramatta, 1,026; Macquarie-street, Parramatta, 328; Cottage homes for destitute married couples, Parramatta, 41; Liverpool 877; Glenfield Farm Home, near Liverpool, 70; Rookwood, 398. The total number to be provided for will probably for many years not exceed 3,000. In considering any scheme for the centralisation of these institutions on the basis of cost per bed, the number now at Rookwood may of course be excluded from the estimate, as they are already accommodated in buildings which have been erected specially with a view to the whole of the asylums being placed upon this central site. It is thus necessary to provide only for the 2,342 inmates now at Parramatta and Liverpool, and any further increase of numbers up to the maximum I have mentioned can be arranged for from time to time as the necessity for more buildings arises. The Rookwood Estate comprises about 700 or more acres, and there is, therefore, an ample area on which to erect buildings suitable for the requirements of all classes of inmates. Plans have already been approved by the Chief Secretary for the main hospital block, which is now partially built, and which, when completed, will accommodate 1,300 patients. The new buildings erected under these plans consist of wooden pavilions of one floor, each capable of accommodating sixty inmates, and although they are comparatively inexpensive, they certainly serve their purpose well. The contrast at George-street Asylum, Parramatta, where, in one division, several hundreds of sick or feeble inmates are confined in five stories of one building, from which it is not possible to remove them, because of the difficulty of getting them downstairs, strikingly shows the humane advantages of the Rookwood method, which admits of patients of this class, who are not actually bedridden, being frequently taken out to enjoy the sunshine and pure air. Without, at this stage, going fully into details which will have to be determined after consultation with the Government Architect, I may point out that in connection with future buildings it will be necessary to so subdivide the general block that some of the pavilions will have to be completely isolated, in order that the different classes of inmates may be effectively dealt with. Separate provision, for example,

must.

must be made for the consumptive patients, of whom there are between 200 and 300. They should be placed as far as possible from the other inmates, in pavilion buildings differing altogether from those now on the ground, and having inside walls which may be lightly covered with cement and glazed, so that they can be frequently flushed and cleansed with antiseptic fluids. These hospitals should have their own enclosed gardens and grounds, and they must possess extra facilities for the destruction of all infectious and unsanitary matter by fire. Similar separate provision will also have to be made for the cancer patients, who will probably number about seventy-five. Dr. Beattie, the Medical Superintendent of Liverpool Asylum, has repeatedly drawn attention to this matter, and pointed out that unfortunates suffering from this frightful disease ought to be treated at some distance from other inmates, as such a course "would be less hurtful to their own feelings, and less horrifying to those obliged to witness their sufferings." There were 117 deaths from consumption and thirty-seven from cancer last year. An infirmary with suitable appliances is needed for the eye patients, of whom there are generally between 200 and 300 under treatment, and who are now necessarily compelled to mix with the general inmates. Dr. Odillo Maher, the visiting ophthalmic surgeon to the asylums, has on several occasions urged that these patients should be completely isolated from other inmates in a suitable building, "in order that they should not associate with others whose eyes are healthy, and thus the danger of contagion would be avoided." A small isolated lock hospital is required, as syphilitic patients are occasionally received from the various infirmaries. All the foregoing divisions would have to be carried on in buildings and with appliances particularly adapted to the requirements of each class of patients, and the pavilions must consequently differ in these respects from those erected for the general inmates. A separate division is also required for the better-behaved and more educated class of inmates, whose presence in the institutions has not resulted from any fault of their own; and also (in order to lessen the expense of the present system of dealing with them) for the decent old married couples, who are now accommodated under a distinct and comparatively costly method of management in the cottage homes at Parramatta. There are always many respectable old colonists in these asylums, whose decline from prosperity is due to illness or misfortune, rather than to vice or other causes for which they might fairly be held responsible. Finally, an entirely distinct division, and different method of treatment, are necessary for that numerous class of inmates who are technically known as "casuals." They pass in and out of the institutions many times during each year, and they are generally drunkards and vagrants. Some years ago, Sir James Martin carried through Parliament a Workhouse Act, which was specially intended for the treatment of persons of this class in penitentiaries, but it was never carried out practically, and it was eventually repealed; and these offenders against decency and good order—for such they virtually are—have, for obvious reasons, continued to find refuge in Government asylums, instead of being sent to the gaols. Hitherto, for want of separate buildings, and of sufficient land area, it has not been possible to make any material difference in the treatment of such inmates, and of their more deserving fellows, but if the Principal Under Secretary's recommendation is adopted, this difficulty will be overcome, and they can be dealt with, under legislation, upon their merits. In a former report upon this subject I suggested that the "dietetic system, providing for dieting inmates according to their physical needs and conduct, which has been adopted with remarkable success in connection with prisons and charities in one or two American States, might be applied throughout the whole of the Government establishments as a method of rewards and punishments, in conjunction with exclusion from recreating grounds, reading-rooms, and amusements." Suitable employment might be added, not only for the purpose of making the whole institution partly self-supporting, but in order to reduce the number of objectionable inmates, many of whom would probably leave rather than work up to their capabilities. It will thus be seen that the remainder of the buildings required for the complete institution could not, if the best results are to be secured, be placed in one compact block, but there is at Rookwood, as I have explained, an ample area over which to scatter them; secure a most complete system of classification; and at the same time leave plenty of land for the farm, dairy, piggeries, poultry-yards, and workshops, in which inmates able to do light work could be suitably employed. The Principal Under Secretary has suggested that the future pavilions should, on grounds of economy, each contain 100 inmates, instead of sixty as at present. I concur in this proposal, and I understand the Government Architect is favourable to its adoption. The foregoing is, of course, the mere outline of a scheme, but the details can be filled in without difficulty after the general proposals have been dealt with by the Chief Secretary. Suitable buildings in every division need not be of an expensive description; and, as I shall show presently, the sale of the Parramatta and Liverpool properties would largely contribute towards their cost. I have pointed out that it is necessary to make permanent provision at Rookwood for probably 2,500 inmates, in addition to those now on the estate. The buildings recently erected there have cost about £21 per bed; but with the increased number which it is proposed should be accommodated in each of the new pavilions, and considering the present value of materials and labour, it is not likely that it will cost more than £20 a bed to erect the complete institution, with (say) an additional £20,000 for the administrative block, kitchens, dining-rooms, workshops, officers' quarters, and out-offices. The whole establishment would thus cost about £70,000 which, if provided under the Loan Act, as it properly should be, would represent an annual 4 per cent. interest charge of £2,800. As against this I have very little doubt that the Parramatta and Liverpool properties could be disposed of for at least £30,000—probably more—in the event of the Liverpool buildings being required for railway purposes, as I understand they may be in the course of time, and this will leave only £40,000 to be provided for from the Loan Vote at an annual interest charge of £1,600. The centralisation of the institutions at Rookwood will effect a general saving in management expenses, cost of maintenance, medical attendance, rent, &c., of at least £6,000 a year. Thus the entire cost of the complete institution at Rookwood could be provided by Loan Vote without expense to the country, and, at the same time, a total profit to the Government, by the new policy, could be effected to the extent of about £4,400 per annum. I have been very careful over these figures, and I am convinced that the change will be attended with even more satisfactory financial results when it comes to be worked out practically. With reference to the estimated cost per bed (£20), or including the administrative block and officers' quarters, (say) £28, I beg to point out that in other institutions intended for the treatment of the insane, and of the sick poor, £250 a bed for buildings alone has been considered a very moderate charge. The new buildings which it is proposed to erect in connection with the Government asylums will, however, be thoroughly suitable in every way, and quite sufficiently permanent in character to make any larger expenditure undesirable. In carrying out these suggestions it will, in my opinion, be necessary to completely alter the present method of local management: but I will submit proposals on this point when the scheme has reached a more advanced stage, and it becomes necessary to re-organise the managing staffs. The system of having medical superintendents, and matron superintendents, to control the management of the various institutions has, in some cases, resulted so unsatisfactorily, as I am fully prepared to show by records and results, that it should not be continued longer than is absolutely indispensable.

All that was done on this, so far as our Department is concerned, was to have £70,000 provided on the Loan Vote.

1608. In other words, the Director of Asylums is carrying out your suggestions in these plans that have been prepared? These plans have been prepared without being approved of by the Department. They have never been submitted to me. I do not know how they came on to the Public Works Committee. I for one would never have consented to buildings being located so close to the Potts' Hill Reservoir as those marked on the plan.

1609. In suggesting the removal of some of the inmates from Parramatta to Rookwood, the number you contemplated, I believe, was about 3,000? Making allowance for increase, all I proposed to place there at present was a little over 2,000.

1610. And you think 2,000 is a sufficient number to place in one centre at Rookwood? Yes. You could provide for some of the others in the Liverpool Asylum, or in the old buildings in Macquarie-street, Parramatta, until other provision could be made. I refer to the ophthalmic and consumptive patients.

1611. Would your Department, do you think, consent to a consumption hospital being located amongst a number of healthy paupers? Certainly not.

1612. You do not think that Rookwood is a proper site for such a hospital? No; I do not think it should be there at all.

C. Walker,
Esq., C.M.G.
19 Feb., 1890.

C. Walker,
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1613. Therefore, if the plans before the Committee had been submitted to your Department, in all probability the scheme in its present shape would not have been before us to-day? It certainly would not have been. In the first instance all the inmates would necessarily have been taken to the new institution in a body; but I should afterwards have weeded out the patients suffering from the diseases I have mentioned, and placed them at Liverpool or elsewhere.

1614. They ought to be entirely removed from the other inmates. Yes.

1615. Have you received any complaints with reference to the overcrowding of the Parramatta Asylums? No. I formed my opinion with regard to these asylums from what I observed there myself, and from the reports of the Director.

1616. But I suppose complaints have been made from time to time that the George-street Asylum has been overcrowded? Yes. It appears so from the papers, but I could not mention any particular complaint.

1617. Has any suggestion been made as to the necessity for legislation of a more effective character to deal with the admission and discharge of the inmates of these institutions? I have heard the matter mentioned, but there has been no official communication with regard to it.

1618. Has it come to your knowledge that such a step is necessary? I certainly think it is necessary.

1619. We are not strict enough? No. Something is necessary to prevent paupers from coming into our institutions from the other Colonies.

1620. Has the number of people applying for admission to the asylums largely increased during the last few years? During the last five years the number has increased by about 1,100. On the 31st December, 1890, the number of paupers was 2,448; in 1891, 2,593; in 1892, 2,912; in 1893, 3,146; in 1894, 3,252; in 1895, 3,425; and in 1896, to 8th February, 3,540. These figures represent the total number of paupers, including inmates at Newington and other asylums.

1621. Could you recommend a place where a separate hospital for consumptives could be established? I was thinking the other day whether some arrangement could not be made by which some of them could be admitted to the Goodlet Convalescent Home at Picton. There is accommodation there now I think for about sixty, but the buildings could be very easily added to if necessary.

1622. In any scheme submitted to your Department, you would not sanction a hospital for consumptives being placed amongst the healthy inmates? I should recommend the Colonial Secretary not to sanction any such step. I do not think it would be a proper thing to do.

1623. Looking at the plans of the proposed buildings at Rookwood for housing 3,000 people, do you think the scheme is likely to commend itself either to the people of Rookwood, to your Department, or to the medical officers? No. I am quite sure that neither the ophthalmic, the cancer, nor consumptive wards should be there. The buildings for these cases should be somewhere else.

1624. Do you know of any other place where they might be located besides the Goodlet Home? I thought that if you emptied the Liverpool Asylum these patients might be removed to that institution temporarily. There are cancer cases there now.

1625. Do you know that the people of Liverpool are up in arms already against continuing the asylum there? I am aware of that. But the question is, where else could you put them.

1626. Do you not think that the people of Liverpool should be considered in a matter of this kind? Yes; I think they should be considered. But perhaps these patients might be placed in the Liverpool Asylum as a temporary measure until some other place was found for them.

1627. You would only put them there temporarily? Yes; I think they ought to be altogether isolated from centres of population.

1628. Would you recommend their removal to the Randwick Asylum? The same objection would apply in that case. There is even a larger population at Randwick—some 6,000 or 7,000 people.

1629. Do you approve of the scheme for concentrating the infirm and destitute old men at one institution? I think it is a cheaper mode, and I think it would answer very well as long as you have only the infirm and destitute, who are not suffering from disease.

1630. Do you think one medical officer could do the work of attending to so many people? Yes; there are nearly as many lunatic inmates at Callan Park where only two medical officers are employed.

1631. At present there is a doctor at Parramatta, another at Liverpool, and another at Newington, and you propose that these three institutions should be concentrated, and that one medical officer should do the whole work? There is only one doctor for Parramatta and Newington, and there are 1,500 inmates in the former asylum and 600 at Newington; and there is one for Liverpool.

1632. *Mr. Hassall.*] Had you any idea when this scheme was submitted that it was to cost £108,350? No. It is quite new to me. I know nothing at all about such an estimate.

1633. You have no idea how the extra cost, beyond the sum of £70,000 placed upon the Estimates, has arisen? I think it must have been suggested by the Government Architect, who has I think taken the matter up and made the plans. He states that he is responsible for the plan before the Committee. It ought to have been sent to our Department before being acted upon.

1634. The Government Architect in his evidence states that the total cost of £108,000 would be equal to a cost of £40 13s. 5d. per bed? The cost would not be anything like that under the £70,000 scheme.

1635. Do you think the higher estimate mentioned is excessive? I think it is based on altogether wrong principles. Many of the things proposed are not wanted. I do not know on what data the Government Architect prepared his plans. It may have been according to his own views, but it is certainly not what was contemplated when I submitted the matter to the Colonial Secretary.

1636. You think that many of the buildings proposed in the scheme before the Committee need not be erected at all? No; because the existing buildings at Liverpool and Macquarie Streets, Parramatta, could be utilised for the accommodation of certain classes of patients. Although the George-street Asylum should be sold, the Macquarie-street Asylum might be retained and be utilised to a certain extent, and if the healthy cases were removed from the Liverpool Asylum a certain amount of space would be available there, even if it were necessary to place the consumptive and cancer patients elsewhere.

1637. In the scheme before the Committee it is proposed to expend a total sum of about £14,000 upon kitchens and laundries? I can safely say that the Department was never consulted as to this proposed expenditure. The matter has been sent on to the Committee by the Works Department. As far as I know, the Colonial Secretary has never approved of it.

1638. This estimate has never been considered by the Department? No. We put a lump sum down as

a rough estimate, to cover what was required for making alterations and the necessary arrangements. Before anything was done with the £70,000, plans and specifications would be prepared and submitted to the Colonial Secretary. The custom is first to place a lump sum on the Estimates, and to work out the plans afterwards, and consider how the money is to be spent. In this case, however, the matter has not been brought under the notice of the Minister who has control of the matter.

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1639. Do you not think that the sum of £2,000 for the residence of the medical superintendent is rather an extravagant estimate, considering the cost of building at the present time, and that nothing would be paid for the ground? I think you ought to be able to do it for about £1,000, or certainly £1,200.

1640. *Mr. Black.*] The Director of Government Asylums in his minute read by you just now estimated that the buildings at Parramatta and Liverpool might be sold for £30,000. Do you think they would be saleable at all? Yes, I think they would be saleable. There are always new enterprises starting, and people will want stores and buildings of this kind. They were used as a woollen factory before.

1641. In reply to *Mr. Fegan* you said that you thought something should be done to limit or restrict the admission of paupers from the other Colonies? I think there ought to be some measure of the kind.

1642. Have you any idea of the number of paupers that annually come from the adjacent Colonies? Last year about twenty-four or twenty-five came from the Colonies of New Zealand, Victoria, and Queensland.

1643. Those were cases that were traced, but there might be two or three times as many without its being found out? Just so.

1644. I suppose you are of opinion that in conjunction with legislation of that character something should be done to make the relatives of these infirm and indigent poor pay for their maintenance? I think so. I think the relatives ought to pay something.

1645. You have no means of getting at them now? None whatever.

1646. *Mr. Wright.*] I understood you to say that in your original minute, you contemplated an expenditure of about £70,000? Yes.

1647. Is it customary when a minute of that kind has been prepared by you, for the work to be taken up by others, and submitted to Parliament without the plans going back to you? No.

1648. The procedure taken in this case has been altogether unusual? Yes; I put it down to some mistake.

1649. When a scheme is propounded by a Department of the Government to cost a certain sum, is it customary for the Government Architect to almost double that amount in his plans and estimate? No; it is usual for him to say whether or not the work can be done for the amount we suggest, and not to increase the estimate. He has to say either that the work cannot be done for the money, and report against it, or to provide plans for buildings that could be erected for the £70,000.

1650. Then I gather from your remarks that you were rather surprised at the course of procedure adopted in this case? Yes, I was certainly astonished.

1651. It is a departure from the usual practice? Yes.

1652. Was it any part of your original scheme to amass the whole of these indigent people in one pauper town? Certainly not. I had an idea that we might deal with what I might term the clean men—the old and decrepid.

1653. Bearing in mind that the number of inmates is increasing year by year to an alarming extent, did your proposal contemplate that, say, in eight or ten years' time the whole of the pauper population should be located at one spot? I do not think I had that idea. My main object was to relieve the unfortunate men who were in such a wretched condition in the George-street Asylum. I thought that if we were going to be charitable at all we might as well be charitable in a proper way, and not treat people like dogs. The treatment of these people in the George-street Asylum was inhuman, over 1,000 of them being confined in buildings five storeys high and about one or two acres of land.

1654. Would you approve of putting what you call the clean people at Rookwood—the really indigent and infirm—in view of the fact that the number is increasing so much every year—in other words, would you make at Rookwood a permanent home for all these people? I think it would be cheaper and better in the long run, and I think they would be better treated.

1655. Do you think it would be beneficial to create a town of, say, 8,000 or 10,000 of these people—for they will assume that proportion in a very few years at the rate at which they are now increasing? It would be much better that they should be located at one spot, instead of being distributed all over the Colony.

1656. Have you looked at the plans before the Committee? Yes.

1657. In your opinion are the buildings there shown suitable for the purpose intended? I object to the use of two-storied buildings, except for the accommodation of the stronger inmates.

1658. You refer in your minute to pavilions accommodating 100 each, which you say would be preferable to pavilions with a capacity of sixty each? My idea was that by this means a saving would be effected in the number of matrons and wardsmen required. In the one case a single staff would be sufficient, and in the other a double staff would be necessary. While favouring the pavilion form of building with a ground floor for the infirm, I think that each building should have a larger capacity than is proposed in the plans before the Committee.

1659. You have had considerable experience in the administration of the poor laws of this colony? I have been dealing with them for twenty-five, if not thirty years, and I ought to know something about them.

1660. Has it not struck you that some legislative action should be taken to limit the demands now made on the Government? Yes; I think something should be done, and that the Government should not bear the whole expense. I think there ought to be a poor rate; it would be a very small charge upon the population.

1661. Some years ago a poor law was passed in New South Wales at the instance of the Government of Sir James Martin, and it was afterwards repealed? I think that must have been the Workhouse Act passed by Sir James Martin. I am not aware of any law having been in existence imposing a tax on the people for the maintenance of the poor.

1662. From your minute it would appear that these asylums for the aged and indigent are being turned into hospitals? Their character has been altered from that originally designed.

1663. It appears that even now nearly 50 per cent. of the inmates are hospital patients? Persons entirely bedridden.

- C. Walker, Esq., C.M.G.
19 Feb., 1896.
1664. Has it struck you that in the plans before the Committee the fittings and appointments are rather of a superior character, considering the purpose required? I think they are a little extravagant—a little more expensive than I thought they ever would be or than is necessary.
1665. Do you think it advisable, for instance, to have in the hospital building handsomely carved gorgons and things of that kind? No; I do not think so. It is only necessary that the buildings should be plain and healthy.
1666. Your idea is that they should be plain, substantial well-ventilated, lofty buildings? Yes.
1667. Sufficient only to ensure the health and comfort of the inmates? That is all.
1668. *Mr. Hoskins.*] In reply to Mr. Wright, you said you were in favour of housing these people in buildings similar to those now at Rookwood? Yes.
1669. Would not that plan be much more expensive than to house the most feeble of the inmates in one-storey pavilions, and the others in buildings of two storeys? I have already pointed that out. I think they should be classified and separated, and that the stronger inmates should be placed in two-storey buildings, and the feeble ones in one-storey pavilions.
1670. Was this matter of housing all the old and sick poor, and the transference of such persons from Parramatta to another place, formally brought before the Colonial Secretary, and if so, did the Minister give his assent or express his approval of housing all the persons so transferred in one place—that is to say, taking the whole or a portion of the inmates from Liverpool, and the whole of the inmates from Parramatta, and housing them at Rookwood? All that the present Colonial Secretary saw was the minute of the Director of Government Asylums and my own minute, in which I suggested that the inmates should be removed from Parramatta to Rookwood. After seeing the Parramatta institutions the real object was to have the inmates removed to Rookwood.
1671. And reducing the number of inmates, I suppose, in the asylum at Liverpool? Yes; £70,000 was suggested to be put on the Loan Estimates, but, of course, we could not remove the inmates until we got the new buildings erected. We had to get the money voted first. The money was voted, and a reference was made to the Government Architect to get the plans prepared. Instead of sending to the Department to know how we were going to accommodate the inmates, and so forth, he or some one else appears to have gone on with the matter, and to have sent plans to the Public Works Committee.
1672. I gather that the late Colonial Secretary, Sir George Dibbs, gave his assent to the removal of nearly all the aged and destitute to one institution at Rookwood? Yes; the object being to put a stop to the overcrowding of the Parramatta and Liverpool institutions. It was proposed to remove all the inmates from Parramatta, and to reduce the number at Liverpool. The object of the proposal really was to relieve the existing institutions, and not to establish a big central charitable institution for all sorts and sizes at Rookwood.
1673. How many would be removed to Rookwood under your scheme? I do not suppose there would be more than 2,000.
1674. Added to the 480 already there that would make a total of 2,480? Yes; that would be about the total.
1675. Did those who were responsible for this scheme, and submitted it to Sir George Dibbs, ever explain how it was proposed to dispose of the sewage from buildings containing 2,480 people? The sewage could be taken down to Saltpan Creek; the drainage is all down that way, and the distance is not two miles.
1676. Is that the way you propose to get rid of the sewage? Only as regards the dirty water; the faecal matter would be utilised.
1677. What was it proposed to do with the faecal matter? To utilise it for cultivation purposes, as is done on the sewage farm at Botany.
1678. Before launching into a scheme of that kind, do you not think that the responsible officers of the Department should have ascertained whether the soil at Rookwood was of such a character as to absorb the faecal matter emanating from an institution with 2,500 inmates without any danger to those in the institution itself, or to the persons living in the neighbourhood, and without any possibility of polluting the water in the reservoir adjacent to the site? The faecal matter has been so treated at Rookwood for two years. The sewage matter is now being used for cultivation purposes, and the inmates have not been affected in any way—the number being about 450.
1679. If that number were increased five times, do you not think it probable that the health of the inmates would be effected? I do not think so with the system now adopted. If it could be done with 450 people, surely it could be done if there were 4,000 people.
1680. At all events, the Department never asked the officers of the Board of Health, or any other competent persons, to give them a report on the subject? No, because we have not had a chance of doing so. The matter has not come before us to be dealt with, and to decide whether or not the scheme is feasible.
1681. If the usual course had been followed in this case, and if the plans had been forwarded for the inspection of the Department and the Minister, would not the Department, first of all, have consulted the Board of Health to ascertain whether in the scheme proposed there was anything likely to be prejudicial to the health of the people or dangerous to the Sydney water supply? I am sure they would have asked for such information. The Minister has not approved of the plans.
1682. As a matter of fact the scheme has come before the Committee in a very crude state? It has come before the Committee, in my opinion, before it is ripe, and before it is in a proper state to be submitted to the Committee.
1683. Do you happen to know what provision is made in the Colony of Victoria for housing the infirm and destitute? I could not give you an exact description of the system adopted, but I know they apporportion them out to different institutions, and I think also they have a kind of boarding-out system. I am not quite certain, but I think they board out the adult poor just as we board out children in this Colony. I think, also, they are classified, and sent to different institutions.
1684. Therefore the system in force in Victoria is entirely opposite to that proposed in the present case—that is, to locate all the sick and indigent paupers in one place? Yes; but in Victoria they have some very large establishments on the same principle.
1685. *Mr. Humphrey.*] Are you aware that the number of infirm and destitute provided for by the Government of Victoria is very much less than the number provided for in this Colony? I think it is about 350 less, which is not a very large number, considering that our population exceeds that of Victoria by nearly

nearly 200,000. The cost per head in Victoria is £13 13s. 9d; in South Australia, £13 4s. 4d.; in Queensland, £13; in New South Wales, £14 7s. 3d in the case of the four main asylums, and £15 4s. for all institutions. In Great Britain the cost per head is £19 6s. 4d.

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1686. In the design prepared by the Government Architect you will observe that there are three groups of buildings. In the suggestion you made to the Colonial Secretary was it your intention to place the group coloured red in such close proximity to the Potts' Hill Reservoir, or was it your idea, by adding wings to the existing buildings, to locate the whole of the paupers in the vicinity of the site where the buildings in the plan are marked black? No. The wings I proposed to add to the existing buildings would be fully half a mile from the Potts' Hill Reservoir. The groups marked on the plan, Nos. 2, 3, 4, and 5, embracing the casuals, the general cases, and the three hospitals, were not contemplated, and are all now to me. The site for the Superintendent's house is an absurd one, and should be in another position. The Government Architect told me he was responsible for all these proposals. He may have consulted with the Director of Government Asylums, but it appears that the plans have been sent on without being first submitted to the Department. If I had seen them I certainly would not have allowed them to go.

1687. I understand you are of opinion that it would be better to separate the chronic sick from the healthy paupers? I think so.

1688. Did you propose that the chronic sick should be placed at Rookwood? Yes; except those suffering from cancer and consumption.

1689. Men suffering, say, from rheumatism? Yes; rheumatism or gout, or old cripples.

1690. You intended to put the whole of these at Rookwood? Certainly.

1691. Did you intend separating them from the healthy? I intended that they should be classified.

1692. But did you intend that they should occupy the same pavilions or buildings? That they should occupy the same locality, but not the same buildings.

1693. What you intend is that all the patients should be housed at Rookwood except the consumptive, cancer, and ophthalmic patients? That is so. I would exclude those three classes, and I should classify the others. I would not put a strong man alongside a sick man, because one would disturb the other at night.

1694. Having regard to your evidence respecting the George-street Asylum, could that asylum be used for a certain number of patients? I think it is quite unfit for any purpose of the kind. It ought never to have been used as an asylum. Objection has been raised to the proximity of the Necropolis to Rookwood, but very few people seem to be aware that 200 or 300 of the inmates of the George-street Asylum, Parramatta, look at a burial-ground all day long. The burial-ground lies to the north, and there is nothing else for them to see.

1695. Assuming that you will have to make arrangements for the housing of the pauper population pending the carrying out of any scheme that may be decided upon, would you propose using the George-street Asylum for certain patients,—instead of patients occupying three, four, or five floors, could they occupy the ground floor? I think that might be done as a temporary measure, but the buildings are quite unsuitable for permanent use in this direction.

1696. You do not see any objection to it? No, as a temporary expedient.

1697. With regard to the Macquarie-street Asylum, could it be utilised for 250 or 300 patients? It now has 350 inmates and is full. There is only an acre of land there. I do not think that asylum is capable of decently accommodating more than 200 people.

1698. Therefore you think it should be abandoned as soon as practicable? Yes. I have known it since I was a boy—it is a very old building.

1699. Do you think it necessary to abandon the Liverpool Asylum also? The Liverpool Asylum is a very substantial and good building. Although the establishment is old, it has been so altered and renewed that it is almost as good as a new building. I have thought that it might be utilised for the ophthalmic, cancer, and consumptive cases.

1700. You would not recommend that the institution should be abandoned? I do not think it ought to be abandoned, but it might be relieved a good deal.

1701. *Mr. Clarke.*] Would there be any possibility of the drainage from Rookwood going into George's River? I think it could. The matter would, of course, have to be looked into before the scheme is carried out.

1702. You have no idea of the expense? No.

1703. It was stated yesterday in evidence that the cost would be £20,000, and that it would be necessary to put a tunnel through a hill? I do not think the cost would reach that amount. I would not suggest that this proposed scheme should be carried out unless the question of drainage was first thoroughly investigated.

1704. You do not approve of more than 1,500 or 2,000 paupers being sent to Rookwood? I think a little over 2,000 would be quite sufficient. I do not think it would then be a very large asylum. I should like to see it established as a home for the infirm and destitute.

1705. Do you think the site is rather bleak? No; I think it is a healthy site for the purpose. I have been there at all times and at all seasons. At one time I used to go there regularly nearly every Saturday, and I know the place well.

1706. *Chairman.*] In the minute read by you, mention was made of lock hospitals;—have you any knowledge as to the number of inmates? No. The Director of Government Asylums would be able to give you detailed information on that point.

1707. On what ground do you justify the centralisation of all the paupers at Rookwood? On the ground of economy. I believe we should save in supervision, in the carriage of goods, and in various other ways of which I am not prepared to give the details, but I believe the information could be obtained from the Director.

1708. With regard to the George-street and Macquarie-street Asylums, Parramatta, if a number of the inmates were removed, so that there was no longer any overcrowding, and no use was made of the upper storeys, would you still recommend the absolute abandonment of these buildings as permanent asylums? Yes. I think they should both be abandoned as unfitted for the purpose. It is really a brutal sight to see them at present.

TUESDAY, 25 FEBRUARY, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.	CHARLES ALFRED LEE, Esq.
The Hon. JOHN DAVIES, C.M.G.	JOHN LIONEL FEGAN, Esq.
The Hon. JAMES HOSKINS.	THOMAS HENRY HASSALL, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	GEORGE BLACK, Esq.
HENRY CLARKE, Esq.	FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Erection of Buildings at Rookwood for Infirm and Destitute Persons.

Alderman John Cole, Esq., Liverpool, sworn, and examined:—

J. Cole, Esq. 1709. *Chairman.*] Are you an alderman of the Borough of Liverpool? Yes.
 25 Feb., 1896. 1710. Have you a statement which you desire to place before the Committee? Yes.
 1711. Are you deputed by the Council to appear here to-day? Yes.
 1712. Do you think the statement you are about to read represents public opinion in this matter? Yes.
 The statement is as follows:—

To the Chairman, Parliamentary Standing Committee on Public Works,—

Sir,

Town Hall, Liverpool, 24th February, 1896.

We, the aldermen of the Municipality of Liverpool, desire to lay this statement before your honorable body, urging upon you the early necessity of the removal from our township of the poor, destitute and diseased persons' asylum; and, as a responsible body, we do this in the interest of a mass of living beings, old and young, numbering 3,350 souls, to whom this asylum is a hideous menace. We can assure your honorable Committee that in this institution there are men dying daily from the most aggravated cases of cancer, consumption, and venereal diseases; and these packed premises, containing these poor creatures, the healthy mixed indiscriminately with the diseased, in the proportion about one-half, are situated on the east of this extensive population above referred to, with the prevailing coast winds from the north-east, south-east, and due east blowing directly across the town. Of a night-time people complain that there are heard the lamentations of these poor suffering creatures.

In the interests of humanity, we beg to point out that these people suffer in buildings which are cold, draughty, and unsuitable.

The inhabitants whom we represent complain that they are sickened to see the cancerous and consumptive men walking the streets, and other ailing patients sitting about hotels and recreation grounds.

Again, we desire emphatically to point out that the site upon which this institution is built is perfectly flat, and drainage from it is impossible—it must either percolate the soil or find its way into the river, which it undoubtedly does, and this drainage consists of the most dangerous organic matter.

The ground is too limited for the crowded suffering humanity required to exist upon it, and there can be no doubt that the health of Liverpool has been diminished, and the district progress retarded by the improper location of this asylum in our midst.

We, therefore, beg that, in the interest of an old and important district, your honorable Committee will, in their wisdom, be pleased, for the objects of sanitation, humanity, and administration, to relieve us of this burden so detrimental. And while we in no way wish to presume to say what should be the course adopted in dealing in the future with this great public question, we would like to point out that if an asylum must be in our district for the purposes of an old man's relief home, "The Glenfield Farm," situated some four miles from town, is an excellent site for such, but not for an incurable diseases hospital. The ground is extensive in area, adjacent to the railway, elevated, well watered, of good soil, and in every way suitable for a rural indigent asylum, such as they have in other countries.

I have, &c.,

FRED. CHAPMAN,

(On behalf of the Council). Mayor.

1713. *Mr. Humphery.*] Does the document which you have just read sum up the objections of the Council to the existence of the present buildings at Liverpool? They are the chief objections. We might have enlarged on those very much; but we thought it better to put the objections before the Committee concisely.

1714. When did you last visit Liverpool Asylum? Probably six months ago.

1715. Do you believe that the building is unsuitable for the purpose for which it is used? Yes.

1716. In what respect? There are large corridors all through the place, and windows on either side, and I have heard the old men complain of the draughts and cold, especially in winter.

1717. Do you not know that those windows and corridors are necessary for ventilation? Of course they are to a certain extent. Still it is a cold draughty place.

1718. The chief objection, I take it, is that there are a large number of inmates in this building? No; our chief objection is that the place is so entirely unsuitable, being right in the centre of our town, so that old men have no ingress or egress without coming into our streets.

1719. What distance is the building from the Town Hall? 400 or 500 yards.

1720. Within what radius does the population of 3,000 reside? Probably within 2 or 3 miles of the Town Hall.

1721. You do not mean that there are 3,000 people living in the immediate vicinity of the asylum? No, they are scattered about; but the largest number of them are in the main part of the town, which is not far from the asylum.

1722. Do you say that some of the consumptive and cancerous patients are permitted to leave the asylum and sit in public-houses? Yes.

1723. Is that within your own knowledge? Yes. Probably there is not a fine day when you will not see a large number of the consumptive patients walking our streets.

1724. Are they under no restraint? No; they will come into a shop or hotel and sit down—some of them can hardly speak. They frequently come into my own shop, and they cannot tell me what they want; they are coughing and expectorating all over the place. A week ago one of them became so bad that he ran out of the shop and sat down on the adjoining doorstep coughing and expectorating for a considerable time.

1725. What distance is your shop from the asylum? 400 or 500 yards.

1726. What objection would there be to the continuance of the institution at Liverpool if it should be considered expedient to remove all the inmates except the healthy ones? The chief objection then would be the material detriment it is to the progress of our town.

1727.

1727. Do you think there would really be no objection to the institution being continued as an asylum for old people who are destitute? The Council whom I represent are unanimous in their desire to see the whole place removed. We have complaints from business people frequently that when they wish to sell their business, and a probable buyer consults the agent in Sydney, as soon as it is known that the business is situated in Liverpool, they say that they will not have anything to do with it, owing to the presence of the asylum. That statement has been made to me repeatedly. J. Cole, Esq.
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1728. Does not the drainage of the institution go into the river below the dam? Yes.
1729. It does not pollute the water in any way? There are people residing on the salt water portion of the river. They sink wells, and the water percolates through.
1730. Then the objection you have urged on that score does not apply to the town of Liverpool in any way? The drainage runs in below the town, but the river is a tidal one, and it is only in flood times—which is very occasional—that all the stuff is carried away. The offensive matter goes down the river with the ebb tide, and it comes back again with the flood tide, and the smell is very offensive at times.
1731. Do you think that the Glenfield Farm will be suitable in every respect for an asylum of this description? Yes.
1732. What is its area? About 900 acres.
1733. Is there a railway platform on the farm? No; it is lower down—perhaps a quarter of a mile from the building.
1734. Have you visited that place lately? Not for twelve months.
1735. Do you know that already there are seventy-five or eighty patients there? Yes.
1736. When you say that you think that would be a suitable locality for an institution of this kind, do you speak only of the healthy destitute? Yes; not for the sick. We would not recommend them to be so near our town.
1737. Have you any suggestion to make with regard to the sick? No.
1738. You want to get rid of them and the whole institution from the town, so that you are not so much moved in your objection by a desire to provide for the indigent as you are by a wish to shift the asylum to some other locality? Not at all. I think it is much better for the inmates. It is an impossibility to confine so many men in a building of that sort. They must come out to get fresh air, consequently they come out and intrude themselves upon us.
1739. *Mr. Trickett.*] Is not this a rather new-born objection to the institution? No.
1740. When was any objection ever raised? The Council have made objections on previous occasions when I was not a member, and the matter was brought under the notice of the Government. I cannot say how far back that goes, but twelve months ago I think they protested against the enlargement of the cancer ward.
1741. Then it is the cancer ward you chiefly object to? No; we object to the whole thing.
1742. Is the Council backed up by any medical opinion as to the effect of such an institution? I think the evidence given before this Committee by medical men is directly in favour of separating the consumptive and cancerous patients from the healthy old men. Four or five years ago it was proposed by the Railway Commissioners to take the present asylum buildings, and convert them into engine-sheds and workshops.
1743. Judging by the answer that you have given, the only real objection to the institution is that the consumptive patients are allowed to go about the town? Our Council is unanimous in the opinion that it would be in the interests of the town that the whole asylum were removed.
1744. Have there been any public meetings held on the subject? Not to my knowledge.
1745. Was there any public agitation on the subject? No; but I may say that I was returned to the Council unopposed on that very question. That shows that the ratepayers in my ward were in favour of my view. I brought it prominently before the public twelve months ago in a letter to the press. I was interviewed on the question many times, and pressed repeatedly to stand as a candidate for the Council. I did so, and no one saw fit to oppose me.
1746. Supposing the number of patients was reduced to 500 or 600, and the objectionable cases of sickness taken to another institution, would there be any objection to the asylum then? As far as the Council is concerned, our desire is to see the whole institution removed from our midst.
1747. But must not the institution be placed somewhere? There are plenty of sites in the country, without putting the asylum at our front door. Liverpool is an important place. We are, as it were, within a stone's throw of Sydney, but we can make no progress, simply because the name of Liverpool has become a by-word and a reproach. It is regarded as a poor-house town. It is the first place that travellers see when they are going through in the train, and it makes a very bad impression.
1748. Would that not also apply to Parramatta? No doubt; but in Parramatta the institutions are not so prominent.
1749. In passing through Liverpool, I saw a number of the inmates located in a paddock, where they inhabit little humpies;—are they members of the institution? Yes; but some of these little places are simply business places. They come out into the town and pester our lives out of us for stamps, writing paper, newspapers, and so on, which they take down to the asylum and sell in those little places you refer to. Those buildings are not used as sleeping-places.
1750. *Mr. Davies.*] Have you any evidence to show that disease has been carried from the asylum to any home in your Municipality? I am not in a position to prove that, but I can say that we have had several deaths from consumption, and we have other cases where the patients are at present at death's door.
1751. Would not that apply to every other part of New South Wales? Yes.
1752. Does not the drainage from the asylum go into the salt-water portion of the river, a long way from the town? No.
1753. Does not the drainage go into the river 300 or 400 yards below the dam? Not so far.
1754. Where is the populous part of the town;—is it close to the asylum? It is within 400 or 500 yards from the asylum, and it is so situated that almost all the prevailing winds carry everything right across the town.
1755. Where are there 100 people living within 500 yards of the asylum? I cannot say.
1756. Is not the asylum practically outside the town? No; we have houses surrounding it.
1757. Which is the greatest nuisance—the paper mills, the wool-scour, or the asylum? The asylum.
1758. Was there not more agitation in Liverpool to abolish the paper mills and the wool-scour than to remove the asylum? It was not proposed to abolish the mill or the wool-scour, but only to remedy the nuisance.
- 1759.

J. Cole, Esq. 1759. Was not the nuisance caused by those works so great that the people who had to pass through the towns in the train made complaints? That has not been the case since the drainage was taken out of the fresh water.

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1760. Is not the asylum building a very good one? It is a very strong building.

1761. Are you a property-owner at Liverpool? I have leasehold property.

1762. Do you think that the presence of the asylum depreciates the value of your property? Yes.

1763. Do several other aldermen hold the same view? Yes.

1764. Long before your time, were not the people of Liverpool anxious to get the asylum there? I do not know.

1765. Was not the asylum the life of the place? I do not remember that to be the case.

1766. If you took away the paper-mill, the wool-scour, and the asylum, what would there be left at Liverpool? We are only asking to have the asylum removed. We are very glad to have the other industries there.

1767. Was there not an agitation by a large section of the people there to abolish both of those industries? I cannot answer the question.

1768. Was not the late proprietor of the wool-scour compelled to spend a large sum of money in order to abate the nuisance? I do not know.

1769. As a matter of fact, you do not know much about Liverpool? I know a little about it.

1770. Would you like to have these poor old men sent anywhere so long as they are sent away from Liverpool? I presume that the Government would see that they are well housed.

1771. At present are not the old men as well housed as you are yourself? I think so.

1772. *Mr. Lee.* How long have you been in Liverpool? About seven years.

1773. Do you know that this asylum has been established at Liverpool for a great many years? Yes.

1774. Of late years has the asylum been made more than an asylum for chronic cases of cancer? Those and consumptive cases have increased largely of late.

1775. The inhabitants naturally feel aggrieved because a number of men with infectious diseases have been placed in their midst? Yes.

1776. Have you been able to trace the spread of disease in the town since the asylum has been made a hospital for those cases? I am not in a position to prove that.

1777. Has there been any serious outbreak of cancer, or any of these diseases? I am not aware of it.

1778. And has there been any outbreak of consumption? We have had several cases of consumption during the last few years, and we have them at present. It should be remembered that Liverpool is regarded as a very healthy town.

1779. Supposing that the objectionable cases you have referred to were removed to some remote asylum, would the objection of the townspeople to the asylum be as strong as it is now? Perhaps not; but at present they are all in favour of having the whole place removed.

1780. Are you aware that a large amount of money has been spent on the buildings of late years? Yes.

1781. What difference would it make to your town if only a reasonable number of infirm people were accommodated in the asylum? Of course that would not affect the town very much. There would only be the fact of our property being kept down to a minimum price owing to the presence of a poor-house in our midst. It would be very acceptable to the people of Liverpool if the sick people were all removed.

1782. If the consumptive and cancer patients who at present parade the town were taken to another asylum, would not that remove the alleged danger? Certainly.

1783. As far as the old infirm people moving about the town are concerned, if they did so in limited numbers, could there be any possible objection to that? There is this objection, and a very serious one, that it affects the morals of our town and of our children. Gentlemen who have not visited Liverpool at certain times have no idea as to how these men carry on in our public streets. At times our wives, sisters, and daughters cannot go outside their doors without being afraid of running up against some of these old men with their clothes greatly disarranged. They get drunk, they lie about in our streets, they insult you if you speak to them, they come into your shop begging for 3d. for a drink, and if you order them out they insult you and use the filthiest language. You will see crowds of children following these old men in the streets, and the old men swearing at them. If that is not stopped, how can we get on?

1784. While these inmates are acting in such a manner do they return to the asylum? They do not return to the asylum while they are drunk. I have taken one down myself to the asylum, but he was refused admission. They have to lie about the streets all night. When I have been going to my bake-house early in the morning I have frequently seen them. Last Friday morning three of them came into my shop as drunk as they could be. They had probably been out all night, and they wanted more drink. I had none to give them, and they insulted me. The police can do nothing, because if the men are arrested they are only discharged with a caution. These things take place frequently. We see them committing acts of indecency in the streets in front of our shops.

1785. Do you consider that the asylum is a public nuisance? Yes; the town is practically in a state of siege at times.

1786. But supposing the supervision were more strict, and the inmates were not permitted to go to the town? Then we say the place is not suitable for confining so many men. The walls are very high, and in the hot weather it would be inhuman to compel them to remain within the precincts of the institution, but they cannot go out without coming into our town.

1787. Is there not an open paddock in connection with the asylum? There is a very small paddock adjoining.

1788. Is it not sufficient for some hundreds of men? But there are 900 or 1,000 men in the asylum.

1789. But it is not necessary for them to go into the town to get fresh air? No.

1790. Do you think the inmates should not be allowed to patrol the town? I do not say that, but the place being situate just at our door-steps, it is impossible to confine them to the asylum. So long as it is an asylum we shall be troubled by these men, and it is a great drawback to the progress of our town.

1791. During the seven years you have been at Liverpool has there been any organised action on the part of the townspeople to obtain the removal of the asylum? Not that I remember. There has been no public meeting. Of course, the people of Liverpool generally let the Council take up these matters.

1792. What steps have the Council taken? The Council twelve months ago protested against these men being allowed to walk the streets, and also against the extension of the cancer ward, but that was taken no notice of.

1793.

1793. But that was a very modified protest;—was there any action taken to procure the removal of the J. Cole, Esq. asylum? Our protests have all fallen to the ground.

1794. Considering that the asylum has been in existence for a number of years, and that no action for its removal has been taken, how is it that on the present occasion, when the question of housing the poor of the colony comes up, that you ask that the asylum should be removed? I imagine it is because of this inquiry. We thought the time had arrived for the people of Liverpool to speak out on this question. 25 Feb., 1896.

1795. If the abominable nuisances to which you have referred have existed for a long time, do you not think that the inhabitants of Liverpool would rise up in a body and demand the abolition of such an institution? A great many of the people there have become so used to these things that they are utterly callous, and many of them take no notice of it; but when a stranger goes to the town and sees these things he is utterly astounded, as I was when I first went there. If I had not invested in property in the district I would immediately have left it. Now that I am there no person will buy me out.

1796. *Mr. Clarke.*] If the consumptive, cancer, and ophthalmic patients were removed to some other asylum, would there be any objection to the other patients being retained at Liverpool? Our objection would still stand good, because of the material and moral influence which the presence of that asylum has upon our town.

1797. Do you not think that it is the fault of the management to a great extent that the consumptive patients and others go through the town? I am not in a position to answer with regard to the management. I do not think it is the fault of the management, because when there are too many men in a small place they must get out.

1798. Is there not a small paddock attached to the institution? Yes, and it is crowded. The sheds there are crowded, and so are the streets at times.

1799. Your object is to get rid of the whole thing? Yes.

1800. If the asylum is properly managed, do you not think the people of the colony generally should be consulted as well as the people of Liverpool? I think the people of Liverpool have a perfect right to say that the Government or anybody else should not gather up men from the whole colony who are suffering from all kinds of diseases, and put them down at our door.

1801. Would not that apply also to Parramatta? For many years the Parramatta people have been trying to get rid of those asylums.

1802. Does not the ebb tide take away a great deal of the objectionable matter which goes into the river from the asylums? No; it goes down so slowly that it is deposited on the sides and bottom of the river. When the tide comes up again it floats back to the dam.

1803. Are there many people residing on the river below the asylums? There are several.

1804. Do they complain about the nuisance? Of course they do. The prevailing winds blow the bad smell over the town.

1805. We have evidence before us that the Liverpool Asylum is a very good site for keeping about 600 patients, if the objectionable chronic cases of sickness are removed;—what have you to say with reference to that? I can only say that it resolves itself into a pure matter of opinion. Our opinion differs from that.

1806. *Mr. Fegan.*] Do you say that you were elected unopposed on account of the position you took up with regard to this asylum? Not altogether on that question; but the ratepayers knew my views upon that question.

1807. Was any other alderman elected unopposed whose views coincide exactly with yours with regard to the removal of the asylum? Yes.

1808. The first objection you raise against the asylum is that it is cold and draughty on account of the wide corridors and windows;—does not that show that there is good ventilation? Yes; but it is not very nice if you cannot keep out the wind in the winter.

1809. Would you think it wise if the Government proposed to erect an asylum without windows or corridors? No.

1810. How long have you been in the asylum at one time? Perhaps an hour.

1811. Do you think you are a competent judge as to the asylum after being in it for only an hour? It is not necessary to stand there for even an hour. It would soon make you shift.

1812. Can you give evidence on oath that it is not a fit and proper place when you have only had one hour's experience of it? I think so.

1813. How long have you been an alderman? For one month.

1814. How is it that you take precedence of the mayor in giving evidence to-day? For the reason that the mayor was unable to attend on the first day appointed by the Committee for taking our evidence. That day was changed, and we were unable to make any different arrangements.

1815. Do you remember that your Council protested twelve months ago against consumptives going into the town? Yes.

1816. Was any notice taken of that protest? I heard that no persons with contagious diseases were to be allowed to parade the streets.

1817. Has that not been strictly adhered to since? No.

1818. Are you willing to make complaint to the officers that that regulation has not been carried out? I am prepared to say that those people do come out into the town. I do not know what instructions have been given.

1819. Now, with regard to the progress of the town, what was its population ten years ago? I cannot say.

1820. You will admit that, if your Municipality has made equal progress with other municipalities which have equal facilities, your statement that you are going back would be incorrect? I do not think I made a statement that we are going back. If I did make that statement I withdraw it. We are not making progress.

1821. What was the population eight years ago as compared with the present population? I can only say that our population now is 3,350.

1822. Do you know the death-rate of the Municipality? No.

1823. What are the facts on which you base your statement that the town is not making the progress that it ought to? Because of the presence of the asylum; people object to reside in what is looked upon as a poor-house town. Then the men are allowed to parade the streets, and there is the presence of diseased patients.

1824.

- J. Cole, Esq. 1824. What have you to go on with regard to your statement with reference to the progress of the town? We can only judge by seeing the progress of other towns. Liverpool is one of the oldest towns of the colony, and towns which are only a few years old have made much greater progress.
- 25 Feb., 1896. 1825. Do you know other towns which have made less progress than Liverpool? No.
1826. Take the case of an ancient town like Windsor? They have not the same facilities that we have; they are not nearly so close to Sydney.
1827. Has Parramatta made more progress? At Parramatta the asylum buildings are not so prominent, and the men are not allowed to parade the streets.
1828. If the instructions which were issued were heeded, would not that get rid of a great deal of your objection? I have no doubt it would; but we do not know whether there are any regulations with regard to these men.
1829. Have you ever sent a petition to the Chief Secretary for the removal of this asylum? I do not know.
1830. Is it not a very serious request that you are making, seeing that there is such a large number of unfortunate people in these asylums—that they should be thrown out of their place of refuge? We are not asking for that to be done.
1831. Are you not asking that all the inmates of the Liverpool Asylum should be taken out and placed elsewhere? Certainly; but we are not asking that they should be thrown out into the bush.
1832. But what about the buildings now existing at Liverpool? I have a document here showing that the Railway Commissioners, about four years ago, were anxious to obtain these buildings, in order to convert them into engine-sheds and railway workshops. I believe that idea exists at the present time.
1833. If the Commissioners have altered their minds since then, what would you do with those huge buildings? We cannot do anything with them.
1834. Would you put the Government to unnecessary expense in putting up other buildings? That is for the Government to decide.
1835. Have you property in the neighbourhood of Liverpool? I have some, but not a great deal. I have freehold land over the river.
1836. Is that the reason why you protest against the asylum being at Liverpool? That is one reason—it prevents our advancement and progress.
1837. Have the poor people of Liverpool ever asked for the removal of this asylum? I do not know whether they have ever done so publicly, but they have talked about it.
1838. Has all this nuisance and depreciation of property grown up in the space of the last twelve months? No; it has been in existence ever since I have been in the town.
1839. As a representative of the Council, when have you shown your disapprobation of the asylum heretofore? We are never too old to learn. We are now beginning to make a move. We have a progressive Council at present, and we are trying to remove this obstacle to our progress. Of course we have a perfect right to do that.
1840. Do you not think the Government have also a perfect right to ask you, when you are giving evidence, to give some facts in support of your demand for removing the asylum? Yes.
1841. Yet you are unable to give us any? I think we have given them.
1842. But have you not admitted that you do not know what the population was eight years ago compared with its present population? That is the case; but perhaps my colleagues can give the information.
1843. On what do you base your evidence, seeing that you are only making assertions? I think I have given sufficient proof that this asylum is a standing menace to our town.
1844. Is it not a help to tradespeople to have this asylum near the town? A great number of us derive pecuniary benefit from the asylum, but we consider that whatever is brought into the town by the asylum, twice as much is kept out by its presence, so that we are actually losers.
1845. *Mr. Hassall.*] Do you base your request for the removal of the institution on the fact of its proximity to the town, and because the patients perambulate the streets? That is one great objection.
1846. Do you not think there must be some fault in the management when the patients are allowed to perambulate the streets? I am not prepared to answer that question; but the patients do perambulate the streets, and you can almost see through some of the poor creatures.
1847. What percentage of those who perambulate the streets are suffering from disease? I cannot say. But if you go to any hotel in town you will see the bar full.
1848. But are all the patients bad? No; there are some very nice men there.
1849. Would there be any serious objection on the part of residents of Liverpool if the Government still made use of the institution for fairly healthy men? That would remove the chief objection; but, speaking personally, and for the Council, I am in favour of the whole thing being removed.
1850. Failing that, you would be in favour of removing the most serious cases of illness? Yes.
1851. If that property belonged to the Council, would you feel justified in giving it up and erecting buildings elsewhere for the same purpose? Perhaps not. We are giving up a great deal in asking that the asylum should be removed now. For instance, the Council gets £200 a year for the consumption of gas by the asylum, but we are willing to sacrifice those advantages.
1852. Has Liverpool grown up around the asylum, or has the asylum grown up around Liverpool? In the immediate neighbourhood of the asylum I believe only four dwellings have been built during the last ten years.
1853. When you went to Liverpool did you not know that there was an asylum there? I knew there was such a place, but that is all. If I had known as much about it then as I do now I would not have gone there.
1854. Do you say that Glenfield Farm would be suitable for an asylum of this kind? It would be for the aged and infirm, but I would not recommend that diseased patients should be sent there.
1855. What do you think Glenfield Farm is worth? From £10 to £12 an acre.
1856. If it was removed there, would there not still be an objection with regard to the drainage? We would recommend that the sewage should be used on the farm.
1857. But would not the surplus sewage have to find an outlet in the river? Yes; in George's River.
1858. Would not there be serious objection with regard to the drainage whatever site might be selected? Yes.

1859. Would the asylum property realise a sufficient sum to enable the Government to erect buildings elsewhere? I do not know. The building would be of some value, but it could only be used as railway workshops or a factory. The land itself is in a low situation, and is subject to surface floods. J. Cole, Esq.
25 Feb., 1896.
1860. If the buildings were removed, would there be any rush for the land? There is no doubt the Railway Commissioners will have to resume the land. The line is as close as possible at present to the buildings, and it is within a few yards of the bank of the river, which is being washed away.
1861. Are there no precautions being taken to prevent that? No.
1862. Is not the soil a stiff clay on that side? Yes.
1863. *Mr. Black.*] You appear to have visited the asylum only in cold weather? That was the case when I went right through it; but my business takes me occasionally there.
1864. If you visited the building in warm weather, might you not have thought that it was not sufficiently cold and draughty? Yes.
1865. Do you not agree that this is a very valuable building, and that it could not easily be replaced? Yes.
1866. Are you not also aware that the building and the land is Government property, while Glenfield Farm is only leasehold? Yes.
1867. Are you not aware that so far from people objecting to live in the neighbourhood of asylums, in every instance in the memory of man when an asylum of this kind has been erected, a town has sprung up around it? I do not know that that is the case. I should say that that occurred in spite of the presence of the asylum, and not because of it.
1868. After people have built a town about an asylum, is it not astonishing that they should petition the Government against the existence of the very thing that made the town? That is not a very strange thing, because some of those who are protesting now were not alive at the time when people petitioned for the erection of an asylum. Ideas have changed in the meantime, medical science has progressed, and so have we.
1869. Under the circumstances I have mentioned, do you not see that it is an impossibility for the Government to suitably house the poor, and, at the same time, please the people in the neighbourhood? I am not in possession of such evidence as you refer to.
1870. You say that you object to the present system of drainage at the asylum, that it is a menace to the town; you say that the sewage is carried down by the ebb-tide, and carried back again by the flood-tide;—can that sewage matter, which you say is brought back, possibly go beyond the dam? The tide never reaches the top of the dam.
1871. When you speak of sewage, do you mean the solid excreta? I speak of all kinds of sewage.
1872. Do you think the solid excreta from the asylum is discharged into the river? No.
1873. Then what is the good of telling us that it floats up and down the river, and that microbes float over the town? We were talking of all the sewage of the asylum.
1874. Do you mean to say that the slop-water and urine from the asylum, when largely diluted with salt-water, is in any way likely to breed microbes or foul smells? I could not give you an expert opinion. I have simply to go by expert opinion.
1875. But you only make a number of assertions without any facts to support them? We can only say that the drainage from the asylum drains into the river. All these people cannot live there without creating a lot of dirt, filthy water, and so forth.
1876. That is not the case with regard to them any more than it is with regard to the other inhabitants of the town? No.
1877. Are you not aware that the solid excreta from the asylum is all buried, and that it is only the effluent from that which can find its way into the river? I cannot answer that question.
1878. If that be so, do you not think that you have attempted to deceive the Committee by making statements of that character? No; I am addressing a body of intelligent men, and you must know that with an institution of that sort, there must be a great deal of foul drainage and filth which must flow into the river, and we ought not to create dangers for ourselves.
1879. You have spoken of this asylum being in your midst—on which side of the railway is it? On the western side.
1880. How many buildings are on the eastern side of it? There is a wide stretch of country there.
1881. Are there any buildings within half a mile of the asylum on the eastern side? Yes; there is one just on the other side of the railway.
1882. As a matter of fact, on the eastern side there are very few buildings? Yes.
1883. Is it not a fact that so far from the asylum being in the centre of the town, it is on the very outskirts? It is on the side of the town, but it is on that side from which the winds blow right over the town.
1884. Do you not think that if all the sick were removed from that asylum, and if the number of inmates were reduced by 200, and if instructions against parading the streets were carried out, the objections of the people of Liverpool would be wholly removed? They would not be wholly removed; they would only be partly removed.
1885. Is there not a lot of people about Liverpool who will be deprived of their means of livelihood if the asylum were removed? I do not know that that is the case, except with regard to officials of the institution.
1886. Is there no revenue derived directly or indirectly from the inmates of the asylum? I have admitted that that is the case.
1887. If you admit that to be the case how can you say that there would be no people who would lose pecuniarily by the removal of the asylum? I say we would lose something. Most of the business people benefit by the asylum, and the Corporation would lose, because at present there is a large consumption of gas. Still, we are willing to give up that.
1888. On whose behalf are you speaking? On behalf of the Council, who represent the people.
1889. Are you perfectly sure that in this matter the Council do represent the people? We are supported by the vast majority of the people.
1890. If the consumptives, cancerous patients, and chronic sick were removed, if the number of the inmates were so reduced that the accommodation indoors would be sufficient, and if the regulations against free trading were carried out, do you not think that the people of Liverpool, as a whole, would prefer to have the asylum retained there? I do not think so. That is my individual opinion, and the opinion of the Council, but, of course, a very great objection would be removed.

- J. Cole, Esq. 1891. Do you not think that the depreciation of the value of property at Liverpool has been due to the same causes which have depreciated the value of property in every other town? Yes; that has been partly the case.
25 Feb., 1896.
1892. *Mr. Wright.*] I gather from your evidence that you look upon the inmates of the institution as foul, physically or mentally? Not altogether that. There are many intelligent men there.
1893. You have spoken of the foul conversation of the men? Those are probably only a small proportion, but when they come into the streets in numbers they seem to be a large proportion. I should say that only a small proportion of all the inmates annoy us, but still that is repeatedly being done.
1894. I understood you to say that the public-houses are crowded with these people, that they expose their persons in the streets, and so on? That is the case very often. But even when you see the public-houses crowded with them, or a large number of them in the streets, a great many of them are decent men, who annoy no one. Only we seem to have no control over the few who do make a noise, and so on.
1895. Supposing the Government determine to abolish the asylum, to pull down the building, and sell the land, would you be in favour of such a course of action? Yes; personally.
1896. Would you prefer to see the people removed and no use made of the land and buildings? Yes.
1897. If a law were passed in this country by which the inmates of poor-houses would be confined to the poor-houses, and not allowed to roam about and get drunk, would there be any objection to 600 or 700 inmates being kept in the Liverpool asylums? Yes; I think the place is too small for them.
1898. If medical authorities state that the asylum can accommodate 700 or 800 people, do you think there would be any objection on the part of the residents if that number of healthy inmates were kept at Liverpool? I do not think the objection would be so great; but there would still be some objection.
1899. Is the agitation in favour of the removal of the institution based on the assumption that the buildings and land would be utilised for engine-sheds and railway workshops? Not altogether. We fully believe that these large premises would not be allowed to remain idle.
1900. Do you think that if you got rid of the asylum you would get in substitution for it a factory of some kind? Yes.
1901. *Mr. Hoskins.*] Are you aware that the Government now expend in Liverpool on account of this asylum £12,760 per annum, and do you think the people of Liverpool would like to lose an institution which brings them so much money? They are quite willing to stand the loss.
1902. Where is the proof of that? I am here to represent the Council.
1903. Have you only been imbued with that view during the last four months? I have held that view ever since I have been in Liverpool; that is for seven years.
1904. Why did you not take action before? I drew attention to the matter twelve months ago.
1905. Are you not aware that the Railway Commissioners have large workshops at present at Eveleigh? Yes.
1906. Are you not aware that they are concentrating their railway workshops in Sydney and at Newcastle? Yes.
1907. Supposing these buildings were used as railway workshops, do you think more money would be spent in Liverpool amongst the people employed in those workshops than is spent now in the maintenance of the asylums? I cannot say; but still we are willing to chance that.
1908. You would actually prefer to see the buildings razed to the ground? Yes; as far as I am concerned.
1909. Do you think there are many people who would seek to reside in Liverpool as a matter of choice? I have heard several people state that they would like to live there.
1910. Is not all the country already occupied in the neighbourhood? There is plenty of available land there.
1911. Is it not all private land? No; some of it is Crown land, but most of it is private.
1912. Does not that apply to all parts of the Colony? Yes.

Frederick Chapman, Esq., Mayor of Liverpool, sworn, and examined:—

- F. Chapman, Esq. 1913. *Chairman.*] Are you Mayor of Liverpool? Yes.
25 Feb., 1896.
1914. Have you heard the evidence given by Alderman Cole? Yes.
1915. In general terms do you agree with his evidence? Yes. The aldermen are deputed to urge the removal of the asylum, and I think Alderman Cole has endeavoured to do his duty in that respect.

Alderman Pollard Smith, Esq., Liverpool, sworn, and examined:—

- P. Smith, Esq. 1916. *Chairman.*] Are you an alderman of Liverpool? Yes.
25 Feb., 1896.
1917. Have you heard the evidence given by Alderman Cole? Yes.
1918. In general terms do you agree with the evidence he has given? Yes.

WEDNESDAY, 26 FEBRUARY, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.	CHARLES ALFRED LEE, Esq.
The Hon. JOHN DAVIES, C.M.G.	JOHN LIONEL FEGAN, Esq.
The Hon. JAMES HOSKINS.	THOMAS HENRY HASSALL, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	GEORGE BLACK, Esq.
HENRY CLARKE, Esq.	FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Erection of Buildings at Rookwood for Infirm and Destitute Persons.

- A. W. Green, Esq. Alfred William Green, Esq., Secretary to Charitable Institutions, sworn, and examined:—
26 Feb., 1896.
1919. *Chairman.*] Are you Secretary to the Charitable Institutions Department? Yes.

1920.

1920. Do you produce certain returns for the information of the Committee? Yes. They are as A. W. Green, Esq., follows:—

RETURN of Deaths in the Government Asylums for the Infirm and Destitute during the year 1895:—

26 Feb., 1896.

Disease.	L. A.	P. A.	M. A.	N. A.	B. A.	C. H.	G. F.	B. H.	Total.
CLASS I.									
Order 1— <i>Miasmatic Diseases</i> —									
Influenza	16	...	...	6	3	1	...	...	26
Spinal .....	...	...	3	...	...	...	...	...	3
Order 2— <i>Diarrhœa Diseases</i> —									
Diarrhœa .....	...	11	1	3	2	...	...	...	17
Dysentery .....	...	1	...	...	...	...	...	...	1
Order 5— <i>Veneral Diseases</i> —									
Syphilis	1	...	...	...	...	...	...	...	1
Order 6— <i>Septic Diseases</i> —									
Erysipelas .....	...	...	...	2	...	...	...	...	2
CLASS IV.									
<i>Constitutional Diseases</i> —									
Rheumatism	4	2	...	3	...	...	...	...	9
Cancer	42	...	...	10	...	...	...	...	52
Phthisis	59	12	5	10	16	...	...	...	102
Diabetes	1	2	...	1	...	...	...	...	4
Mesenteric .....	...	2	...	...	...	...	...	...	2
CLASS V.									
<i>Development Diseases</i> —									
Senile debility	83	65	21	43	24	3	...	...	239
CLASS VI.									
Order 1— <i>Diseases of Nervous System</i> —									
Brain .....	...	5	...	2	...	...	...	1	8
Apoplexy	1	...	1	1	2	...	...	...	5
Hemiplegia	1	...	...	...	...	...	...	...	1
Paralysis	14	18	4	14	2	...	...	...	52
Epilepsy	2	2	...	4	...	...	...	...	8
Cerebritis	1	...	...	...	...	...	...	...	1
Meningitis	1	...	...	...	...	...	...	...	1
Order 3— <i>Diseases of Circulatory System</i> —									
Aneurism	2	1	1	1	1	...	...	...	6
Cardiac	11	18	20	8	5	...	...	...	62
Syncope .....	...	2	...	...	...	...	...	...	2
Pericarditis .....	...	1	...	...	...	...	...	...	2
Order 4— <i>Diseases of Respiratory System</i> —									
Asthma	8	2	1	...	1	...	...	...	12
Bronchitis	6	18	2	3	9	...	...	...	38
Pneumonia	1	5	2	4	1	...	...	...	13
Congestion of lungs .....	...	3	...	...	...	...	...	...	3
Laryngitis .....	...	1	...	...	1	...	...	...	2
Order 5— <i>Diseases of Digestive System</i> —									
Stomach .....	...	2	1	...	1	...	...	...	4
Peritonitis	1	...	...	...	1	...	...	...	2
Liver	3	1	...	...	3	...	...	...	7
Gastritis	2	...	...	...	...	...	...	...	2
Dropsy .....	...	5	2	...	1	...	...	...	8
Jaundice .....	...	3	...	...	...	...	...	...	3
Dyspepsia .....	...	1	1	...	...	...	...	...	2
Order 7— <i>Diseases of Urinary System</i> —									
Nephritis .....	...	...	...	...	1	...	...	...	1
Bright's Disease .....	...	...	...	2	...	...	...	...	2
Cystitis	1	...	...	...	...	...	...	...	1
Bladder .....	...	3	...	...	...	...	...	...	3
Kidney Disease .....	...	2	...	...	1	...	...	...	3
Hæmaturia .....	...	1	...	...	...	...	...	...	1
Order 11— <i>Diseases of Integumentary System</i> —									
Ulcers	1	1	...	2	...	...	...	...	4
Anthrax .....	...	...	...	...	1	...	...	...	1
CLASS VII.									
Order 1— <i>Accident or neglect</i> —									
Injury to hip	1	...	...	...	...	...	...	...	1
Injury to head .....	...	...	...	1	...	...	...	...	1
Drowning .....	...	...	...	...	1	...	...	...	1
Fractures .....	...	1	...	...	1	...	...	...	2
Order 3— <i>Suicide</i> —									
Wound in throat .....	...	1	...	...	...	...	...	...	1
CLASS VIII.									
<i>Ill-defined and not specified causes</i> —									
Rupture	1	...	...	...	...	...	...	...	1
Abscess	1	...	...	...	...	...	...	...	1
Disease of bones .....	...	2	...	...	...	...	...	...	2
Tumour .....	...	1	...	...	...	...	...	...	1
Malignant growth .....	...	...	...	2	...	...	...	...	2
Totals	265	195	65	122	78	4	1	1	731

A. W. Green, Esq. RETURN showing Names and Number of Inmates recently arrived from other Colonies or Countries during last six months.

26 Feb., 1896.

Admission number.	Names.	Date of admission.	Where from.
1895.			
2586	George Fleming	1 August, 1895	Tasmania.
2789	Joseph Donoghue	21 " 1895	New Zealand; 3 months.
2891	William Henry	29 " 1895	Victoria; 9 months.
2910	George Osmond	31 " 1895	England; 2 days.
3145	Richard Fiess	25 September, 1895	Germany; 5 months.
3246	John Dyer	5 October, 1895	New Zealand; 3 weeks.
3253	James Herbert	7 " 1895	England; 4 months.
3282	Andrew Davis	9 " 1895	Victoria; 1 month.
3318	Richard Lee	11 " 1895	America; 10 weeks.
3568	John Lasher	4 November, 1895	Queensland; 2 days.
3649	Patrick Byrne	9 " 1895	Victoria; 4 weeks.
3652	Thomas Collins	9 " 1895	Victoria; 7 months.
3685	Robert Rae	14 " 1895	Africa; 4 months.
3738	Samuel Leon	15 " 1895	Fiji; 1 week.
3975	William March	4 December, 1895	Victoria; 8 months.
4003	Rodarbox	6 " 1895	India; 5 weeks.
4178	William Highdale	18 " 1895	England; 8 months.
1896.			
37	John Bosci	3 January, 1896	Victoria; 6 months.
56	Robert Smith	6 " 1896	England; 3 weeks.
169	William Graham	11 " 1896	England; 10 months.
239	Cornelius Fitzgerald	16 " 1896	Queensland; 9 months.
293	Robert Creagh	18 " 1896	England; 1 month.
387	John Madden	23 " 1896	Tasmania; 4 months.
490	George Minors	30 " 1896	India; 17 months.
1895.			
3360	Matthew Burns	20 October, 1895	Victoria; 2 days.
3359	Michael Corry	20 " 1895	Victoria; 2 days.
Total.....		26	

PROGRESSIVE increase in Number of Paupers :—

Year.	Number.	Year.	Number
31st December.		31st December.	
1890	2,448	1894	3,252
1891	2,593	1895	3,425
1892	2,912	1896, to 8th February.	3,540
1893	3,146		

Cause of increase is chiefly owing to the depressed times.

SHORT history of the several institutions for the poor, &c., under the control of the Director of Government Asylums :—

Parramatta.—The largest institution is situated in George-street. The main building was formerly the military barracks, and about forty years ago was converted into a home for male infirm and destitute persons. Subsequently, another large structure adjoining, and used as a tweed factory, was purchased by the Government from Mr. Byrnes, and is connected to the main building by a bridge over the tram-line, which separates the two blocks. The area is 26,707 square yards. In consequence of the overcrowded state of the asylum a terrace of houses has been rented from Mr. Whitworth at £280 per annum, in which 140 inmates sleep. These houses are situated in Harris-street, adjacent to the main asylum. Patients suffering from scabies are isolated in these cottages.

Present inmates.....	1,128
Accommodation for	869
Excess	259

Parramatta.—*Macquarie-street Asylum* stands on an area of 15,210 square yards, and in former years was also a military barracks. It was, in the first instance, converted into a home for poor persons suffering from erysipelas, but is now a general asylum for the aged destitute. The bread for all the other institutions (with the exception of Liverpool and Glenfield Farm) is produced at this institution. Ophthalmic cases, heart diseases, and the blind are chiefly treated here. Additional grounds are rented from Mr. Gibson at 20s. per week, and Mrs. Cranney at 6s. per week.

Present inmates.....	308
Accommodation for	240
Excess.....	68

Parramatta.—Twenty-two Cottage Homes, with matron's quarters, have been erected near the Parramatta Railway Station for aged couples. The land was purchased in 1889 from Mr. John Taylor. Mr. A. Ross was the contractor for the buildings.

Present inmates.....	44
Accommodation	44

Newington Asylum, on the banks of the Parramatta River, is the home of the aged women. They were formerly located in the Immigration Barracks, Sydney, but in February, 1886, were removed to Newington, the house and estate, which occupy 50 acres, having been bought by the Government from the Blaxland family. Farming and dairying are barely carried out at the institution. A paddock is rented from Mr. Wetherill at £36 per annum. Since purchased by the Government.

Present inmates	658
Accommodation for	625
Excess.....	33

Liverpool

MINUTES OF EVIDENCE—ERECTION OF BUILDINGS AT ROOKWOOD FOR INFIRM AND DESTITUTE PERSONS.

Liverpool Asylum.—This building was erected for district military barracks, and about thirty-five years ago was converted into an asylum for the aged and destitute. In addition to the housing of general inmates, special provision is made for the treatment of consumptive and cancer patients. In addition to the bread for own use, supplies are baked for the Glenfield Farm Home requirements. A paddock is rented at £2 per annum from Sir D. Cooper.

A. W. Green,
Esq.
26 Feb., 1896.

Present inmates.....	880
Accommodation for	670
Excess.....	211

Glenfield Farm Home.—In 1891, the asylum at Liverpool being so overcrowded it was found necessary to give relief, and the Glenfield homestead and estate (1,200 acres) were leased from Mr. Throsby for five years, at £150 per annum. Farming and dairying are carried out here, and the production of milk, in conjunction with Newington and Rookwood, is sufficient for all institutions, and shows a profitable investment.

Present inmates.....	83
Accommodation for	65
Excess	18

Rookwood Asylum.—The buildings on this estate were originally erected by the Government for a Boys' Reformatory. After being vacant for some years (never having been utilised as a reformatory), the property was handed over in March, 1893, to this Department, so that a portion of the inmates could be transferred from overcrowded institutions. Irrigation works are being carried out, and farming on a large scale is maintained.

Present inmates	436
Accommodation for	405
Excess.....	31

Carpenterian Reformatory and Boys' Home.—These premises and land, including a large orchard, were leased from Mr. John Bennett for ten years, at an annual rental of £500. A cottage for the accommodation of the officials has been rented from Mr. King at £50 per annum.

YEAR 1895.	
Number of re-admissions	869
„ contributing inmates	114
„ who could contribute	53*
„ private funerals.....	100

1921. You see this map of Liverpool which is before the Committee, the cancer hospital being in section 45? Yes.

1922. Is the management of the asylum in occupation of sections 44 and 45? Yes. No. 2, adjoining section 44 on the south, is rented by the asylum at £3 a year.

1923. Parallel to section 44 and allotment No. 2, across the street, there is an area marked 43,—is the asylum in occupation of that? No.

1924. Could it be obtained, and at what rent? Yes, I understand so; at £50 a year.

1925. Does it contain about 7 acres? Yes.

1926. What area of land can be obtained by lease adjoining the lands at present in the occupation of the Liverpool Asylum? A total area of about 25 acres can be obtained. Of that area 17 acres would be Crown lands at present in occupation of the asylum. The residue can be obtained under lease for about £50 a year.

1927. In using this land would it be necessary to leave open the streets shown on the plan of the town of Liverpool? Yes.

1928. Therefore they would form a number of isolated pieces of land? Yes.

1929. Could those various areas be used for recreation and other purposes in areas up to 7 acres? Yes; they are enclosed now.

1930. Would the use of the whole of this land be attended with any inconvenience in working the institution? None whatever. It is used daily by the inmates at the present time, so far as the larger portion of it is concerned.

1931. With an area such as you have described, would there be any need for the inmates of the asylum to wander about the streets of Liverpool? No.

1932. Can the inmates leave the asylum without reference to the officers managing the institution? No; a man cannot get back into the asylum without a ticket, and therefore he gets leave before he goes out.

1933. Have you heard that the state of Liverpool, from a municipal standpoint, is very bad owing to the inmates having access to the town? We believe that there is competent police supervision at Liverpool, and if such a state of things did occur we should be sure to hear of it. The police would prosecute, as they have done in other cases.

1934. Do you find that the train travelling of 22 miles from Liverpool to Sydney is a serious matter in dealing with the poorer portion of the community? No.

1935. Are we justified in inferring that 8 or 9 miles further travelling by rail would not be inconvenient? Yes; if the place is alongside the railway.

1936. How far is it to Little Bay Hospital from Sydney? About 9 miles.

1937. Do you regard that as rather a long distance to take patients over the road? I have no experience in the class of cases taken to Little Bay.

1938. Do you regard 9 miles as an extreme distance by road? Yes.

1939. What is the distance of the main building at Rookwood from the railway station? One and a half mile.

1940. Are we justified in believing that 1½ mile by road is not a serious matter in such cases? Yes.

1941. Would any suitable situation within 1½ mile or 2 miles of a railway station with a fairly good road, and not more than 30 miles or so of railway carriage from the metropolis, be regarded as an inaccessible position? No.

1942. *Mr. Hoskins.*] Have you ever heard the people at Liverpool complain of any offensive smell, owing to the disposal of sewage from the Liverpool Asylum? No.

1943. Have you ever experienced any inconvenience yourself? No; I visit the asylum weekly, and I have never had any experience of bad smells.

1944.

* This information cannot be given with accuracy, as the old people are naturally very reticent as to even the existence, let alone the position, of their relatives; and experience shows that the most reliable method of obtaining information of this nature is to question each inmate periodically. This plan was commenced in 1894, and the information obtained since then is being compiled by the local officials, but will not be completed for a few weeks, as the record of over 3,000 persons is very voluminous. Of course, an inmate who presents himself for the first time is closely questioned, both at head office and at the asylum.

- A. W. Green, Esq., 1944. *Mr. Trickett.*] Has any complaint ever been made to your Department with regard to the objectionable practices referred to yesterday by Alderman Cole? No; we have never had a single complaint.
- 26 Feb., 1896. 1945. Has any other representation ever been made? No; if there had been, of course the matter would have been remedied.
1946. *Chairman.*] Do you know the public school at Liverpool? Yes
1947. Is that fairly well on the outskirts of the town? Yes; it is just above the railway station, and practically on the outskirts of the town. There is only one building between it and the asylum. That is the railway station-master's residence. That is the nearest point to the asylum.
1948. According to the plans is the asylum building about 300 yards beyond the school? Yes, as the crow flies; but it is about a quarter of a mile by the road.
1949. Have your Department any method for defining what constitutes residence in New South Wales? No.
1950. Is any person in needy circumstances entitled to make use of any of the institutions? Yes. I hand in some statistics showing the death rate, 1890 to 1894:—

Institutions.	1890.	1891.	1892.		1893.		1894.	
	Average.	Average.	Individuals.	Average.	Individuals.	Average.	Individuals.	Average.
Liverpool	25.54	26.39	13.01	25.48	13.87	26.32	17.92	32.90
George-street	15.17	15.31	8.37	16.58	9.42	18.42	8.73	15.79
Macquarie-street	11.75	20.42	7.29	12.82	8.12	15.97	7.41	14.70
Newington	23.06	29.70	9.11	14.47	8.88	14.95	8.97	14.52
Cottage Homes .....	.....	13.04	4.61	6.82	.....	.....	3.57	4.65
Glenfield .....	.....	.....	0.67	2.56	2.24	4.72	0.65	1.43
Rookwood .....	.....	.....	.....	.....	2.87	8.40	4.94	13.67
Totals	20.06	22.95	9.30	17.87	10.81	20.52	12.50	22.97

TUESDAY, 3 MARCH, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.

The Hon. JOHN DAVIES, C.M.G.

The Hon. JAMES HOSKINS.

The Hon. WILLIAM JOSEPH TRICKETT.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Erection of Buildings at Rookwood for Infirm and Destitute Persons.

Thomas Whitford Taylor, Esq., auctioneer and land valuer, Liverpool, sworn, and examined:—

T. W. Taylor, Esq.

3 Mar., 1896.

1951. *Chairman.*] You have held an official position in the Borough Council, Liverpool? I have been eight years an alderman, and three years Mayor.

1952. *Mr. Davies.*] Have you any statement to make? I think it is a most inhuman thing to keep 903 men in the asylum at Liverpool, entrenched round by a sewer. The Committee have examined the place at a time when they can form no fair conception of it. The Committee ought to see the place in winter-time. Where these men are supposed to parade and exercise I have seen a foot of water. The main sewer runs right around it, so that even if there were only 100 men there instead of 900 it would still be most inhuman to keep them there. Mr. Green has misled the Committee in regard to certain matters with which he is not familiar. The population is all around the asylum. As a matter of fact, there is one house in the very building; there is another immediately across the line with eight people living in it. There is also Moore College only 66 feet away. There is also the railway yard, which is only separated by 66 feet. There are hundreds of people passing there every day. Then there is the public school within a distance of 200 yards.

1953. Your contention is that the place is overcrowded? No; I say that if there are only 100 people there it would be the same objection.

1954. During the eight years you have been Mayor and alderman have you taken any active part in seeking to remove this building and the people housed in it? Yes; Mr. Maxted will tell you I petitioned the Government several times, and asked that they should remove the drains too.

1955. But have you ever taken any practical steps to abolish the institution before to-day? We have had no opportunity of taking practical steps. There was no such thing as a Public Works Committee during my time.

1956. Did you ever make any representations? I have done so publicly on the platform time after time.

1957. Is not there a new-found zeal on the part of the Council of Liverpool? No; the place has been an eyesore for years.

1958. Has not the institution existed for thirty-five years? Yes; but it is a most difficult thing to move any Government. It is only now that the thing is practical, because you have a place of 1,000 acres to which you can remove the building. In those days there was no such thing.

1959. The whole of your objection is that the place is overcrowded? I do not say that. I say it is not a fit place to put anyone in. We have fresh water and salt water, and everything conducive to make a good town at Liverpool, but what is the result? As a land valuer for the Government I have to value the land at Liverpool at 50 per cent. less than any other land around Sydney. It is not only inhuman to keep the men there, but it is an injustice to the town.

1960. Have not your assessments increased during the last five years? I should say not. I have not the statistics, but certainly the land about Liverpool has not increased in value.

1961. What was the value of your annual rates from all sources when you took office? About £1,000 a year.

1962. What is the value to-day? About £1,200.

1963.

1963. That is an increase? There is a perceptible increase.

1964. And has there not been a great depreciation of the value of property all over the Colony during the last three years? Yes.

1965. Notwithstanding that depreciation, the rates have increased by £200 or £300 a year? There are a great many reasons for that. From the way in which you ask the question it would appear as though the district were increasing in spite of the asylums, but as a matter of fact large estates 5 or 6 miles out of the town, which were formerly left alone, have been cut up. Hoxton Park, with some 3,000 acres, has been cut up. It is an impossibility as long as the asylum is there to sell any property unless you happen to get what may be termed a victim. A number of large estates outside Liverpool, not affected by the asylum, have been cut up, but in the centre of the town people will not look at property because of the asylum.

1966. Do you call the centre of the town the place on which the asylum stands? It would be if it were not for George's River.

1967. What is the population on the other side of George's River? It is not very large.

1968. Could you not count them on your fingers? True; but if it were not for the river it would be central, because it is adjoining the station.

1969. You state that the asylum is practically in the town? No; I do not. I say it is a central position, the railway being alongside it. The Town Hall is a little under 300 yards away, and the post office 350 yards away. The public school is 180 yards away. If that is not a central position, I do not know what is.

1970. I should like to know what the objections to the asylum are, provided the inmates are classified and the number greatly reduced? It is not a fit place for them in winter. It is not a fit place for any man to live in. The Committee have only gone there in summer-time, when the place has been at its best.

1971. Do I understand you to say that Liverpool is not a fit place to live in in winter-time? No; I do not. I say that the position of this asylum is not fit for any human being to parade on in winter-time.

1972. For what reason? It is entrenched by the main sewer of Liverpool, and in winter-time, when there is a flood, it is under water to the extent of 6 to 12 inches. It is surrounded by a sewer of the most filthy character.

1973. But there would be no difficulty in curing that defect? And there would be no difficulty in removing the building.

1974. All you wish is to see the building removed? No; but I would like to see the old men removed.

1975. Do you know of any better building in Australia than the one in which these men live? I know of many. The buildings in Parramatta are much more suitable. The coldest building you could select in winter-time is that asylum. It never was intended for old men.

1976. Then you regard the George-street and the Macquarie-street buildings as far more suitable? They are more comfortable for old men.

1977. Would you be surprised to hear that those buildings are a sort of prison for them, and that they never see the outside? That is a matter of discipline.

1978. But are the buildings to be compared with those at Liverpool? They are much more preferable as far as comfort is concerned.

1979. I suppose you know the Committee have been through these buildings? Yes.

1980. Do you not think that they are able to form an opinion about the matter? I do not say they are not, but very often we form preconceived opinions, which it is difficult to remove.

1981. At any rate you have only just woke up to the fact that the buildings at Liverpool are undesirable? No; I preached it on the public platform for the last ten years.

1982. Have you any public record of that? I swear it.

1983. Have there been public meetings denouncing the asylum? Yes; as the biggest nuisance we have.

1984. On what date? I could not tell you.

1985. You simply want the asylum abolished? Yes.

1986. For the reason you have assigned? The two special reasons are that it is a most inhuman place to keep the men in in winter, and it is a terrible blight upon the district of Liverpool.

1987. *Mr. Massall.*] I was under the impression you were going to give some evidence to refute the evidence of Mr. Cole? No.

1988. You are here to substantiate everything he has said? Yes. I can go further back than he. He has only resided there seven years, and I have been there fifteen years.

1989. Did Liverpool grow up around the asylum or did the asylum grow up around Liverpool? Since the asylum has been there the houses have gone away from it. There has not been a house built there—with the exception of some alterations to the convent—for the last ten years.

1990. But you are so geographically situated that you can only build in one direction? No.

1991. The river confines you to one position? No; there is one place around Moore College where you can build.

1992. In the event of these patients being removed, would the land and the buildings upon it be of any value? Undoubtedly.

1993. For what? For many things. I think the Railway Commissioners would only be too happy to get them.

1994. Would the land sell to a private individual? It would. I think you could sell the buildings as they are for £10,000 or £12,000.

1995. Do you think you could erect similar buildings for £12,000? I do not suppose you could. But if they were required for a factory there would have to be certain alterations.

1996. But there is no necessity to sell? I understand there is a certain amount of money voted to place an institution of this kind in a proper and better place. We are asked the question whether Rookwood is not a more suitable place than Liverpool. I say that Rookwood is the more healthy place. The building would be no detriment to people there, and the home would be a healthy one for the old men.

1997. You say it is an inhuman act to keep these men there in winter-time? Yes.

1998. Then it must follow that it is an inhuman act to keep the residents of Liverpool there in winter-time? No; I can take you to half an acre of ground upon which it would be an inhuman act to keep a man, but at the top of it it would be a pleasure for him to live. They are in a gully, and we are on an elevation. They are "partaking" of our sewage all the year round.

T. W. Taylor,
Esq.
3 Mar., 1896.

- T. W. Taylor, Esq.
3 Mar., 1896.
1999. Is there an open sewer? Yes; you will see cats and dogs floating in it now. The water used to supply your cancer patients runs right through the sewer.
2000. Does that drain run through the town of Liverpool? The greater part of it. [*Witness here explained by means of a sketch the course of the sewer.*]
2001. It must follow that in the event of the removal of these people from Liverpool the land and the buildings must be sacrificed;—the Government must suffer loss;—they will have to erect buildings in some other locality to house the patients? Whatever loss there is, I have no hesitation in saying the first loss would be the best.
2002. *Mr. Fegan.*] When was your last petition to the Government? I do not remember that we ever did petition the Government. I think we petitioned Mr. Maxted.
2003. When? About six years ago.
2004. Do you know what was the gist of your petition? We tried to bring pressure to bear on the Government by saying—"Now that we have taken action against the paper-mill and the wool-wash, in order to make the place presentable, we ask you, in all fairness, to take action with regard to the asylum."
2005. Was any notice taken of that? Yes; Mr. Maxted wrote to me, and I had an interview with him. He said something definite would be done before long.
2006. With what result? None. The only result, I think, was that they buried for some time the excreta of the place.
2007. Were you Mayor after that time? No.
2008. Or alderman? Only for one year. I have been out of the Council for four years.
2009. Then during the two years you were in the Council, after representing this matter to Mr. Maxted, you took no action? You can imagine how slow the Government are to get to work. We had agitated for ten or twelve years to get even a bridge.
2010. Have you asked for a railway there too? Yes; but we have not got it.
2011. Have there been public meetings about it? Yes.
2012. Because it was thought to be a necessity for the district? Yes.
2013. Were the meetings well attended? Yes.
2014. Mr. Parkes and Mr. Scobie addressed the meeting? That was an outside railway from Liverpool.
2015. Then a large meeting was called to condemn a Bill before Parliament, in reference to the vine disease? Yes; that matter did not affect Liverpool alone, but the districts surrounding it.
2016. Liverpool joined with the other districts in convening a meeting? Yes.
2017. Then in regard to any improvements to the district, public meetings are convened to express an opinion? Yes; in regard to anything of pressing importance.
2018. Is it not strange, if this building is a hot-bed of fever and pestilence, and not fit for a human being to live in, that the people of Liverpool have not raised their voice on behalf of the inmates? That is not quite correct. I have done it myself. Of course people are very apathetic about matters which are every one's business. What is every one's business seems to be no one's business.
2019. Is it not a fact that every one's business is looked after by the Council, and that that business is transacted by eight or nine men in the Council? Yes; by nine men.
2020. And the Council never convened a public meeting to petition the Government against the asylum continuing in Liverpool? I do not think they have; never during my time. We found in Liverpool it was impossible to shift the Government upon anything. Time after time complaints have been lodged. But presuming we have not agitated as we should have done, it is still inhuman to keep the patients there, irrespective of our apathy.
2021. Why is it inhuman? Because of the position.
2022. Is it a bad position? The worst position.
2023. What is the death-rate? I could not say.
2024. Is the death-rate greater than elsewhere? I could not say. About one person dies a day.
2025. Are you basing your assertion on fact? As far as I can. A man might come there to-day from another institution, and he might be dead before he got there. It would be unfair to put that down as against the institution.
2026. Do you say the asylum impedes the progress of the town? Yes.
2027. Why? I, for instance, bring gentlemen there time after time to look at property, but as soon as they find there is an asylum there they are off.
2028. Do you sell land there? Occasionally.
2029. Have you any for sale now? I have lots of property about there to sell.
2030. And you think the land would sell if the asylum were removed? I personally have none to sell.
2031. But if the asylum were removed it would give you, as an auctioneer, a better opportunity of selling land? No doubt it would.
2032. And that is one reason why you think the asylum should be removed? I would not give that as one reason. I have given you the two primary reasons.
2033. You think by the removal of the asylum the land in the vicinity of Liverpool would sell at a better price than it does? Yes.
2034. Do you think the paper-mill is to the detriment of Liverpool? No.
2035. Is there no stench from the works? No. The water is filtered before going into the river.
2036. You had rope-works there at one time? Not in my time.
2037. Is the wool-scouring no detriment to the health of the people? Not now. They have to filter everything. It was formerly a great nuisance.
2038. *Mr. Black.*] You have no personal feeling in regard to this matter? No.
2039. You do not own any land? Only about 3 miles out.
2040. Do any of your clients own land? I have no special clients. Anyone may be a client to-morrow.
2041. Where would you propose to remove these old men to? There are many places which would be more beneficial to the old men, and to my mind to the country. I think the one which has been selected is a very appropriate site. There are some 700 acres there, and if the patients were divided there would be 200 or 300 acres to each lot.
2042. Could you give any guarantee that if the asylum were removed the whole town of Liverpool would not follow it? I think I could venture to give you that guarantee.
2043. Is it not a fact that about half the people in Liverpool are dependent for the money distributed in the

- the town on the presence of the asylum? It is not a fact. There are only two or three people who gain anything out of it—the butcher, the baker, and the grocer.
2044. Is it not true that about £12,000 a year is spent by the asylum? I do not think so. Mr. Kidman, of Sydney, gets the greater portion of what is spent. T. W. Taylor,
Esq.
3 Mar., 1896.
2045. With regard to the drain which you speak of as being so obnoxious to the old men, would not that drain be equally obnoxious to those who have business in its vicinity even if the asylum were not there? Yes.
2046. Then, do you not think it would be better for the safety of the people of Liverpool to remove the drain, and not the old men? It is not only the drain I complain of—it is the natural position of the ground.
2047. I know the ground is lower on the other side? Yes. In flood-time these old men are fairly swamped, and the consequence is they have to ramble about the town.
2048. You say the building is all right in summer, but unfit as a residence for these old men in winter? Undoubtedly.
2049. Do you not think that with the expenditure of a little money that objection could be removed? I think it would be better to commence the expenditure by erecting a new building. It is too good a building to tinker with.
2050. Do you think you could erect a similar building anywhere else at a less cost than £30,000? I could not say. But if we were erecting a building, we would not erect a two-storied one for old men.
2051. How is it if you do not believe in the two-storied buildings for old men at Liverpool, you believe in the six or seven-storied buildings at Parramatta? I would not erect the six or seven-storied building if I had the erection of it. But I say that the George-street building is more comfortable than that at Liverpool.
2052. Are you not somewhat prejudiced in favour of the asylum at Parramatta, because it is not in Liverpool? I can assure you I am not. If you visit either building in winter time, you will find that one is much more comfortable than the other.
2053. You say that gentlemen who come to look at land in Liverpool, would not complete their purchases when they hear there is an asylum there;—do you not think there is some other reason for that;—are they people going into business, or people retiring from business? Both. There is a number of people who desire sometimes to build a sort of country home.
2054. Do you mean to tell me, that even if the asylum were removed, any man desirous of settling down in a suburban retreat, would, after seeing the town of Liverpool, select it as such a retreat;—is there any beauty in the surroundings? Yes. We have one of the finest districts a little out of Liverpool to be found anywhere. There are 400 acres and 900 acres along the ridge of the railway belonging to Sir Saul Samuel and Mr. Thorsby.
2055. How far is that from the railway? From 1½ to 3 miles.
2056. How could anyone be prejudiced against buying the land situated 1½ mile from the asylum by the presence of the asylum? It is so. Time after time, in my capacity as agent, I have met with the same reply. It has occurred to me more than twenty times.
2057. Have you any idea as to how the death-rate of Liverpool compares with that of any other similar town? No; but I believe we are living in as healthy a district as any in the country.
2058. In spite of the asylum? Outside the asylum.
2059. Do you know how the death-rate in the asylum of Liverpool compares with that in the Parramatta Asylum? I do not, but it ought to compare favourably, because they have the run of the whole town in Liverpool.
2060. According to your argument, the patients having the run of the town would be the means of reducing the death-rate of the asylum, and increasing the death-rate of the town? I think it would have that effect. We never had consumption or cancer until lately at Liverpool.
2061. If the Committee decided, and the Government approved of the removal of all consumptive, ophthalmic, and cancerous patients from the asylum—if it removed all the chronic sick, and housed only healthy old men unable to work, reduced their number, and increased the comforts of the building by slight additions, and also improved the surroundings by the covering in of the obnoxious drain, do you think there would be anything objectionable in the presence of the asylum to the town of Liverpool? There would be a strong objection. You could never lift the land high enough to make the place habitable in the winter. It is a blight to the place, and it is a great detriment to the old men to be kept there.
2062. You do not think that if the asylum were removed the town of Liverpool would shut up? No; I think it would be of advantage to the town.
2063. *Mr. Wright.*] How long is it since you were first elected alderman? 1884.
2064. Are you well acquainted with the ancient history of Liverpool? Yes.
2065. What is the present population of the Municipality? About 3,800.
2066. What was it fourteen years ago when you first went to live there? About 3,800.
2067. Do you mean to say the population has decreased? I believe it has.
2068. If Mr. Scrivener, the ex-Mayor of Liverpool, writes to the Committee and tells them the population has largely increased, he tells us what is untrue? I will not say that, but he is under a misapprehension.
2069. You tell us the population was larger twelve years ago than it is to-day? Formerly the population was not taken as accurately as it is now. It was an estimated population, and it was given as 3,800.
2070. Can you give us any idea of the population of Liverpool thirty-five years ago? No.
2071. Was it 2,000? I could not say.
2072. Do you think it was more than 1,000? I could not say.
2073. Before the establishment of the paper-mill, the wool-scouring works, or any other works, do you think the population was likely to exceed 1,000? I could not form any idea.
2074. How many people are employed in the paper-mill and other establishments? About 200.
2075. And as each man is supposed to represent a family of five, I suppose they maintain 1,000 people? Very likely.
2076. Do you think it reasonable to suppose that before the establishment of these industries the population was not more than 1,000? I would not doubt it, but I am not in a position to say.
2077. It is thirty-five years ago since this institution was turned into a benevolent asylum? Yes.

- T. W. Taylor, Esq., 2078. I venture to say that during that time the population of Liverpool has quadrupled? Very likely.
- Esq., 2079. And yet you say that the asylum is such a detriment to the place that no one will come and live there? I am only speaking from what experience teaches me. I venture to say that if you remove the asylum the population will be doubled within seven years.
- 3 Mar., 1896. 2080. But this establishment was put there thirty-five years ago, when the population was 500, and to-day it is 3,300 in spite of it, therefore that destroys your theory that the asylum has prevented the population from increasing? If you remember that Liverpool is the third oldest town in the Colony, you will naturally ask the question how it is that there are only 3,300 people there.
2081. What is Liverpool remarkable for in regard to products? Both fruit and farming.
2082. Where are the farms? Within a radius of 3 miles you will get as good farms as in any part of the country. I have 100 acres of land which I have had let at £100 a year.
2083. Where? Three miles out of Liverpool, on the Cabramatta Creek. Peter Miller has about 400 acres, and it is as good as any land in the country.
2084. What is there to make the town go ahead? We have better facilities there than in most parts of the country. We have fresh water and salt water. We can bring a steamer of 400 tons up there.
2085. Has one ever been brought up? Yes. They used to supply the paper-mill before the railway was built. All the grass and old bags used to be brought up by the river.
2086. Does the paper-mill employ as many men as formerly? Yes.
2087. Is the woollen industry the same? Yes.
2088. So that the manufacturing industries have not been retarded by the asylum? No.
2089. But you think the institution prevents Liverpool becoming a favourite residential site? Yes; it prevents people building there.
2090. Do you think, under any circumstances, you could persuade any man that Liverpool is a favourable residential site? I do. I left Sydney broken in health, and I have never lived in so healthy a place as Liverpool. I came down to Sydney for a year, and I had bad health.
2091. In the interests of Liverpool, then, you protest against the maintenance of the asylum? In the interests of the old men and of Liverpool I do.
2092. If medical men say that the asylum is eminently suitable, you reply by saying that it is eminently unsuitable? I say the position is unsuitable. As far as experts are concerned, I do not value them in the slightest. The Government may get a dozen of them on one side, and I could get a dozen of them on the other.
2093. You say that during the winter time this ground is from 6 inches to 1 foot under water? Yes.
2094. Is not that ground within 150 yards of the river banks, which are nearly 20 feet high? Yes.
2095. How often is the flood period? Generally once a year, when the banks of the salt-water river are flooded. There is a danger of the asylum being washed away altogether if it is not protected, because it is on the bank of the river.
2096. *Mr. Hoskins.*] You stated in reply to a question that if the Government removed all the inmates from the asylum at Liverpool the buildings could be applied to other purposes, and that the Railway Commissioners might purchase them? Yes; I was speaking with Mr. Eddy, who was in treaty for a small part of 8 acres in front of the asylum. They offered us £2,000 for it. The Government were contemplating the resumption of the asylum for workshop purposes.
2097. How long ago? Five or six years.
2098. Are you aware that the Government, for the Railway Commissioners, acquired by purchase about 60 acres of land at Redfern, and that the Commissioners are contemplating having all their repairing works at two or three principal sheds in Sydney or Newcastle? Yes.
2099. Therefore, the probability of the Commissioners using that building for railway purposes does not appear to be very rational? It would only be in connection with what may be termed the country lines. I understand the Commissioners are concentrating all the workshops for the suburbs.
2100. Would the residents of Liverpool like to see the Government use this building for railway workshops? I would not mind what they used it for, so long as it were used for a healthy purpose.
2101. But would there not be a danger of the river rising and washing it away? Not of the Asylum itself; but where the old men parade, it is right on the brink of the river.
2102. Does it not occur to you that if the Government resume this building there would be more money spent in Liverpool than now? Yes.
2103. Then as a matter of personal advantage, the people would prefer to have the buildings converted into workshops? Yes.
2104. Is not the greater portion of the open sewer which has been referred to, embraced within the area of the Municipality? Yes.
2105. Is it not the duty of the Municipality to abate the nuisance arising from it? You cannot abate it very well without going through Government property; but even if we could abate it we have not the money for the purpose. The matter is now before the Government. They had two schemes before the Council about it.
2106. *Chairman.*] Did you consider the offer of the Railway Commissioners, of £2,000 for the Moore Park, a reasonable one? I thought it was rather a small figure; I thought it was worth £3,000.
2107. What is the area of it? I think it is 8 acres 2 roods 15 perches.
2108. What do you regard as the present value of it;—has it altered since that day? It may have depreciated a little; but I think it is worth £3,000.

Sydney Maxted, Esq., Director of Government Asylums, sworn, and examined:—

- S. Maxted, Esq., 2109. *Chairman.*] You are aware of the scheme before the Committee? Yes.
- 3 Mar., 1896. 2110. Has it been prepared under your notice, and in accordance with your views? Yes; with the exception of the design in detail. I may say at once that I have never seen the design in its completed form.

2111. You have already sent us a sworn statement in regard to the matter? Yes; I desire that statement to be published as part of my evidence. It is as follows:—

S. Maxted,
Esq.

PROPOSED Erection of Buildings at Rookwood for Infirm and Destitute Persons—Statement by the Director of Government Asylums. 3 Mar., 1896.

Memorandum.

Charitable Institutions of N.S.W., Government Asylums Branch,
Cleveland-street, Redfern, 26 February, 1896.

Sir,

In order that the Parliamentary Standing Committee on Public Works may be informed of how the Rookwood site came to be proposed and selected as a central site for the Infirm and Destitute Asylums of this Colony, I beg to present the following very brief memorandum relating to the matter, leaving details to be dealt with in connection with my examination, which I desire, in view of some of the evidence that has been given thus far, shall be very full and exhaustive.

These Government institutions were officially handed over to my charge in August, 1888, consequent upon alleged mismanagement, which had been the subject of investigation by a Royal Commission whose inquiries extended over a year. It was apparent to me (and the Royal Commission, of which Dr. Ashburton Thompson was a member, had also determined) that several of the existing asylum buildings were unsuitable for their purposes and ought to be abolished. They were also very much overcrowded, and were in many respects undesirable either as homes for the merely aged indigent, or for the chronic sick poor. It therefore became necessary to make better provision for these unfortunates, and in due course the question of sites for a new institution was considered. As an evidence of the urgency that existed in this matter, I here beg to submit for the information of the Committee a letter to the Chief Secretary, dated 14 February, 1893, containing a *précis* of correspondence relating to the overcrowding, dating back as far as October, 1888.

I also forward your Committee a letter which was sent to the Chief Secretary on 24th June, 1890, suggesting that as a means of obviating the overcrowding, the existing Rookwood buildings should be used as an auxiliary asylum; or, as an alternative plan, that the buildings at Randwick should be utilised.

In consequence of my letter and *précis* of 14th February, 1893, the Chief Secretary visited and very carefully inspected all the Government asylums, and the result was the following direction:—

Minute Paper.

Utilisation of building at Rookwood, known as the Reformatory Buildings, for an Asylum for the Infirm and Destitute.

Chief Secretary's Office, Sydney, 18 February, 1893.

REPRESENTATIONS having been made with regard to the overcrowding of the Liverpool Asylum, the George-street Asylum, Parramatta, and the Macquarie-street Asylum, Parramatta, I paid a visit to these establishments yesterday in company with the Principal Under Secretary, the Director of Asylums, and the Honorable Dr. Creed, with a view to inspecting and seeing for myself what was the nature of these complaints. In going through these institutions, which, I must admit, are very neatly and cleanly kept and excellently managed, I was horrified to find that the unfortunate inmates were crowded to an alarming extent, many of them having to lie on the floor. As far as I can ascertain from Mr. Maxted, the Director, there are in the Liverpool Asylum in excess of the number for whom there is proper accommodation 200 inmates; in George-street, Parramatta, 350; and in Macquarie-street, Parramatta, 75.

After leaving these institutions, I paid a visit to the buildings known as the Rookwood Reformatory. These buildings were erected for a reformatory institution, and have been built for many years, having been left unoccupied ever since they were erected. They were, I believe, built by the Stuart Government, and were intended for boys committed to reformatories.

In view of the more pressing requirements of the above mentioned asylums, and, in order to relieve the overcrowding, these buildings, which I understand have been authorised by the Governor-in-Council to be proclaimed as a reformatory, should be utilised as an additional asylum for the infirm and destitute, and the minute authorising their proclamation as a reformatory should be rescinded, and steps immediately taken to drain the grounds and buildings so as to make them habitable for this purpose.

(Signed) GEORGE R. DIBBS.

Ask the Director of the Asylums for Infirm and Destitute to furnish a report and prepare the necessary documents for transfer of Reformatory from Department of Justice.

(Signed) C.W., B.C., 21/2/93.

The result of this minute was that, as directed, I made a detailed report (a copy of which I understand has been furnished to the Committee), and as soon as the existing buildings at Rookwood were placed in order the overcrowding at several of the institutions was relieved; and further relief was afforded by the erection at Rookwood as soon as possible of four additional wooden pavilions. It is necessary that I should state here that not one step was taken with regard to these suggestions or recommendations without consultation with and advice from the medical officers of my Department, and on the occasion of the Chief Secretary's visit he discussed the whole matter very fully with them, particularly with regard to the proposed Rookwood policy of centralisation, which had then been formulated by me, after most careful consideration, on what I conceived, and still believe, to be good grounds, and which I am prepared to show had their full approval. This question, however, in consideration of some facts now before me, appears to me to be sufficiently serious to make it advisable that I should not make any detailed reference to it until I am personally before the Committee.

In the beginning of March, 1895, I was directed by a minute from the Principal Under-Secretary to report further on the Rookwood proposals, and I did so on March 12, 1895. This Report, which is before the Committee, was sent on in the usual way to the Department of Public Works, and then to the Government Architect. That, I may mention, is the customary official routine in the first instance in these matters. I heard nothing more until 3 December, 1895, when Mr. Edwards, the Assistant Government Architect, called upon me and stated that it was desired to pass the scheme through the Public Works Committee before Parliament was prorogued, and asked me for statistics as to the numbers and classes of inmates to be provided for. I furnished him with some statistics, but pointed out that it would be necessary to consult the medical officers of the Department with regard to the hospital arrangements, and impressed upon him that in preparing the plans for the consumptive, cancer, and ophthalmic hospitals, these divisions should be isolated and enclosed with about 100 acres of ground each. I have Mr. Edwards' note to that effect. A day or two afterwards I consulted Mr. Vernon, and on the 10th December, 1895, a board consisting of Drs. Waugh, Beattie, Brown (representing Dr. Violette, who was absent on leave), Mr. Vernon, Mr. Edwards, and myself met at Rookwood, and very fully discussed the whole question.

(In

S. Maxted,
Esq.
3 Mar., 1896.

(In connection with this point I beg to direct the Committee's attention to Dr. Waugh's evidence, questions 965 to 967, upon which I think it unnecessary to comment here.)

965. *Mr. Davies.*] Were you and the rest of the medical officers in connection with these asylums consulted with reference to the proposed concentration of the whole of the pauper patients at Rookwood? I am not aware that we ever were consulted together. I do not remember that there was any official communication. If there had been we would have had to send in a report in writing.

966. Have there been no representations made by the medical staff? There may have been representations made separately, but there was no meeting where the matter was argued out.

967. There was no medical board or conference as far as you know? I am not aware of any.

The representations which were made at that meeting I reserve until I am giving evidence, because they hardly touch the purpose of this memorandum. I have, however, had the following correspondence with the Government Architect on the subject, which I think the Committee should have before it:—

Dear Mr. Vernon,

Paddington, 17 February, 1896.

I cannot go down to see you, and hence I am constrained to write and ask if your memory is clear enough to enable you to answer the following questions relative to our recent visit to Rookwood:—

1. Did I not explain very fully the details of the scheme to Drs. Waugh, Beattie, and Brown, and invite them to make any objections, suggestions, &c., and to open their minds freely for the guidance of you and myself in the matter at issue?

2. Did not they then accompany us all over the sites and fully approve of them; and were not your plans (particularly for the sick divisions) drawn in accordance with the opinions they then expressed as to the suitability of the sites, the question of contiguity to water supply receiving special consideration? Mr. Edwards was present throughout, and if your memory enables you to give an affirmative reply to these questions, you might perhaps permit him to state his recollection of what took place.

My mind is perfectly clear.

Will you kindly return your answer, and Mr. Edwards', on this note.

Yours sincerely,

(Signed) SYDNEY MAXTED.

I must be examined. I hope to be able in a day or two.

Dear Mr. Maxted,

17 February, 1896.

My answers are as follows:—

1. The scheme was fully explained by you to the medical officers (3) in my presence, and a general discussion followed, and the scheme placed before the Committee was the result of that consultation.

2. The site was traversed by the three medical officers and yourself and myself, and Mr. Edwards, and it was upon the expression of opinions then made that I based the scheme. Mr. Edwards was present, and he would, I am sure, confirm what I say. My evidence refers to the medical officers and their consultation. Ifansard gave Mr. Brunner's initiation of the scheme when placing Loan Bill on the Table.

(Signed) W. L. VERNON.

Rookwood Asylum, *re* General Scheme.

MEMO.—10th December, 1895, accompanied Government Architect to Rookwood, with Director of Asylums, to meet (by Director's arrangement) Medical Officers (Drs. Beattie, Waugh, and Brown) to consult upon the general scheme.

Walked over the site of proposed buildings generally, the Government Architect and Mr. Maxted explaining the scheme more or less in detail.

The proposed site for hospital blocks (cancer, ophthalmic, and consumptive) being particularly dwelt upon.

Personally, I remember reference to the proximity of these blocks to the reservoir being canvassed; but did not hear details, nor did I hear any pertinent objections urged to any portion of the proposed scheme by any of the medical authorities.

(Signed) A. G. EDWARDS.

24/2/96.

While the plans were being prepared by the Government Architect, I attended at his office to give whatever information I could; but I was unfortunately stricken down by illness, and have never yet seen them in their complete form. I may, however, say that I have been very much surprised to find that notwithstanding my representations the whole of the buildings have been placed on an area of 64 acres, while the estate over which it was proposed they should be scattered comprises nearly 600 acres.

In conclusion, I just think it necessary to point out that the plans appear to me to have been prematurely placed before the Committee. In the ordinary course they should have been sent to the Chief Secretary first, and then to Dr. Ashburton Thompson, who would finally have consulted with me, and then the Committee would have had the whole matter before it in a completed form.

I have not, in this statement, attempted to go into the merits of the question at issue, because I feel I can only do that fully and fairly as a matter of evidence.

I have, &c.

SYDNEY MAXTED,

Director of Charities.

P.S.—I gratefully acknowledge the consideration that has been shown to me by the Committee during my illness; and I most earnestly beg that its inquiry may not be closed until I am afforded an opportunity of being examined. This must be now within a day or two. Indeed, I should have gone to-day but for Dr. Creed's prohibition.

The within statement, dated February 26, taken and sworn before me, at Paddington, on same date.

J. F. PLUNKETT, J.P.

Witness—J. S. CHEAGH.

The Chairman, Parliamentary Standing Committee on Public Works.

2112. *Mr. Trickett.*] Will you kindly give your views as to the necessity for making better provision for the class of patients known as the infirm and destitute? The necessity arises from the fact that all the institutions are very much overcrowded, that the hospital and the general patients are indiscriminately mixed up together, and that the present system is, in my opinion, a most unnecessarily expensive one to work.

2113. Have you from time to time impressed upon the authorities the necessity for making better provision for these people? Yes; I cannot tell you how many times, but many times dating from four or five months of my appointment to this particular branch of the Charities, eight years ago, I should be within the mark.

2114. I ask you that question because Mr. Walker seems to imply that there has been no very specific objections raised on the ground of overcrowding? I may say at once I have not read his evidence, but I think there must be some misunderstanding of the question.

2115. In question 1,617 and 1,618, Mr. Walker is asked :—

Has any suggestion been made as to the necessity for legislation of a more effective character to deal with the admission and discharge of the inmates of these institutions? I have heard the matter mentioned, but there has been no official communication with regard to it.

Has it come to your knowledge that such a step is necessary? I certainly think it is necessary.

Has this been impressed upon the Government? Yes; upon the Government and upon Parliament also, as far back as 1890, and in my annual reports. Mr. Walker, of course, means that no direct official communication was made to him as Principal Under-Secretary, and in that report he is quite right.

2116. By verbal representation? No. I have here a complete code of legislation suggested.

2117. Have you always urged this in your yearly reports of the work of your Department of Charities? Yes; here I have an Act of 37 clauses suggested in my report for 1890.

2118. What did you recommend there? Under the heading of "Outlines of necessary legislation," I recommended "Providing for maintenance cost of inmates to be paid by relatives. Providing for uniform intercolonial legislation to prevent the transfer of paupers from one colony to another, and making relatives liable in whichever colony they may reside. Local rates to be chargeable for maintenance (wholly or in part) of all dependent persons transferred from their respective districts to Government Asylums. Hospitals receiving Government subsidy to be charged with a portion of the maintenance cost of patients who, being under treatment for illness or accident, are in their convalescent stage forwarded to the Government Asylums for Infirm and Destitute for subsequent treatment at the Government cost." I should like to explain the necessity which arose for that. I found that the country hospitals and the benevolent asylums were taking the Government subsidy under which they are supposed to receive all local patients without cost to the Government, and all local paupers, and that as soon as they had made these people to a certain extent convalescent they were passing them on to the central institutions, that is, the Government asylums, as they are technically called. At that time it appeared to me that no proper inquiry was made into the class of patients they were forwarding. They simply seemed to be able to go to the local Police Magistrate, or to get a certificate from the local medical hospital or a benevolent asylum, as the case might be, and send on these patients. A system of inquiry was instituted, which was attended with a singular result. On page 38 of my report for 1890, you will see that a circular was sent in response to every application from the country districts, and particularly from the hospital authorities, intimating that admission orders could only be granted under the following conditions:—1. That applicant was both infirm and destitute, and had not any relatives in a position to support him outside a public institution. 2. That applicant was physically and mentally fit to travel. 3. That the case was not one which should be treated in a local hospital, or by a local benevolent society, subsidised for that purpose. 4. That in every case when practicable a medical certificate must be obtained as to the applicant's eligibility for admission into, or treatment in, one of the Asylums for the Infirm and Destitute. That circular was sent in January, 1889, to all the country hospitals. That was five months after these places were handed over to me.

2119. That was acted upon with what result? The first four months' operations of this circular brought the admissions down nearly 40 per cent. That is to say, instead of having 769 admissions from January 1st to December 31st, 1889, the admissions in the following year in which the circular came into operation went down to 627, a total decrease of 142, or nearly 19 per cent. Ever since that circular has been in operation, and that condition has been observed, this proportion of decrease has been maintained, notwithstanding the large increase of the numbers in the asylums. For instance, in 1889 the number was 769. From my report of last year, page 13, it appears that in 1889—that is the year in which this condition was not carried out—the admissions were 769; in the following year they went down to 627; in 1891 they went down to 618; in 1892 to 526; in 1893 to 485; and in 1894 to 465.

2120. These inmates are inmates who come from sundry country hospitals? Yes, and country benevolent asylums.

2121. And may be looked upon as permanent inmates of the head institutions? Yes.

2122. Does that include all the people who come from the country districts? Yes.

2123. Are there not some who are sent on by local magistrates? These include all those.

2124. But they do not all come from local institutions;—they may be poor decrepit people? I have them classified—both the magistrates orders and the hospitals. The magistrates orders in 1889 were 514, and the hospitals 255. The magistrates orders went down to 325 in 1894, and hospitals went down to 140 in 1894.

2125. From that you gather that of late years there has not been so much abuse of this system as existed prior to that regulation? There is no doubt of it.

2126. Although the number of patients who come from the country by magistrates orders, and from similar institutions to hospitals and benevolent asylums still continues to a considerable extent, do you think that the system is much abused at the present time? I do not think it is, because in addition to this circular we get a report from the police authorities on every case.

2127. What was the matter with those cases that used to be sent on in such numbers? They were cases that ought to have been maintained by the local authorities instead of at the cost of the Government.

2128. Those societies get certain money for doing that? Yes.

2129. And instead of doing it, they used to send the patients on to your institutions? Yes.

2130. It was only the benevolent asylums, I suppose, which were subsidised—not the hospitals? No; it is a condition in both hospitals and benevolent asylums.

2131. They are supposed locally to keep this class of people? Yes; of course the abuse prevailed most largely in connection with the hospitals, because they are numerous, and the benevolent asylums are not so numerous.

2132. Seeing then that this abuse of the system has discontinued, will you explain how it is that there are such large numbers at the present time in these institutions? I cannot explain it, except on the ground of the destitution of the people who are admitted. I will explain what they have to go through before getting into these institutions. They have first to go to Dr. Paton, the Government Medical Officer in Sydney, who examines the applicant, and certifies that he is a fit case for admission on the ground of old age and destitution, or old age and chronic disease. Then the applicant goes to my office at Redfern and gets an order to go into one of these institutions. There is a written instruction from me to the Medical Superintendent that the applicants be taken in upon Dr. Paton's certificate, and they are

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are then examined by the Medical Superintendent of the Government Asylums. If they are found to be suitable cases, they are retained, and the Medical Superintendent has written instructions that if in his opinion they are not suitable cases to be retained, they are to be discharged after three days.

2133. What do you mean by a suitable case? A case in which, in the opinion of the Superintendent, a man is able to earn his living outside, and has succeeded in getting a certificate from Dr. Paton by malingering. He has to send him about his business in three days.

2134. That state of affairs applies only to people who are dealt with in Sydney? The great bulk.

2135. Will you explain the course adopted, with regard to inmates from the country? The inmates from the country get the orders from a magistrate. They are dealt with by the Medical Superintendent of the asylum in precisely the same way as the others.

2136. Does not a magistrate consult a local medical man? Yes; it is precisely the same form in the country as in Sydney, only that the matter is locally inquired into. I had a medical examination of every inmate made in 1890, and in that year, out of 2,560 who were then in the institutions the medical officers returned only nineteen as being able to work outside, and they were over 60 years of age. I had a similar return made two and a half years ago, and then the number was declared to be only thirty-five out of a total of nearly 3,000.

2137. So that on the ground of not being able to work, you think there is very little abuse? I am sure there is not—that is, in not being able to get a living outside. Of course, a man of 60 years of age can do a good deal of work in the institutions, and yet he may not be able to get his living outside.

2138. Seeing that all these precautions are taken, and that in three or four years the number has grown to over 3,000, can you account for the increase? The hospital admissions have increased in the largest proportion.

2139. Have you any means of ascertaining whether these people belong to this Colony, or whether they come from other Colonies? Yes; I have a return on the subject:—As to the statement that large numbers come in from other Colonies—During year ending December, 1895, fifty-six applicants, all of whom arrived in this Colony within twelve months of the date of their admission, were received into the Government Asylums for Infirm and Destitute. Of this number, seventeen are still inmates, while thirty-nine left, after having been treated and cured in the asylum hospitals. The following are the details:—From England, 15; Ireland, 4; Scotland, 4; Victoria, 7; Queensland, 5; South Australia, 1; New Zealand, 6; Tasmania, 4; India, 1; Canada, 1; Germany, 2; Sweden, 1; Norway, 1; Ceylon, 1; Austria, 1; South Africa, 1; Cape de Verde, 1.

2140. Do you think that that is a reliable return? I think it is. It is compiled from 4,000 admission forms, to every one of which a report is attached.

2141. In these returns is the place where they come from stated? Yes; and there is a check return made at the asylum. For instance, when a man comes to the office of the asylum in Sydney for his application form his history is taken from him there. Then the Medical Superintendent of the asylum has an instruction to subsequently take his history also.

2142. So that the suggestion which one hears sometimes as to numbers of people coming from other countries to the institutions has small weight? I saw the evidence of my medical officers on that point, and I say advisedly that they are simply talking at random.

2143. You think there is no foundation for the suggestion that the institutions are filled with large numbers who come from other countries and Colonies? I do not think it is possible. Occasionally we find that a family has been sent on improperly from another Colony, and we always send them back.

2144. If you find that a person has come from a similar institution in another Colony he is sent back? Yes; if his state of health permits.

2145. How long have you been doing that? I should say within the last four years.

2146. You mean where they have come direct from an institution in another Colony? Yes; or where relatives have sent them on. I know of an instance in which a son sent his mother from Queensland three times, and we sent her back each time. He got rid of her by paying her passage from Brisbane to Sydney.

2147. I suppose he put her in one of the institutions in Queensland, and they possibly found out she was not a fit subject to be there, and he sent her on here? Probably they refused to take her there. These cases are not numerous, but we have a few of them.

2148. In your report for 1889 in your suggested legislation you point out the necessity of making provision for relatives contributing to the support of such people;—will you give a reason for that suggestion? I have the history of a number of relatives who were applied to and who would not contribute.

2149. Do you think there are many inmates whose near relatives could well contribute to their support? Of course it is difficult to give a strictly accurate statement about that, but approximately I should say there would be from 200 to 300 in the Government asylums whose relatives might keep them at home or pay a fair amount for their support in the institutions. They are always applied to.

2150. How do you find that out? We get the statement from the inmate first, and then we have inquiries made as to the ability of the relative to pay, and if we find he is able to pay we apply.

2151. What is the result of an application of that kind generally? They pay very seldom. I had the father of two postmasters, and his daughter was married to a third postmaster in the colony, in the Liverpool Asylum. I applied to these three people, and not one of them would contribute. I have a number of such cases set forth in my report under initials.

2152. I have heard it stated that well-to-do relatives of inmates of these asylums sometimes drive up in private vehicles to see their relatives? I have not known that to be done.

2153. But there are cases of this kind—that when they shuffle off this mortal coil, their relatives give them a good burial? Sometimes. I think last year there were upwards of 100 private funerals.

2154. At any rate, the system has been so much abused that you have found it necessary to point out the desirableness of legislation to make relatives pay? Yes.

2155. Somewhat similar, I suppose, to the working of our new Lunacy Act? Yes; on the same line.

2156. Did you get the legislation you have suggested from any other colony? Yes; there is legislation in South Australia, Victoria, and, I think, New Zealand.

2157. Have you pointed out to the present Government the desirableness of legislation of this kind? No, not to this Government, beyond stating it in my annual reports; but I intend to do so.

2158.

2158. Is the Government utterly powerless at present to get any compensation from relatives? Yes.
2159. And although you may know they are well able to contribute, still, if they have not the decency to do so, you cannot compel them to pay? No; and I cannot allow the old people to remain in the streets to starve. They must be housed.
2160. How many people have you in these various asylums? At present time, including old women, about 3,500.
2161. Roughly speaking, there are 2,900 men and 650 women? Yes; that is about it.

S. Maxted,
Esq.
3 Mar., 1896.

WEDNESDAY, 4 MARCH, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.	CHARLES ALFRED LEE, Esq.
The Hon. JOHN DAVIES, C.M.G.	JOHN LIONEL FEGAN, Esq.
The Hon. JAMES HOSKINS.	THOMAS HENRY HASSALL, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Erection of Buildings at Rookwood for Infirm and Destitute Persons.

Sydney Maxted, Esq., Director of Government Asylums, sworn, and further examined:—

2162. *Mr. Trickett.*] I think you have certain returns to present? Yes; I present a return showing the number of inmates in the institutions during 1895:—

S. Maxted,
Esq.
4 Mar., 1896.

RETURN showing the number of inmates in the following Institutions during 1895.

Institutions.	In institutions, 1 January, 1895.		Admitted during 1895.		Discharged during 1895.		Died during 1895.		In Institutions 31 December, 1895.		
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Total.
Liverpool	785	.....	1,075	.....	751	.....	265	.....	844	.....	844
George-street, Parramatta	995	.....	1,061	.....	785	.....	195	.....	1,076	.....	1,076
Macquarie-street, Parramatta	321	.....	353	.....	318	.....	65	.....	296	.....	296
Newington	27	612	47	647	39	535	...	122	35	602	637
Glenfield Farm Home	64	.....	191	.....	176	.....	1	.....	78	.....	78
Rookwood	379	.....	614	.....	438	.....	78	.....	427	.....	427
Total	2,571	612	3,346	647	2,557	535	604	122	2,756	602	3,358

2163. How many people were there in the asylums at the end of 1895? 3,358, including 637 women at the Newington Asylum.

2164. Is the cost of the maintenance of the women about the same as that of the men? It is a little less. I think the net cost at Newington is between £11 and £12 per head.

2165. And what is the cost per male? In the yards £11 18s. 8d., and in the hospitals £19 1s. 11d.

2166. You say the cost in the female wards is a little less than in the male wards? Yes.

2167. Does it not strike you that it should be the reverse, because the men, I suppose, are working about the place? Yes, but I have not dealt with it in that way. I have taken the actual charge. The women, of course, work about the institutions as well. They do all the washing and the laundry work. The same rule applies fairly to both. I do not think there is any difference on that ground.

2168. Can you contrast the cost of maintenance in New South Wales in the yard establishment with one or two of the other colonies? Our cost is about £11 18s. 8d.; in Victoria, £13 13s. 9d. for the ordinary inmates and £9 3s. 7d. for the casuals, but the casuals do not receive clothing. They are only housed. They are never asked to work; they go in and out. They are received at a place called the Immigrants' Home. In South Australia the cost is £13 4s. 4d., and in Queensland £13.

2169. Are those figures obtained from authentic sources? Yes; some of them were telegraphed for, and others were obtained from official returns.

2170. And they are all based on the same outlay? Yes.

2171. For instance, do you debit the institutions of New South Wales with any interest on the cost of construction? No; that is not done in any case.

2172. So that really, in addition to this cost in all the Colonies, that would have to be added? Yes.

2173. Your statement shows that the New South Wales establishments are conducted more economically than those of the other colonies? As far as the yard patients are concerned there is no doubt about it.

2174. What would be the cost per head if there was the concentration that you contemplate in the Rookwood establishment? I have a table prepared that shows it exactly. The total saving in the cost of administration, that is in salaries and wages only, would be £4,225 a year. Of course, that is exclusive of the probable saving in rations and in other matters. That would pay the interest of 4 per cent. on the proposed £70,000 loan, and leave a surplus of £1,425 a year.

2175. Are you able to tell us what the saving will be per head, or what the cost will be per head, if your ideas are carried out? I can furnish that information. Of course, the estimate of the savings, apart from salaries and wages, is only approximate, but I do not think it would be less than from £4,000 to £5,000 a year.

2176. Would not the saving in the way of delivery of rations and that kind of thing to one place be considerable? Yes, I have included that; I have calculated that the whole saving will be from £8,000 to £9,000 a year at least.

2177. Do you agree with the representations which have been made from time to time as to the thorough unsuitableness of the Parramatta building, especially for the housing of these people? Yes, in every respect.

2178.

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2178. The evidence that has been given by other people, and the Press, and other reports which have been handed in from time to time, are not in any way exaggerated? No, they could not be in my opinion.
2179. It is absolutely cruel, dangerous to life and health; and the premises are thoroughly unsuitable for the purpose for which they are at present occupied? Yes, in every particular.
2180. And if any alarm of fire or a panic occurred in any of the buildings with these unfortunate people huddled together on two or three floors, the damage and loss of life would be something frightful? There is no doubt about it.
2181. Therefore on the ground of the unsuitableness of the present buildings you are in accord with the evidence that has been given and with the recommendations that have been made? Yes.
2182. Does that apply to other places besides the Parramatta Institution? I do not think the Liverpool buildings are suitable for sick people.
2183. That is the stone buildings? None of the Liverpool buildings are suitable for sick people—that is for the class of sick housed in them at present.
2184. Then you agree with Mr. Taylor that they are draughty and cold? I do not think they are suitable. Take the consumptive people for instance. They can never get downstairs; they are always kept in one room.
2185. They cannot get the benefit of the sun and fresh air? No; I may say, as far as Mr. Taylor is concerned, that I do not agree with anything he has stated. I do not think he spoke about the sick people at all. He spoke about the Liverpool buildings being unsuitable for any people because they are draughty. That is all nonsense. Fires are provided everywhere through these buildings during the winter months, and they are provided very liberally.
2186. You have heard the evidence of the Liverpool aldermen as to the irregularities said to go on in Liverpool on the part of the old men from the institution. Have any representations been made to you on that score? None whatever. An isolated case may have occurred when an old man has been discharged from the asylum to go elsewhere, with a shilling in his pocket. He may have got an extra glass of grog, but I have no hesitation in saying it has not occurred to any appreciable extent.
2187. Then the accounts are exaggerated? Yes.
2188. Will you provide the Committee with a copy of the regulations of the institution? Yes.
2189. I suppose the regulations in regard to patients going outside the institution are very strict? Yes.
2190. Are they adhered to? I am sure they are. Besides we have never had any complaints.
2191. Then, as regards the Liverpool institution, you do not think it is suitable for consumptive people, and people suffering from chest complaints? No.
2192. Is it suitable for a limited number of fairly healthy patients? Yes; my objection to the retention of the building does not arise from that reason at all.
2193. You are agreeable to that building being wiped out altogether? I agree for reasons I am prepared to state, to that place being removed after the Parramatta institution is disposed of, simply on the ground of economy. I think it would be unnecessary to keep a number of healthy patients there in a limited area, and at additional cost, who could be removed to an institution on that large Rookwood estate, where they might be profitably employed. That is my only objection to that place. As an institution for healthy old men, I think, if an additional area of ground could be secured it might be used very properly.
2194. But as head of the Department, you are in favour of the concentrated system? Very strongly—under a system of separation of the institutions on the Rookwood Estate; not exactly on the system shown on the plan which I saw yesterday for the first time.
2195. You have handed in a statement dated 26 February, 1896, of your views regarding the Rookwood proposal? Yes.
2196. I notice from that statement that you wish to amplify it, and I would ask you to give any further reason you have for locating the whole of these people at Rookwood? The site appeared to me to possess special advantages—1. Because it afforded a chance of placing in separate institutions on a large area, so that they should be properly classified the various classes of inmates dealt with in the Government asylums; the sick could be separated from the sound, and as easily confined to their own respective grounds as if they were in different towns. 2. The site is elevated and healthy; a good water supply is near; I was assured by the professional advisers of the Government long ago that there would be no difficulty with regard to drainage; and I see they have stated so in their evidence. 3. There were buildings already on the ground, erected at a cost of between £20,000 and £30,000 that were suitable, with alterations, for asylum purposes, and could not be used for any other purposes. 4. The centralisation of these asylums on this ample site, under a proper system of separation, will save a very large annual expenditure, although this would not have weighed with me if I had not thought, as I still believe, that the general scheme which I have proposed would secure the comfort of the sick poor, and the other classes of inmates who occupy these asylums. While upon this point, however—which seems to me to be a very material one—I may mention that the saving in cost of administration that could be effected by my proposals would amount to £4,225 per annum in salaries and wages, which would pay the interest at 4 per cent. upon the loan vote of £70,000 and leave a surplus of £1,425 from the present working cost. This is exclusive of the probable saving in rations and other matters which can only be ascertained after a year or two's experience, but I should think it would amount to at least from £4,000 to £5,000 per annum. I am responsible for the selection of the Rookwood site, acting upon my own belief, and upon consultations from time to time with the medical officers of the institutions, and also upon the opinions expressed by two chief secretaries, who carefully considered the whole question after visiting the locality, and one of whom was accompanied by no mean medical authority when paying his official visit with the Principal Under Secretary and myself. I wish to impress upon the Committee that no important step with regard to hospital arrangements has been taken without the advice of the medical officers, and that the hospital plans have been prepared solely upon their recommendations as stated by Mr. Vernon and the Assistant Government Architect.
2197. If these buildings which were erected for the boys' reformatory had not been there, would this site have entered into your mind as a place for the location of infirm and sick people? I think it would. I thought of several sites, and I may say that step by step, as far as that site is concerned, I have consulted the medical officers of the Asylum.

2198. And they, you say, have approved of it? They have, right through. They approved of it, as you see by Mr. Vernon's evidence, when they were called together; and when the whole matter was explained to the three of them together, they most strongly approved of it. I should like also to say with reference to the site, that two Colonial Secretaries have been over the ground,—one of them was accompanied by a good medical authority at anyrate. The whole scheme was discussed then, and Sir George Dibbs most strongly approved of the proposal.

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2199. What I want you to be clear upon is, that it is not because there happens to be those buildings there that you are fixing upon the site? No. Of course the buildings were there, and I would have asked for them under any circumstances at that time to relieve the overcrowding, but that did not weigh with me.

2200. But with regard to the statement of yours, that you were backed up by the advice of the medical officers of the Department, there seems to be a little difference of opinion? I have seen their evidence, and I am quite incapable of understanding it. I have here a statement of Mr. Vernon in his own handwriting, and I have the statement of his assistant, Mr. Edwards; and here, now, is my own evidence upon oath which distinctly contradicts them. I feel bound to say that, although I say it with extreme regret.

2201. If you look at the top of page 2 of the memorandum to which I have just referred, you will see with regard to some question which Mr. Davies asked, that you state—

The representations which were made at that meeting I reserve until I am giving evidence, because they hardly touch the purpose of this memorandum.

Will you explain that? The purpose of this memorandum I took to be to make the Committee acquainted with the history of the site, because I saw from one or two questions put that the point was not quite clear; but in addition to that I may state that I called these three medical gentlemen together in the presence of the Government Architect, and the assistant Government Architect.

2202. What are their names? Dr. Waugh, Dr. Beattie, and Dr. Brown. I impressed upon those gentlemen that, so far as the medical aspect of the matter was concerned, they would be held wholly responsible. I pointed out exactly what the details of the scheme were as I had suggested it. Then I suggested that they should go over the ground with the Government Architect, and his assistant, and myself, and fix the sites which were in their opinion best suited for hospital purposes. I have Mr. Vernon's endorsement of that in writing, and Mr. Edwards' endorsement also. They were called together on the 12th December, if my memory serves me correctly.

2203. Now you see that they have somewhat gone back on that? I see by questions 965, 966, and 967, put by Mr. Davies to Dr. Waugh, that they were not there at all—that they were not consulted.

2204. Of course that is a matter which remains between them and you; but I would refer you now to another important medical opinion on this site, and that is the opinion of Dr. Ashburton Thompson;—you, no doubt, have read his evidence? Very carefully.

2205. And you see it is not altogether favourable? It is not altogether favourable. As that question has been put I should like the Committee to put that matter before Dr. Ashburton Thompson again when he is before it—that is, the question of the suitability of this site with regard to all the inmates now in the Government asylums with the exception of the consumptive people. I may say at once that I submitted to Dr. Ashburton Thompson this proposed classification.

2206. When? Since he has given evidence. I will read it:

		<i>Divisions.</i>	
Division 1. 500	{	Cancer Consumptive Ophthalmia	} Approximately 500 to be classified. Require regular medical treatment.
Division 2. 1,000.	{	Paralysis... .. Rheumatism Epileptics Heart Disease Senile decay Convalescents from the general hospitals suffer- ing from fractures, &c., sent on account of difference in cost.	} To be classified. Do not usually require much medical treatment beyond tonics, stock medicines, and special diet.
Division 3. 1,000 (approx.)	}	Old age and destitution ...	} To be classified
Division 4. say, 500.	}	"Casuals."	

As the question has been raised, I would ask that when Dr. Thompson is examined again that may be submitted to him—as to whether that proposal has not his absolute approval, provided the four divisions are placed on suitable sites on the Rockwood ground. I may say at once that as far as I am concerned, I would prefer to have the consumptives right away from the estate altogether. I also think it would be better to have the cancerous and ophthalmic cases away too. I do not want those hospital people there at all. But we have them, and we have to provide for them, and on medical grounds I was assured there would be no difficulty in providing for them on this estate. That matter was left absolutely in the hands of the medical officers.

2207. But apart from those objections, Dr. Ashburton Thompson raised certain objections to dealing with the sewage from this large number of people which seemed to be rather weighty? I can only say again that the opinion of the officers of the Government who should be best qualified to deal with that question has been taken, and you will remember what it was—that there would be no difficulty if dealing with it.

2208. One of his objections was as to the character of the soil—that possibly it might not be sufficiently absorbent for a number of persons, and also that the effluent, which must be of considerable quantity, would have to be taken from a great distance, possibly to the Parramatta or Cook's River? I saw that.

2209. Are not those very weighty objections? Yes; I have the very highest respect for Dr. Thompson's opinion upon any matter of that kind; but as I have just pointed out, the scientific officers of the Government who deal specially with these questions—Mr. Vernon and Mr. Darley—give a distinctly opposite opinion.

S. Maxted, Esq. 2210. Will you look at questions 109, 110, and 111, put to Mr. Vernon.

4 Mar., 1896. *Mr. Davies.*] Was there a Board appointed, and did it make a suggestion for grouping the whole of the buildings at Rookwood? I am unable to say.

How, then, did the recommendation to group the whole of the buildings at Rookwood come about—what were your instructions? My instructions were to consult the Director of Benevolent Asylums as to what was required.

No Medical Board or Board of Works has sat to make this recommendation? There was a meeting of all the medical officers, with myself—that was subsequent to my instructions—and upon the deliberations of that meeting I based the grouping of the different classes.

I understood you to say a little time ago that Mr. Vernon acted upon the advice of the Government medical officers? With reference to the hospital sites.

2211. *Mr. Lee.*] But what medical officers are you referring to? Messrs. Waugh, Beattie, and Brown.

2212. *Mr. Trickett.*] Not to the official Medical Board? No; the ordinary official routine course would be this—plans would be prepared by my Department upon the recommendations made by my Department. They would go in due course to the Chief Secretary. Then they should have gone on to Dr. Ashburton Thompson, as the independent consulting medical authority of the Board of Health. Then Dr. Thompson, if he had seen anything to object to, would have consulted in the first instance with me, or he would have gone to Mr. Critchett Walker, who would have directed him to come to me. His opinions would have been noted upon the plans. He would have made a report on the matter which would have gone before the Chief Secretary. Then it would doubtless have been referred back to Mr. Vernon. There would have been a general consultation, and the plans would then have come on to the Public Works Committee in due course in completed form.

2213. Then you repeat your own opinion, and also the endorsed statement of Mr. Critchett Walker, that this scheme is really prematurely before the Committee? Yes. Mr. Bruncker has never seen the thing at all.

2214. You state distinctly that you have not been consulted as to the details of this plan, or as to the group or location of the various buildings? I was present at the meeting on the ground that day, with the medical officers, and the Government Architect, and twice afterwards I went to the Government Architect's Office as they were drawing the sections to supply them with details of numbers, the rooms required, kitchens, and so forth. They had just commenced this general plan. They had the proposed hospital group in it, also Group 2 and Group 3. Group 4 had not been reached.

2215. In your statement you say you are very much surprised to find the whole of the buildings had been placed on an area of 64 acres, whilst the estate over which it was proposed they should be scattered comprises an area of 600 acres. Did you point out to Mr. Vernon that it was your scheme that the buildings should be separated? Here is the statement in the Assistant Government Architect's own handwriting. This is the memorandum of instructions sent to the Assistant Government Architect. He called at my office and asked for some short details as to numbers. This is what he took down as I spoke to him—

ROOKWOOD GENERAL SCHEME.—Data obtained from Director on 3/12/95.

Classification *a sine qua non*.

1. General class (to be provided for)	...	...	...	...	...	...	...	1,000
2. Undesirable (idle loafer class)	...	...	...	...	...	...	...	500
3. Consumptives	...	...	...	...	...	...	...	200
4. Cancer	...	...	...	...	...	...	...	100
5. Ophthalmic	...	...	...	...	...	...	...	300
6. Hospital (present group of buildings)	...	...	...	...	...	...	...	400
7. Additional, against future	...	...	...	...	...	...	...	500
								3,000

Construction, brick; Hospitals, tile-lined;

Consumptives in Wards of 25 each	} enclosed with about 100 acres of ground each.
Cancer " " " " "	
Ophthalmic " " " 50 "	

2216. If your suggestion had been carried out the ophthalmic, cancerous and consumptive hospitals would have been half a mile apart? I think about a quarter of a mile; it means that each hospital was to have an area of 100 acres of ground.

2217. Would not separating them to the extent you propose have increased the cost of drainage? Yes; but I think that would have been a minor consideration in view of the necessity for separating them.

2218. Coming back to the question of drainage—beyond the evidence of Mr. Vernon and Mr. Darley, which you rely on, do you not think that treating the refuse from over 3,000 people in thick clay-soil, and then having to let the effluent find its way to such a distance as Parramatta or Cook's River by open drainage, would be a serious objection? I can only make this reply—that that, in my opinion, was a question purely for the scientific officers of the Government to deal with, and their evidence was very clear upon the point. Of course the same statement was made to me with regard to the drainage—that there would be no difficulty whatever about it.

2219. You do not set up your opinion against that of Dr. Ashburton Thompson, and, I may add, Dr. Renwick, who is very strong upon the subject? I, of course, have the highest respect for Sir Arthur Renwick's opinion, but so far as I remember, he was only strong on the point of aggregating these people. He did not offer an opinion on the question of drainage.

2220. If such an eminent authority as Dr. Thompson, who is one of our leading men connected with the Board of Health, is of a certain opinion, do you not think that that opinion should have a certain weight? Certainly; and it should be weighed in conjunction with the evidence given by Mr. Vernon and Mr. Darley. It is just a question of doctors' differing. It occurs to me that it is rather an engineering than a medical question after all.

2221. Have you read Mr. Davies' evidence? Yes; but I would like to know whether he proposes to put in a sewer which a man could walk through, and whether such a sewer would be necessary.

2222. Look at page 42 of the evidence of Dr. Thompson, and you will see the following:—

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Sewerage and Drainage.—This is a very important matter which should be thoroughly considered, and even worked out, before proceeding to examine other points. Supposing 2,500 or 3,000 people to be housed at this place, and connection with the Western Suburbs Sewerage Scheme to be for the present impossible, then a scheme for disposing of the liquid and solid wastes must be shown to be practically possible, or else the position is untenable. I think there can be no difference of opinion that so large an establishment should be systematically sewered on the water-carnage system, and that disposal should be by filtration, arrangements being made to draw off as much of the flow as might be required on cultivation &c. All surface and roof waters should be conveyed by separate gutters to any natural outfall; and then the sewage to be dealt with would be nearly invariable in quantity. I do not suppose it could be less than 14 gallons a head a day, or about 50,000 gallons from a population of 3,000. On this plan there would be water-closets or latrines, which, if they can be had, are vastly preferable on all counts to pail-closets. I know of no alternative to this plan: the liquid wastes must be thus provided for, and to deal otherwise with solid wastes appears to me a complication for which there is nothing to be said. If the filter-beds were scientifically laid out and managed, the effluent would be fit to enter any natural watercourse not drawn upon for drinking purposes. If there be no alternative, then it is a prime necessity to ascertain whether this plan can be carried out on this area. There is no doubt that it could not be done on an area of soil such as has been described without a great deal of expensive preparation. But, of course, it could be done; the governing consideration is cost, and that is one on which engineers alone can speak with authority.

Do you not think on an establishment of this kind containing 3,000 people, it is rather a dangerous experiment, seeing that these old people are supposed to work it largely themselves, and seeing that it is a long way from the Parramatta or Cook's Rivers, it is rather a dangerous experiment to have the sewerage of this mass of people treated in this artificial way, when a very slight hitch might throw the whole system out of gear and imperil the whole of the surrounding districts? So far as working it by the old men is concerned, it would be done under competent oversight. I can only say as Dr. Ashburton Thompson said, "The question is one on which engineers alone can speak with authority."

2223. But you must admit, seeing that there is a large number of people, it is a serious and primary consideration in dealing with the Rookwood site? Undoubtedly.

2224. With regard to the detailed plans, you still emphasise your statement that you were not consulted with regard to them, owing to your being laid up ill? I was largely consulted, but I have not seen them at their fully developed stage.

2225. If you had been consulted, I understand you would have recommended the buildings being placed much further apart than the plans proposed? Certainly; the memorandum from the assistant architect shows that. Of course, that can easily be done now.

2226. According to the memorandum and your evidence, you appear to have been guided and assisted by the evidence and advice of the medical officers of the various institutions? With regard to the hospitals and general suitability of the site for so many people.

2227. Independent of these medical gentlemen, did you have any other advice to assist you in selecting the Rookwood site? No, I do not think I had in the first instance—not when I proposed it. Of course, I brought my own experience, as far as I considered it to be valuable in the management of these places, to bear upon the question.

2228. Then, I understand that the real reason for the site being selected by you was, in the first instance, the visit in company with Sir George Dibbs, the fact of these buildings being there which could be partly utilised, the subsequent addition to those buildings, and then the subsequent visit of yourself, the Colonial Architect, Mr. Edwards, and the three medical gentlemen? Yes, and my own independent belief, that the site was, in all respects, a thoroughly suitable one.

2229. Do you approve of the plans submitted to our consideration or not? As they stand, I do not.

2230. Will you explain what you take exception to? With regard to the cancer, ophthalmic, and consumptive hospitals, or Group 4, I object to them, because they are in the wrong position.

2231. They ought not to be in the southern part of the ground? It was Dr. Waugh who, in the first instance, suggested that site. I suggested that it should be nearer to the Medical Superintendent's residence, on the northern portion facing west. Dr. Waugh said that would not be a good aspect, and he pointed out the other.

2232. Why did he point out the other? He said you could get there a north-easterly aspect, particularly for the consumptives.

2233. Mr. Davies.] You were pointing out your objections to the arrangement as shown on the plan;—will you describe your objections? My objection is particularly with regard to the three hospitals referred to.

2234. You are strongly opposed to the location of those three hospitals? Yes, they would be better away.

2235. Did you read Dr. Waugh's evidence? Yes.

2236. You find he swears he has never been consulted? Yes.

2237. Do you find Dr. Beattie also swearing he was never consulted? I do not think he went so far as that. I saw at any rate that he had tried to disconnect himself from the matter.

2238. Did you see that Dr. Violette also said that he had not been consulted? Dr. Brown was acting as Dr. Violette's *locum tenens*.

2239. Who went over the ground with you and apportioned the sites? Drs. Waugh, Beattie, and Brown.

2240. Would these gentlemen have any purpose to serve by declaring an untruth to the Committee? I do not wish to impute a motive at all in the matter; but I am here simply to state facts. I believe these gentlemen of course to be absolutely truthful, but here is the official record against them. It is nonsense for them to talk like that.

2241. They are good and faithful officers? As far as Dr. Beattie is concerned, I have found him to be an excellent officer for attending upon the sick—an able man in his profession; and I may say that if I discussed this question once with him, I have discussed it twenty times; and I think if he were recalled and the question were put to him he would not deny it.

2242. But you observe from the evidence you have perused that he has denied it? Yes, he has. Here, however, is the evidence of the Government Architect—his sworn testimony. I have also the written testimony of the Assistant Government Architect, and here is my own evidence. There is also the official record of the visit to the ground. If you notice Dr. Waugh's evidence in other places, when he was asked if he were consulted from time to time, you will see that he is very shifty, and says he might have been spoken to about it.

2243.

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2243. Is the idea for the concentration of the whole of the pauper inmates of the different asylums an idea of your own? Yes; the idea originated with me in the first instance.
2244. Have you in any document, other than those before the Committee, put that view before the Colonial Secretary? Not in writing. I have had discussions from time to time. When the idea first occurred to me I consulted my own officers. Then the question was put before the Colonial Secretary, and he visited the ground.
2245. But there is no official document to show that you made representations to the Colonial Secretary direct of the great necessity for concentrating the whole of the pauper patients at Rookwood? Not other than those which have been shown, and my report of five years ago.
2246. In the statement which you sent to the Committee the other day you suggested that the buildings should be spread over the whole of the land? Yes.
2247. You also stated that in conjunction with the Medical Superintendents and the Colonial Architect you went over the land and picked out a site? Yes.
2248. Did you pick out the site where the buildings are grouped together on the plan? I suggested the site for the casuals or Group 3, and also Group 5.
2249. Did you suggest Group 2? No; that was Mr. Vernon's idea.
2250. Did you agree with him? Yes.
2251. If you proposed or suggested that the buildings should be spread over this large area of 600 acres, how does it come about that they are all pretty well blocked together on 62 acres? Because, as I tell you, the matter was brought before the Committee before its time. As far as my suggestion for the separation goes, I have handed in a memorandum from the Assistant Government Architect which thoroughly endorses that suggestion, with regard to the hospitals at any rate.
2252. But does it not appear to be a contradiction of your own statement when you say that you, in conjunction with the medical officers and Mr. Vernon, met on the ground, went over it, and located the different buildings, and then that you should say that the buildings were not located where you agreed to? I did not say that. I have stated that the hospital sites were located absolutely in accordance with the recommendations of the three medical officers. Mr. Vernon has so stated in his evidence.
2253. He does not state that he was instructed by you to locate these buildings distances apart? I have no power to instruct him to do that. When the details were furnished to Mr. Vernon the matter was, practically, out of my hands, except with regard to furnishing him with whatever information he might require with regard to accommodation. It is for Mr. Vernon to make the plans.
2254. Are we to understand you are the officer responsible for the proposal to concentrate the whole of the paupers at Rookwood? Yes.
2255. And you are actuated with a desire to secure economy in management? Yes, and the better treatment of the various classes of inmates in these institutions.
2256. Can you point to any similar institutions in which large numbers of patients are concentrated as you propose, and in which the results have been as satisfactory as they have been in smaller institutions? I can give you a list of instances where there are larger numbers.
2257. Can you tell us what the results have been? No.
2258. I have asked you if you did not state that you went with Mr. Vernon and the medical superintendents of the institutions to Rookwood to locate the different buildings? Yes.
2259. Then I asked you if the buildings have been located according to the decision of that board, or whatever you like to call it? So far as the casuals were concerned we were unanimous.
2260. Are the buildings, as shown on the plan, located according to the positions you, and the medical experts allotted along with Mr. Vernon? No, not altogether. I have explained that I object to the hospitals.
2261. That is the only part you object to? Yes; but I would rather see Groups 1 and 2 put 100 acres apart. It would cost more, of course, because they would want separate treatment. I do not know whether you have noticed the class of patients it is proposed to put in Group 1. There are patients who require very little medical attendance—paralysed people, people suffering from heart disease, and so on.
2262. Are not 50 per cent. of the entire inmates in the hospital? No, about 1,400. That includes the consumptive, cancerous, and ophthalmic patients. As far as Group 1 is concerned you have to take from that number the consumptives, the ophthalmic, and the cancerous patients.
2263. They are all included in the gross number? Yes; but they would not be accommodated in Group 1.
2264. How many are permanently in hospital out of the 2,800 patients? The numbers vary very much, but you could make sure of 600 always being there.
2265. From your knowledge of the treatment of the inmates of the different institutions, you say that at least 40 per cent. are sick in the hospital? Yes, they are chronic cases—cases which do not require regular medical treatment, but tonics and plenty of nourishment.
2266. Then you are responsible for the idea of concentrating the whole of the paupers of the Colony in one spot, simply on the ground, as you believe, of economy? The evidence I have given is that the reasons which actuated me in suggesting this scheme were, first, that I thought it would secure the better comfort of the sick, and next, a cheaper administration.
2267. How do you arrive at that conclusion? I pointed out yesterday that the sick and the sound are at present indiscriminately mixed together in the separate institutions, without any chance of classifying them.
2268. There is a failure of space for classifying them? Yes. Then with regard to the site for the sick, as I have already explained, I have consulted the medical officers of the institutions from time to time. With regard to the question of economy, I have worked out the figures.
2269. What do you consider would be a fair and reasonable number of patients for one medical superintendent to see to? It depends on the class of cases. One medical officer, with an assistant to act as dispenser—and on that point I particularly consulted the three medical officers—could manage all the duties appertaining to 2,600 inmates. Most of his trouble would lie amongst the cancerous, ophthalmic, and consumptive cases. The superintendent would manage the rest. The epileptic, heart disease, paralysed, and rheumatic people require very little medical assistance.
2270. A large portion of the saving would be in the salaries of medical officers and others? Salaries and wages.
2271. On the 9th February the inmates numbered 3,540, of which 650 were women? Yes.

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2293. You recommend that the patients should be treated in one block at Rookwood to effect a saving of £4,000? Not in one block, and not for the purpose of saving £4,000 at all, but on the same piece of land in separate blocks, for the purpose of securing the better comfort and treatment of the inmates, and effecting better classification, and finally on grounds of economy.
2294. Is the treatment at present very bad? I do not say it is. Of course it is not bad.
2295. To effect a saving of £4,000 a year, and to obtain greater efficiency, you have recommended that the whole of the patients should be located at Rookwood? Yes.
2296. You say you would have greater efficiency;—can you point out any instance where paupers have been massed together where greater efficiency has been the outcome as compared with smaller institutions? I do not know of any other institution in these colonies which has so many patients, but I can give you a list of instances elsewhere, and they are institutions which are under very keen supervision.
2297. Would efficiency be more thoroughly secured by one Medical Superintendent than by three? I do not think it would. I have suggested two instead of three.
2298. When you made choice of Rookwood as a spot desirable for housing all the poor out of the institutions, did you give any attention at all to the system of drainage and sewerage? The question was first raised when Sir George Dibbs was up there. Then, when the Assistant Government Architect was carrying out the drainage there, it was declared that there would be no trouble whatever about it.
2299. Where does the drainage empty itself? It is only a system of irrigation beds.
2300. Are they not a disgrace;—do you call that treatment of sewage matter scientific, or in accordance with the principles of a sewage farm? I did not propose to adopt that system. That is a matter which the engineers of the Government could advise about. It is a matter for which I am not responsible.
2301. Is not the first consideration in connection with hospital treatment the provision of a proper system of drainage and a good supply of water? Certainly. Mr. Vernon and Mr. Darley have both declared that there would be no difficulty about that.
2302. Have you read their evidence? Yes. That is the evidence also which has been given by Dr. Ashburton Thompson.
2303. That there will be a great difficulty in effecting a thorough system of drainage? Mr. Vernon says there will be no difficulty. He was asked the following question:—
Supposing this scheme is carried out, and these 2,900 people are removed to Rookwood, have you any apprehension, from what you know of sanitary matters, that the site will probably have to be abandoned on account of defective drainage? I have not the slightest fear of that.
- That is very clear.
2304. But if you go a little further you will find he has very grave doubts? Mr. Vernon does not contradict that.
2305. You know the character of the soil? It is clay. Of course it would have to be very much broken up before it could absorb anything.
2306. Your own common-sense, apart from any engineering knowledge, is sufficient to point out that that is not the character of land to absorb sewage matter? No; not to absorb sewage matter, of course. It is the same sort of land as that which the Callan Park Asylum is built upon. They get rid of their matter mostly by the pipes, but they bury some of it. Dr. Ashburton Thompson says it is a question after all which must be left to the engineers, and the engineers say that there is no difficulty about it.
2307. The best sanitary engineer who has come before the Committee swears that there is a great difficulty, but that it can be got over by a large expenditure? Yes; I saw that Mr. Davies differed to some extent both with Mr. Vernon and Mr. Darley.
2308. Notwithstanding the defective nature of the locality for drainage, you are still in favour of the scheme? I say that, weighing the evidence as it is before me, with reference to the question of drainage, I do not see any reason to shake my opinion that it would be a good scheme to have these buildings there, as I have pointed out, with the exception of the three hospitals to which I have referred.
2309. How many cancer patients have you in the whole of the asylums? About forty or fifty; they are all at Liverpool.
2310. Could they not be taken to Little Bay? They could undoubtedly.
2311. Would it not be more satisfactory? It becomes a question of cost. These cases are sent to us because they can be more economically managed in the Government Asylums.
2312. Do you know the cost per head of the patients at Little Bay? I think about £33.
2313. And there are a number of people located at Little Bay who could be treated at your institutions? No. As it is considered they can be treated at my institutions, they are forwarded on because of the greater economy. I see no reason why the cancer patients could not be treated at Little Bay beyond the question of costs.
2314. Do you know the cost of the cancer patients in the Liverpool building? £19 to £20 per head.
2315. How many ophthalmic patients have you in the different institutions? They are centralised pretty well at the Macquarie-street Asylum. In round numbers they will be about 200.
2316. How many consumptive cases have you in the different institutions? At present nearly 200.
2317. Where are they principally located? Liverpool.
2318. Have you any consumptive cases at Rookwood? A few in the early stages.
2319. Do you draft patients suffering from consumption from the other institutions to Liverpool? Yes; if they are at all serious cases they go to Liverpool in the first instance.
2320. Then at Liverpool you have no proper system of classification? No; you cannot secure one.
2321. That all arises from a want of space? Yes.
2322. Then your idea is, if this or some other scheme is carried out to house these poor people, to classify them? Yes.
2323. Have you made representations to the Government, independent of what we have before us, as to the necessity for classification? Not independently of what you have before you, but I think there are about half a dozen representations.
2324. You are aware that a Commission some years ago recommended a classification of the patients in connection with all these institutions? I do not recollect it; but I have no doubt they did.
2325. And nothing has been done from that time to this? There has certainly been an improvement in that respect, as far as it could be effected.
2326. Your great difficulty has been a want of space? Yes.
2327. How does it come about that there has been such a great increase of paupers seeking admission to
the

the institutions during the last three years? I cannot tell you. I described yesterday the method under which they get in, and showed pretty well that it was almost impossible for a man to get in unless it was absolutely necessary that he should get there.

2328. If the increase keeps on *pro rata*, you will want a larger institution than is now proposed? It is obvious that if the increase goes on we shall want a very much larger institution. I suppose it arises from the depressed times. We got a good many from the hospitals.

S. Maxted,
Esq.
4 Mar., 1896.

THURSDAY, 5 MARCH, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.

The Hon. JOHN DAVIES, C.M.G.

The Hon. JAMES HOSKINS.

The Hon. WILLIAM JOSEPH TRICKETT.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Erection of Buildings at Rookwood for Infirm and Destitute Persons.

Sydney Maxted, Esq., Director of Government Asylums, sworn, and further examined:—

2329. *Mr. Davies.*] You have some statements to present to the Committee? I was asked yesterday to prepare a statement of the saving in the cost per head under the proposed new policy. Assuming my figures to be correct, it comes to nearly £3 per head. You asked me to obtain a statement showing the distribution of the charity vote. I have it here for the last year. Reference was made yesterday to the difference in the management cost of the Liverpool and George-street Asylums. For the moment I was unable to give the cost. The cause is that £280 of the Medical Superintendent's salary at the George-street Asylum is charged to Macquarie-street. He has the two places. There is a baker at £130 a year at the Liverpool Asylum, who is not employed at George-street. The baker who bakes for the George-street and Macquarie-street Asylums, bakes at Macquarie-street, and there is an extra matron and assistant matron at the Liverpool Asylum at £60 a year. The difference between the two places is £190. The items I have just enumerated total £470; so that the figures are, excepting for numbers, in favour of the Liverpool Asylum.

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2330. But the number of inmates at George-street and Macquarie-street are much larger than at Liverpool? Yes; the figures still show in favour of the Liverpool Asylum.

2331. How do you account for the expense of Rookwood? At Rookwood it will be less this year. In that year the irrigation works were charged.

2332. *Chairman.*] You were to furnish the number of paupers in this and the adjoining colonies with the cost of maintaining them? I have that return here:—

Cost of Paupers, 1894-5.

Country.	Population.	Number of Paupers.	Proportion of paupers to population.	Cost.	Cost per head.
Great Britain	38,104,975	1,018,028	1 in every— 37	£ s. d. 19,667,513 0 0	£ s. d. 19 6 4
Victoria	1,180,043	1,418	546	19,410 0 0	13 13 9
Do casuals .....	.....	744	.....	6,827 0 0	9 3 7
do cancer cases .....	.....	(exclusive of cancer, consumptive, and ophthalmic cases).	.....	.....	37 5 5
South Australia	352,797	322	1,095	4,256 0 0	13 4 4
Do cancer, ophthalmic, and consumptive cases.	.....	.....	.....	.....	53 5 7
Queensland	445,155	824	540	10,712 0 0	13 0 0
Do cancer, ophthalmic, and consumptive cases.	.....	.....	.....	.....	71 2 0
New South Wales	1,251,450	3,356*	431*	51,017 0 0*	14 7 3*

* General average; but dividing the inmates into "Yards" and "Hospitals," so as to make a comparison with other colonies, the result is:—Yards, £11 18s. 8d.; hospitals, £10 1s. 11d.

I should like to explain that they do not deal as largely in the other colonies with what are called the general hospital cases. I shall have to get those figures in order to make a fair comparison. For instance, they have separate institutions for cancer, consumptive, and ophthalmic cases—they do not come into the general pauper institutions. You questioned me very closely with reference to the matter of drainage. I should like this short statement to be made portion of my evidence:—In reply to some of the questions put to me yesterday with reference to the alleged difficulty of carrying out a proper sewerage system at the Rookwood Asylum, I stated that it appeared to me that the best engineering authorities of the Government had already given evidence to the effect that such a system could easily be provided. I was asked to point out the evidence justifying that statement. At the moment I could not find it. I have, however, since looked through the Minutes of Evidence, of which the Committee has kindly allowed me to be furnished with a copy, and I now with very great respect, in support of my statement yesterday, direct the Committee's attention to the following questions and the replies thereto: Mr. Vernon, Government Architect, questions and answers Nos. 5, 30, 38, 346. Mr.

Darley,

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- Darley, President of the Metropolitan Board of Water Supply and Sewerage, Nos. 1335, 1337, 1354. But principally in support of my statement I draw attention to the report of Mr. Davis, C.E., which recommends that the sewage be treated by precipitation and filtration, and the effluent discharged into the Rookwood Cemetery drain. The total cost of dealing with the sewage under this method, including interest on machinery, is fixed at £725 a year, but Mr. Davis stated, in reply to Mr. Black (questions 1554-55) and Mr. Hassall (questions 1569 to 1571), that if the isolation hospitals were dispensed with and any other buildings (say the casual group) placed on another site some thousands of feet of sewers would be done away with, and the cost of the sewers, above the sewage disposal works, would be brought down to £1,000 instead of £4,153. There is so much land available in a northerly direction that this change of site could be effected, and still allow full scope for carrying out the principle of separate institutions. These figures reduce the cost of the works from £8,435 to £4,282. The interest upon this, at 4 per cent., would be about £177 a year. Then add Mr. Davis's estimate of the working expenses of the sewage scheme, £420 a year, and it appears to me that the difficulty which has been raised as to drainage, &c., can be solved by an annual outlay of about £597. Now seeing that, as Mr. Davis states, the Government are at present paying £652 17s. a year merely to remove the nightsoil from the Parramatta institutions, the cost of successfully disposing of this important question of drainage at Rookwood can hardly be considered as worthy of consideration, if it is held to be the principal objection to carrying out the proposed scheme. Of course, if Mr. Davis's proposal is carried out, there will be a large saving in labour in connection with the present irrigation works, and the great saving per annum that will be accomplished under the general proposals for concentration will, I submit, justify a very much larger expenditure to secure good drainage than Mr. Davis has proposed. I would just point out that Mr. Hickson, Engineer-in-Chief for Public Works, declares Mr. Davis's scheme to be "efficient and economical." I respectfully ask that this brief explanation may be made a portion of my evidence.
2333. *Mr. Trickett.*] In answer to questions 1545, 1546, and 1547, Mr. Davis states that he does not regard the land as suitable for sewage farms—he does not think the area large enough nor the land suitable? I see that.
2334. *Mr. Davies.*] Mr. Vernon, in his second examination, also goes back on his former statement? I was told he had done so, but his evidence does not show it.
2335. *Mr. Hoshins.*] The statement made by Mr. Davis as to the area not being large enough is very explicit? Yes. The figures I have presented seem to me to be very economical. It would cost less to work this scheme than it is now costing to remove the soil from the two Parramatta institutions by the Borough Council.
2336. *Mr. Davies.*] When the Committee rose yesterday I was endeavouring to elicit the cause of the great increase in the admissions into the institutions during the last three years;—can you explain it? I cannot explain it, except that we have a very large number extra from the hospitals. I can obtain the details. No doubt the depression has had something to do with it.
2337. How many do you think have been admitted from the different hospitals? From the Coast Hospital last year 137 patients were sent on to us, as against 132 in the previous year, as against 80 in the year before that, as against 98 in the year before that, and 82 and 81 in the preceding years.
2338. Did they come to the institution for admission by the order of the Government? They were pauper patients, taken from the metropolitan hospitals when convalescent, and sent to the Government asylums to be treated in order to save cost at the other hospitals.
2339. That system is quite new to me, as the Director of the Sydney Hospital? It has been done for years.
2340. Does not the Government give an order for these paupers and send them straight to Little Bay? No; the application is made, and we send the orders for the transmission of these people from these hospitals.
2341. You want the Committee to understand that the sick poor treated temporarily in the hospitals are sent to this institution? Yes. Supposing a man is taken in with a broken leg, and the bone is setting, he is sent to us. He would, perhaps, be sent to Liverpool or Rookwood with his leg in plaster to save the cost of completing his cure in the general hospital.
2342. Can you give a list of patients who are sent in that way? Yes; I have a history of every one of the cases.
2343. Does that account for the great increase in the additional admissions? No; it does not affect it very materially.
2344. You do not get a very large number from the other colonies? No.
2345. Having these large annual accessions in the number of inmates, and you only provide in the new buildings for 3,300 patients, what provision do you intend to make in the future for the great increase which must take place? I cannot say. If the increase goes on, and every case admitted is a deserving one, provision will have to be made.
2346. You are only making provision practically for those who are now housed? About 500 extra.
2347. The accommodation of this building will be 3,300, and you have now 2,900? Yes.
2348. So that there will be provision made for about 400 extra, who will come in probably in one year? Possibly. There was a decrease last year of fifty.
2349. More by deaths than anything else? The death-rate was not above the usual proportion.
2350. How do you account for the larger proportion of deaths at Liverpool than at George-street, where there is a larger population? Because of the consumptive and cancer patients. There are no consumptive or cancer patients at George-street.
2351. But the whole of the cancer patients are a small item? There are fifty. There is not much difference in the proportion of deaths—it is about equal.
2352. Are there healthier patients at Rookwood. On the whole I think they are.
2353. You have not taken the ophthalmic patients from there? They have not any there.
2354. All you have there are the sick? The chronic sick—people who would be under Group 1, and the others who would be under Group 2.
2355. If you carry out your project to house the whole of the 3,300 patients, you will have the chronic sick, as well as those who are hale and hearty, together? Yes; in separate institutions on the one estate of 600 acres.
2356. And the cancerous and consumptive patients who might be termed convalescent would be able to walk about the ground? Yes; within their own area.

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2357. Right up to the water supply? No. For instance, the consumptive hospital is placed further away from the water supply, and that is the only thing there is any danger about. They only could possibly convey any contagion, and I should be glad to see them away from the institution altogether; also the cancerous patients. The cost is the only objection. There are fifty of them. We are keeping them at £19 a year, and the cost was really £60 a year at the Coast Hospital.

2358. In this charge of £60 a year, did they take into consideration the cost of the building of the institutions? No.

2359. Is it a fair thing to charge the capital cost of the land against this project of yours? It is not done in any Government institution in the country.

2360. Why should it not be done? It is never done. It is not done in connection with the Sydney or Prince Alfred Hospitals or any other institution.

2361. *Mr. Black.*] You mean, I suppose, that as a matter of comparison it would not be fair to do it in this case because it is not done in others? Yes.

2362. *Mr. Davies.*] If your suggested proposal is carried out you will have ample accommodation for 3,000 patients? Yes.

2363. And with the annual growth we have had lately it would soon become necessary to increase that accommodation? Of course, if the annual growth went on it would be necessary to provide for it.

2364. Is it not fair to presume that the annual growth will go on in the future as it has done in the past? It is impossible to answer that question.

2365. Do you think we are likely to increase our pauper patients? I hope not. It is difficult to foresee what the social or commercial condition of the country is likely to be. I can only say that no patient is admitted without going through the fire of a very rigid examination.

2366. You are not able to tell the Committee whether there is likely to be increased accommodation required within the next two or three years? It would be impossible to say.

2367. We have had statements from the aldermen of Liverpool to the effect that cancerous and consumptive cases are permitted to leave the building and mingle with the people in the town;—is that true or untrue? I am most emphatic in saying it is untrue. It is absolutely untrue.

2368. Do your regulations prevent the possibility of cancer patients who are isolated on the banks of George's River going into the town of Liverpool? They could not get in. They would have to be in collusion with two or three attendants, and they could not possibly get in.

2369. Have you at any time had a complaint that any one of them suffering from cancer has been in the town? I have never had any representation of the kind made to me.*

2370. Have you had any complaint with reference to consumptive patients mingling with the townspeople and being a nuisance to them? No. Indeed we are so careful that I may state that at one time I found that a few of these unfortunates who walk about were allowed to stroll into the park, which is opposite, and seeing in the course of my reading that that was dangerous, I consulted Dr. Beattie about it, and they were never allowed to go out afterwards; but there was no complaint made.

2371. I presume you have read the evidence of Alderman Cole and other evidence to the effect that cancerous and consumptive patients were allowed to go about the town? Yes.

2372. And they attribute some of the diseases which have broken out in the homes of some of the people to contact with these old men from the asylum? I can only say I have never had any complaint, and I cannot believe their statements can possibly be correct.

2373. Are your regulations sufficiently stringent to prevent the possibility of anything of the kind? There is a printed regulation which prevents any of them going out without getting an order from Dr. Beattie. I produce a copy of the regulation:—

REGULATION 4.—*Inmates' Leave of Absence.*

Permission to leave the asylum premises should not be granted excepting as a reward for good conduct, unless upon official business, or for private reasons likely to benefit the inmate. The system of leave should be firmly discouraged by the Medical Superintendent, and in no instance should an inmate be permitted to leave the asylum without first obtaining a written order upon the forms provided for the purpose from the Medical Superintendent. This rule should be rigidly adhered to in order that rations may not be drawn for men who have left the Institution. A record of all "leaves" should be kept by the clerk who is held responsible for the proper ordering of rations and the correct records connected with the Asylum inmates.

2374. Is this regulation posted in such a position at the entrance, and in different parts of the institution, that the inmates will know what it is? It is posted near the office.

2375. Is there only one place where it is posted? As far as I remember there is only one place where it is posted. There is a man at each gate and they could not get out.

2376. Would it not be wise to have several large copies of it posted in different parts of the building? It might be; there has really never been any necessity for that regulation, though it was made.

2377. If the number at present housed in the Liverpool Asylum were reduced to 600 healthy patients, and certain alterations which have been suggested by the Medical Superintendent in regard to verandahs were made, could there be any possible objection to their being so housed? Certainly not. My only objection is that you would be keeping up an unnecessary additional management cost, and if you keep 500 or 600 healthy patients there, you deprive the general institution of the value of what their services might be on this large area, which I think would be very considerable.

2378. But at present you utilise the labour of some of the healthy inmates? To a certain extent.

2379. On the farm at Glenfield? To a certain extent; it is proposed to abolish amongst other things the Glenfield farm.

2380. What do the old men receive in the shape of gratuities for the work they perform on the farms? It varies. They are on the farms and in the workshops. They go from 3d. to 1s. a day.

2381. Do many receive 1s. a day? Very few; in fact, I think those payments ought to be cut down. I did it once, and there was a great row about it.

2382. What was the total amount paid last year in that way? About £3,000. I think it should be reduced to £1,000.

2383. That was paid for work done in the shape of gardening, and so on? Yes; also for cooks, washmen, making boots, carpenter work, tin work, and so on.

* NOTE (on revision):—I find that in February of last year the Liverpool Council alleged in papers, which are at the Chief Secretary's office, that cancer patients were allowed to walk about the streets. The statement was then fully reported upon by Dr. Beattie, and found to be an error, and the Council were so informed.

- S. Marted,
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2384. Are you sure that the gratuities earned in that way are not spent in the public-houses of Liverpool and other places? That was one reason why it was cut down.
2385. Is not that the case? I do not know that it prevails to any great extent now. It used to be so at Liverpool, because I have seen the people in the public-houses, and that was one of the reasons for cutting down the gratuities.
2386. *Mr. Black.*] I thought you said they could not get out? The workmen get certain leave. A man after getting his month's pay asks for three days' leave. He saves his gratuities, takes his discharge, has his spree out, falls ill, and has to come back again.
2387. *Mr. Davies.*] The same men come back? Yes, in many cases. We have substituted extra allowances of tobacco and tea for money.
2388. Are you not altogether opposed to money gratuities? Yes.
2389. You state that you know of no objection yourself to Liverpool? Except the one I have mentioned. You will be unnecessarily paying additional management cost, and herding a lot of healthy men whose services you cannot very well utilise.
2390. Do I understand you to advocate the abolition of the asylum at Liverpool, and the abandonment of the buildings there? Yes.
2391. *Mr. Lee.*] When Sir George Dibbs brought this matter under your notice in 1893, I believe the action he authorised was the reduction of the overcrowding in Parramatta? Yes, that was the commencement of this matter.
2392. Some time after that it would appear that an idea had arisen that it would be a good thing to concentrate these people;—how did that idea come about? I had that idea two or three years before.
2393. But inasmuch as very little was done to lessen the overcrowding at Parramatta, will you explain why you then suggested a general scheme of concentration? Because I believed it to be the best way of dealing with these people. I did not act upon my own opinion only. Except in regard to matters of administration, I never take a single step without being well advised professionally.
2394. At all events you take the responsibility of having recommended that these people should be concentrated? Yes; that is, to be scattered in separate institutions on the one estate.
2395. You recommended that for several reasons—on the ground of efficiency and economy? Yes; and the greater comfort of these people. It would give us better control. I notice that some of the witnesses have stated that they do not believe in this scheme, but they have given no reasons for it.
2396. Before you took upon yourself the recommendation to the authorities of this system, you consulted what you call your medical staff? Yes.
2397. Are they not medical men in charge of the separate institutions? Yes.
2398. Those are the only people you have consulted? And Sir George Dibbs, who went there and judged for himself.
2399. Is there any one of these medical officers who has ever seen in any part of the world a system of concentration or dealing with paupers on a large scale? I should say Dr. Beattie has.
2400. Have not these medical men been in these colonies a number of years? Within the last seventeen or eighteen years Dr. Beattie has paid quite a dozen trips to England. He has paid one trip to England since he has been medical officer.
2401. In dealing with a matter of this extreme importance to the country, how is it you did not take into consultation the medical officers of the Government of the highest standard, such as the Medical Board, the Board of Health, Dr. Manning, and men of that stamp, who have given these matters their special consideration? That is not my business. If it had been desired, in the first instance, that that should have been done, my suggestions would have been forwarded from the Chief Secretary's office. In the usual course the plans and that report would have gone on—if they had not reached this Committee—to that Department before coming to this Committee.
2402. As a whole, you do not approve of the scheme as submitted on the plan? I approve of it, except in regard to the ophthalmic, cancer, and consumptive hospitals—they are too close. I should like to see them placed on the proposed site of the Medical Superintendent's residence.
2403. Then, as a matter of fact, there is a scheme before the Committee which you, in its entirety, do not approve of? I do not approve of it as a whole.
2404. I presume if the Committee had not been in existence that scheme would have been carried out? Possibly it would, or it might have been referred back to the Chief Secretary.
2405. Will you tell the Committee why you propose to concentrate all the paupers of the Colony alongside the main water supply of the City of Sydney? I do not consider there is any danger except with the consumptive people; and you have had better opinions than mine upon that point.
2406. You do not consider that there is any danger of infection? There is no infectious disease there.
2407. There are medical authorities who differ from you on that? It is not on the evidence.
2408. Your reply is that you do not consider there is any danger from polluting the water? I do not consider there is any danger.
2409. And you have never had the opportunity of consulting the Board of Health or the highest medical officers of the country as to whether there is or is not any danger? I have not had that opportunity.
2410. And, as a matter of fact, the proposal is to be carried out without that inquiry being made? Without that inquiry being made.
2411. You are also aware that, with that proposal, as originally submitted, there was no provision whatever to deal with the sewage matter in the asylum? No; as far as I know Mr. Vernon did not submit any proposal.
2412. As you have made yourself responsible for the concentration of these people at Rookwood, did you not take into consideration the prime question of drainage? That is not my business—that is the business of the Government Architect's Department.
2413. But you are the father, as it were, of the idea, and surely you have taken into consideration all these matters before committing yourself to the proposal? I answered yesterday that on the occasion of Sir George Dibbs' visit the Government Architect had to deal with the question of drainage, and I was assured there would be no difficulty whatever in connection with it.
2414. Whether there would be an actual danger of the pollution of the water supply or not, do you think you would ever disabuse the mind of the public that the water would be free from such pollution whilst the whole of the pauper element of the country would settle on the land? If you took the consumptive people away I think you would.
- 2415.

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2415. How would the removal of the consumptive people a few roods away from the proposed position affect the matter? You have had Dr. Ashburton Thompson's opinion upon that point. He says that if you take them a quarter of a mile away there is no danger.

2416. Less danger? No danger.

2417. Is it a reasonable provision to put this contaminating disease so near the water supply which supplies so many thousands of people? It should not be so close, there is no doubt about that.

2418. Should it be there at all? Of course, if there is no danger there can be no harm in its being there.

2419. Have you considered the question of treating a portion of our paupers in their own homes? Yes.

2420. What is your opinion about that? I should like to see it done.

2421. Of course it would only apply to such cases as those who have homes, but who are in indigent circumstances? Yes; the only objection, I think, would be on the ground of expense.

2422. What would be about the difference? I should not think a man could live under 15s. a week.

2423. Are there not married couples living on 15s. a week at the present moment? I know there are, in the mining district of Newcastle, on a good deal less, unfortunately.

2424. But under the charities of the country? Not that I know of.

2425. At all events you think that that is a phase of the question which might fairly be considered? Yes. If you have noticed the class of inmates of these institutions you will have seen that a great number of them, unfortunately, could not be dealt with in that way. Some few years ago I asked the inspectors of the State Children's Relief Department, when travelling about the country, to see if they could get the farmers to take these old fellows at so much a week, but they would have nothing to do with them. The English Charity Commissioners have just been dealing with this question, and this is what they say:—

These two forms of relief, namely, almshouses and pensions, are well fitted to meet the needs of the poor in old age; and it is unnecessary here to enter further into the question of their comparative advantage, than to say that while, on the one hand, an almshouse, in which proper supervision and attendance are available, seems to be best fitted for the relief of those who have no relatives capable of rendering them assistance, or who are wholly disabled, relief by means of pension on the other hand, gives more scope for the care of the aged poor by their families, and for enforcing those obligations to contribute to the support of relatives, the fulfilment of which is an obvious condition of all relief.

It is proposed there to confine it really to people who have families. I should propose to extend it very much beyond that if it could be done.

2426. In view of the peculiar circumstances of the housing of the poor in the colony at the present time, would you favour the concentration in different localities of small numbers? I do not believe in that. There would be the difficulty of management, the difficulty of oversight, and the very much greater expense.

2427. Would you favour the erection of suitable hospitals for cancer, ophthalmia, and consumptive patients in some country place within easy reach of Sydney, where the whole of that class of patients could be housed, and the housing of the more able poor in the existing institutions outside the town of Liverpool? Do you mean in the institutions we already have?

2428. Existing, but excluding Parramatta? In reply to the first question my answer would be yes. In reply to the second it would be no.

2429. Are not the buildings at Liverpool in a good state of repair? Yes.

2430. And could not they be utilised for many years to come for the able poor? Undoubtedly. I have stated that the only objection I have is not on account of the buildings at all.

2431. But you are strongly of opinion that the chronic sick should be removed? Yes.

2432. And you are strongly in favour of the erection of chronic hospitals in some remote place away from population? Yes.

2433. Your greatest trouble at the present moment are the Parramatta Asylums? Yes.

2434. You are of opinion that the removal of the men from both of these is very urgent? Yes.

2435. Is there any building you know of which could be used temporarily for housing the Parramatta poor until such time as buildings might be erected? Not unless Mr. Davies would lend us the Randwick Asylum.

2436. But is it suitable? You could put about 600 healthy men there.

2437. What would it cost for repairs? For healthy men not very much. But at one time it was proposed to make it a chronic hospital, and Dr. MacLaurin estimated it would cost from £10,000 to £11,000 to make it suitable.

2438. Have you any objection to it as a temporary asylum for the more able poor? No.

2439. In addition to Macquarie-street and George-street you have some buildings at Harris-street? Yes.

2440. At what rent? £270.

2441. Do you pay rates? I think we are exempt.

2442. Were those buildings rented at your suggestion? They were rented with my consent. We did not know what to do. They were taken as a sleeping place for the purpose of relieving the George-street Asylum. I had to stop admissions for nearly a month after consulting Dr. Manning.

2443. How many houses are there in that terrace? Ten, I think.

2444. A portion of which are devoted to skin diseases? Dr. Waugh uses one section of it for scabies cases.

2445. A most undesirable position for anything of that kind? Any place in the town would be an undesirable position; but no ill-results have followed. You probably rub against people in Sydney every day who are suffering from scabies, and you do not know it.

2446. But there is something even worse than that about those buildings—the filth and drainage which finds its way into the gutters of the main streets? There is no filthy drainage from those places. All the clothing and dressings and so on are burnt. Of course, I cannot argue for a moment that the place is suitable—it ought to be shut up as soon as possible.

2447. Supposing the whole of these asylums in Parramatta were emptied, what would you suggest should be done with the buildings? The buildings, unless they could be used for some factory purpose, would not be worth very much.

2448. Do you not think in the case of the Macquarie-street buildings they ought to be burnt? They ought to be destroyed, undoubtedly.

2449.

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2449. The George-street portion might be used for some other purpose? Yes; for some factory purpose.
2450. The position you have suggested at Rookwood is about sufficient to carry the existing poor? Yes.
2451. In the event of the numbers increasing, and as pressure is brought upon you in a few years' time and the Parramatta Asylums are vacant, do you not think you would be likely to use them again? Not if I can prevent it—at any rate never the Parramatta Asylums.
2452. You would never willingly go back to them? No.
2453. Have you any suggestions to make by which you can obtain some place at the present time to which these people can be removed? There is no other place I know of excepting the Randwick Asylum.
2454. You have made reference to the numbers who come to the institutions from the country hospitals and asylums;—I understood you to say that the hospitals were endowed? They get subsidies.
2455. For the purpose of treating these cases? Yes.
2456. Would you not qualify that statement by saying "by taking them into the hospitals and treating them whilst the proper authorities were obtaining their admission to the benevolent asylum?" No. What I want the Committee to understand is this—that people are taken into the country hospitals to be cured, and they are subsequently sent on before they ought to be discharged at all. I have had people sent from these places on more than one occasion who have been in such a state that they have died as they got into the asylums. In several cases I have had inquests held.
2457. What is your opinion of the pavilion as against the two-storey system? I like the pavilion system best, because of the infirmities of the sick. It enables them to get outside.
2458. Could not suitable two-storey buildings be erected at less cost? I do not think so. You would have staircases and so forth in a two-storey building.
2459. Take one of the two-storied buildings at Newington;—what objection could there be to a building of that kind for healthy people? Of course it can be used for healthy people.
2460. Surely it must be less expensive? I do not think it is; but I do not think there is much difference.
2461. Could you not adopt a varied system—partly two-storey and partly pavilion? It might be done.
2462. There is no absolute necessity to have the whole of the buildings on the pavilion system? No. If you thought proper you might have the casuals in the two-storey buildings.
2463. You propose to erect what appears to me to be very expensive buildings for the casuals? Those buildings are, in my opinion—I say this with great diffidence—really too good. I never contemplated that there should be hollow walls. I know, of course, it is best; but I wonder how many wealthy families have hollow walls to their residences.
2464. You think something less expensive would do? I think the £70,000 on the Estimates ought to cover the whole thing.
2465. Ought it not to be made sufficient? It ought. Look at the class of buildings at Newington. There is a pavilion there which cost £1,000 only, which is good enough for anything. It is of wood, certainly. I am sure that £200 more would have made that brick.
2466. How many does that pavilion accommodate? Sixty. I understand the objection to single walls is that the buildings are likely to get damp from the outside. There are 10-feet wide verandahs around these places. We have a brick pavilion at George-street of 9 inches thick, and the weather side is exposed, and it is never damp.
2467. It would be impossible for any brick wall to get wet under a verandah? Undoubtedly. Of course, I can understand that the Government Architect's Department like to have buildings which do them credit.
2468. But the Committee are anxious to know your opinion;—they have a proposal before them which represents really a first-class dwelling house? Yes; it is too good altogether. I say that £70,000 ought to be quite sufficient, and it ought to be made sufficient.
2469. You are acquainted with the proposal of Mr. Davis to drain this place? Yes.
2470. Mr. Davis's scheme is estimated to cost £8,435? Yes. He says that can be reduced by £3,000 if you put the casuals further north.
2471. But even if that system is adopted it will require competent men to work it? The whole cost is taken into consideration, and that would actually cost less to carry out than what we are paying the Parramatta Council to take the night-soil from the two institutions.
2472. What are you paying at Parramatta? £632 17s. per annum.
2473. Unless the sewerage system is carried out your suggestion would fall to the ground? Yes; but that is provided for. It is a most important factor, no doubt, and Mr. Davis's report shows clearly how it can be done, and at a very low cost.
2474. Supposing it is not found feasible to put the whole of these people there together, what is the next best thing to do? You must take them away from Parramatta, and if you do not put them at Rookwood you must build somewhere else for them, and I am not at present prepared to name any better site.
2475. *Mr. Fegan.* A witness named Taylor, from Liverpool, states that whilst he was in the council he sent you a petition on behalf of the inhabitants of Liverpool for the removal of the asylum;—did you ever receive that petition? No; it is not on my records at all. If I had received it it must have been on my records.
2476. Can you vouch for the inaccuracy of his statement? I did not receive the petition.
2477. Have you heard recently any complaints of the scenes which are alleged to take place in Liverpool and in the hotels, owing to the misconduct of the inmates in the asylum? I have never heard of any annoyance of that kind. Of course when people are discharged from the institution they are beyond my control.
2478. Is it not one of the latest recommendations of medical authorities that buildings used for hospital purposes should have hollow walls? Yes, for general hospital cases of course, but my asylums are not for such cases.
2479. Because these people are poor is it any reason why medical investigations should be ignored in the building of places to house them? Certainly not.
2480. Do you not think it is better to have hollow walls in connection with your hospitals? I will tell you why I do not think it is necessary. These are not ordinary hospital patients, except in Group 4.
2481. Would it not be necessary in regard to Group 4? Undoubtedly it would be better.
2482. Is the expense to be considered before the welfare of the unfortunate patients? I should be sorry to consider the expense if the comfort of the inmates was in question.
2483. You have seen places with verandahs to them which became damp from the soil? Yes; but if you run a damp course in, you stop that.

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2484. The soil at Rookwood, however, would be worse than sandy soil for damp? Undoubtedly.
2485. What is the difference in expense between a hollow and a solid wall? I have about two or three different estimates. It has gone from £80 to £150.
2486. Are not the hollow walls much cooler than the solid walls? Of course you can keep a more even temperature.
2487. And is not that necessary with sick people? Yes; but the majority of these people are not sick, except in Group 4.
2488. Then you would recommend hollow walls for the Group 4 hospitals? I see no objection to them.
2489. You were asked yesterday whether you recommended to the present Government the necessity for making provision for the better housing of the people under your charge, and I believe you answered no? That is so.
2490. Does it not strike you that the submission of the plans to this Committee shows that the matter has been recommended to the present Government? What I wished to convey was that I had not made separate recommendations to this Government. The matter has been going on for the last four years, and the papers are always reproduced.
2491. Then this matter must have been brought prominently before the present Government? Undoubtedly; I know it was the most earnest desire of Mr. Brunner to give this better accommodation.
2492. You do not agree with the plans as they are placed before us? I do not agree with the sites of Group 4. The medical officers are responsible for those sites.
2493. In the majority of cases you have women as superintendents? I am changing that system. We have not got it in the majority of cases just now.
2494. You have it at Liverpool? No.
2495. The matron there is really the person who gives orders? No; Dr. Beattie is the Managing Medical Superintendent. Every paper is dealt with by him. Mrs. Burnside and her daughters simply attend to the domestic comfort of the inmates.
2496. For a long time she was the head? Not in my time, at any rate.
2497. You have a matron at the head of George-street Asylum? No; Dr. Waugh is the head, and under him there is an assistant male lay superintendent. The place used to be in charge of a matron.
2498. What about Macquarie-street? That is under Dr. Waugh, too. That was under a matron also.
2499. But Dr. Waugh cannot be present at both places; he only lives at one of them, I suppose? He lives close by both of them.
2500. Who is responsible in his absence? A woman.
2501. Do you find her administration in his absence all that can be desired? She is an exceptionally able woman. Nevertheless, I am changing the system.
2502. What are your reasons for changing? I do not believe any woman is capable of managing an institution of that character. I have never met the woman yet, at any rate.
2503. A man has more control? Men were in charge of these places originally, and when they died, their widows somehow or other got the positions.
2504. You have a woman at Rookwood? Yes; I may state that that is only a temporary arrangement.
2505. With reference to the nursing staff—are not women more competent nurses than men? Yes; I am introducing that system too. I have introduced it at Rookwood, and the reason for not doing it at the other buildings was that I had this scheme in view, and we would have had to erect buildings for the accommodation of the female nurses.
2506. Dr. Beattie has more than once pointed out that the nursing could be more efficient if it were done by female nurses? He has never pointed out that at all. He opposed that suggestion first when I made it, and afterwards he fell in with it.
2507. Has he not acknowledged by his evidence that women are more efficient nurses than men? Yes; of course we would have to have a fair proportion of both.
2508. Is there any truth in the statement that at Newington there are separate quarters allotted for what may be termed the pauper aristocracy? No; it is not a question of education. The sole qualification for inhabiting the separate quarters is good behaviour and nothing else.
2509. How many will that pavilion accommodate? Sixty.
2510. And you have 630 inmates at Newington? Yes.
2511. Do you mean to say that it assists the discipline of that institution by only having sixty beds in the pavilion for those who have been of good conduct? I have one pavilion used there for that purpose now.
2512. Do you mean to say there are only 60 or 100 well-behaved inmates there? No; but I hope the system will be very materially extended if it can be.
2513. Do you not think it is a dangerous system, inasmuch as it seems to cast a slur on the remaining portion of the inmates as ill-behaved? No; it is only carrying out the principle of classification which exists in all the English institutions, at any rate. I may say that in these institutions I have never met the educated poor who would not associate with the uneducated poor so long as they were decent men.
2514. With reference to the difference in the cost between a pavilion and a two-storied building, you have, I suppose, to erect staircases in the two-storied buildings, and to have a second floor? Yes.
2515. And double roof? There is the roof and foundation.
2516. You would not make the foundation as great in the pavilion as in a two-storied pavilion? It would not be necessary. Mr. Vernon has stated that the cost is slightly in favour of the pavilion system. I do not think there is any practical difference.
2517. You believe that the pavilions would be more easily managed than two-storied buildings? Yes. A man might easily govern four pavilions. He cannot always be running up and down stairs.
2518. Then you are of opinion that the pavilion style of buildings for the decrepit is the best? Yes.
2519. Have you not thought of any other site for the hospitals? No; I understood the matter had been placed in the hands of Dr. Ashburton Thompson, and I did not suggest any.
2520. Could you suggest any other site? There is a site a portion of which, I think, might be made suitable, and that is the Glenfield Farm, about 1½ miles beyond Liverpool. It is close to the railway line.
2521. What kind of patients have you there? The convalescent patients from Liverpool; and we have the dairy there.
2522. What progress do they make there? Very good. It is a particularly healthy site, a very healthy place, and a very pretty site.

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2523. And in the event of Group 4 not being added to this scheme, would you suggest a portion of the Glenfield Estate for them? It would be very suitable. It is a good undulating estate. The soil is good.
2524. Where would Glenfield drain to? I think it would drain into George's River, and, of course, that would not do. I did not think of that at the moment.
2525. Under those circumstances you could not arrange for the hospitals to be there? No.
2526. Some of your medical officers do not give you credit for asking their opinions on this matter? No; but I hope I have made the minds of the Committee clear from the independent evidence I have handed in. I may state that Dr. Waugh says that he was never on the site at all, and yet on the 12th December he was there with six of us. I do not believe he made that statement deliberately.
2527. I suppose a great deal of your tailoring and shoemaking is done in these institutions? Yes.
2528. Who is the contractor for clothing? It is provided in different ways. Most of the boots are now made by our own men on the spot. We get shoemaker inmates, and pay them so much a pair.
2529. I suppose that of the 3,000 people you have to deal with there are very few who are not bound by your regulations? Very few.
2530. How many court cases have you had from your institutions? I suppose that during the eight years I have had charge of them, not more than a dozen altogether.
2531. *Mr. Hassall.*] The hospital and general pavilions are estimated to cost £1,400 each; the casual pavilions are estimated to cost £800; is there an absolute necessity for such a difference in cost? Yes. I should have liked to have seen the casual hospitals made better. I think £1,200 a pavilion would be a fair average cost. Of course I do not take into consideration the ophthalmic, cancerous, and consumptive patients.
2532. Are you aware that in that estimate it is proposed to spend £14,000 in kitchens and laundries? I think they can be done for less.
2533. It is proposed to erect Medical Superintendent's quarters at a cost of £2,000; do you not think that is an elaborate proposal? It is too much.
2534. And it will increase, in a marked degree, the cost per head of the patients treated? That has never been taken into consideration; but it ought to be.
2535. The proposed cost of these buildings is £108,000? Yes.
2536. The cost of the land itself is £15,000? I have not the slightest idea what the land cost; but it is worth that at any rate.
2537. Then there is £8,000 or £9,000 to be added for the sewerage scheme? And of course you have to take into consideration the cost of the buildings already there. Buildings worth £25,000 have been there to my knowledge for thirteen years.
2538. I presume the buildings and land up there would bring it up to £150,000? With the £70,000 and the buildings already there, it would come to £100,000. Then you have to add the value of the land.
2539. Can you give any explanation of the remarkable increase in the number of patients during the last ten years? No.
2540. In 1886 there was a total of 1,768, and in 1896 there were 3,540? I have not worked out whether it is largely out of proportion to the increase of population. A very large increase has been in the chronic hospital cases.
2541. You say you have tried the boarding out system? I asked the inspectors of the State Children's Department to see if they could get farmers to take these old fellows at so much a week, but they would have nothing to do with them. Whether in the poorer circumstances of some of them they would take them now, I do not know.
2542. If that system could be initiated, would it not be a great relief, and a much cheaper way of dealing with these old men? It would not be cheaper. We keep them now for 10d. a day.
2543. *Chairman.*] Does that include the cost of the buildings? No—management, salaries, clothing and so on.
2544. *Mr. Hassall.*] Is the £3,000 you pay away to these old men included in the cost of management? Yes under the head of salaries and wages.
2545. You are of opinion the amount should be reduced to £1,000? Yes, and in process of time I hope to abolish it altogether.
2546. What necessity is there for giving these men wages at all? We have to put them to work. Otherwise we should have to employ large numbers of people outside.
2547. Do you not think, in view of the protection which these asylums afford them, they should give some little return if they are able to do it, leaving of course, the monetary consideration out of the question? Undoubtedly.
2548. It has been stated that by reason of the payment of this money to them, they get out into the town, get intoxicated, and become a public nuisance? They do undoubtedly go on the spree occasionally when they leave.
2549. If you remove the cause, you would do away with the effect? Undoubtedly.
2550. I notice that in 1893, the sum of £66 0s. 6d. was collected from the relatives of inmates, and in 1894 £121 13s. 8d. Is it not a well-known fact that the relatives of many of the inmates are in a position to maintain those inmates if they were compelled? I am sure of it.
2551. And your opinion is that the only remedy for that is legislation? Yes.
2552. I see that as far back as 1887, Dr. MacLaurin furnished a report on the Randwick building, and suggested the advisability of removing the children from that institution and using it as a chronic hospital? Yes.
2553. There is no doubt there would be strong objections to that being turned into a chronic hospital? Yes.
2554. And you think a more suitable place could be found? Yes.
2555. Would not that be a good place to send some of the aged men to who were not suffering from disease, but who were merely in a state of senile decay? The buildings are suitable enough for the healthy old men who are able to get up and down stairs.
2556. The land at Randwick is very valuable? Yes; and they must have over 100 acres of it.
2557. Do you think the sale of the Randwick site would give the Government a large sum of money? Yes.

2558. Which would go a considerable way towards the cost of erecting a building elsewhere? Yes. I think I could board the children at Randwick out in three days. Certainly a large number of them would go to their own parents. The Randwick Asylum has a reserve fund of £50,000, which was contributed for the purpose of keeping a certain class of children, but there are not many of that class of children in the institution now.

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2559. I gather that you are not absolutely desirous of seeing these institutions established at Rookwood in preference to upon any more suitable site? Not if there is a more suitable site. You have now the nucleus of the scheme there. You have a large number of buildings there now, and if you go elsewhere you will have to remove those buildings. You cannot use them for any other purpose.

2560. You suggest the removal of the Liverpool Asylum altogether? Yes; that falls into the centralisation policy.

2561. Also the Parramatta Asylums? Yes.

2562. Their removal is more urgent? Yes.

2563. You think that by the concentration of these establishments, economy in administration will be effected? Yes.

2564. And that £70,000 for the purpose of providing accommodation is amply sufficient for all requirements? Yes.

2565. *Mr. Black.*] Do you think, in view of the character of the buildings at Liverpool, their original cost to the country, and their present state of repair, it would be advisable to close those buildings as an asylum? I do, if you save money by it. I understand it is proposed in any case to remove the sick from there. I do not give that as my prime reason.

2566. Do you think any sum, which you imagine may be saved by the concentration of the indigent poor at any site, no matter where, would be likely to repay to the Government the cost of buildings as substituted for those at Liverpool within any reasonable period? The statement I have put in shows clearly that you can pay the interest on the loan, and save £1,400 a year besides.

2567. Do you think if the buildings at Liverpool were closed the site could be readily sold? I do not see what you could sell it for.

2568. Do you attach no importance to the statement of Dr. Renwick with regard to concentration—that when you mass large bodies of poor people together the unit, just as in the case of the individual in gaol, or the man in the army, is lost sight of, and the individual becomes a mere number, who is not much regarded, except that he goes to make up the sum of the whole? I think Dr. Renwick must have been under the impression that we were going to concentrate them on the same principle as they are concentrated now at George-street, and not to place them in separate institutions on a big estate.

2569. With regard to the matter of drainage, it appears to me you have somewhat misunderstood Mr. Davis's remarks with regard to a saving which might be brought about by altering the proposed site of the buildings. I asked Mr. Davis if the buildings were moved from the site which was near Potts' Hill to a site so much nearer Haslam's Creek, it would reduce the cost of the drainage by one-third, and he said, "Scarcely, because the disposal of the works would not be reduced in the same proportion." It appears to me that Mr. Davis thought the cost would be reduced, firstly, because under the present system there would be a sewer of two arms, which would meet at what was called the disposal works, where the sewage would be treated, and that if the buildings were all massed to the northern side of the existing buildings only one arm of the sewer would be necessary. But in your report I see you say you are surprised, notwithstanding your representations that the whole of the buildings have been placed on an area of 64 acres, whilst the estate over which it was proposed they should be scattered comprised nearly 600 acres. If you proposed to scatter those buildings so widely, the saving, which Mr. Davis appears to think would arise from the fact of centering the buildings to the north of the present site, would be a very problematical one. He also made the statement that the sewer work at Rookwood would be expensive, because of the buildings being so much scattered. That expense would still be maintained, because you evidently believe that sanitation and other reasons demand that if the paupers are concentrated at Rookwood, the site of the buildings in which they are housed should be scattered? I will take his first full cost, and it only then means an additional £120 a year interest to the figures I have presented to you to-day. That only means £70 or £80 more a year than we are already paying the Parramatta Council for taking the stuff away from the two institutions.

2570. Is it a fact that at one time it was the custom to pay the inmates able to perform daily labour in connection with the institution amounts of 3d. and 4d. a day in return for their work? Yes.

2571. Is it a fact that that system has been almost discontinued at Liverpool? It is very largely modified. I have stopped a great deal of it.

2572. I have a letter here from the *Australian Workman*, which I believe is written by an inmate of the Liverpool Asylum, in which he states that one-third of the amount formerly distributed among the healthy poor at Liverpool is now saved, because of the reduction of the gratuity, and that in place of money, they get tobacco and so on. Is that true? Yes.

2573. The writer goes on to say that the objection of the aldermen now arises from the fact that men, who had at one time the sum of 3d. and 4d. a day to spend after their own fashion, have not now that money to spend, and consequently the tradesmen in the town do not derive that profit from the institution which they previously did? I could not tell whether that is so or not.

2574. You do not think that is one of the reasons for the aldermanic activity with regard to the removal of the asylum? I should be very sorry to think so.

2575. If it were proposed to house all the healthy together, and all the sick together, you would then require to hire nurses, cooks, and attendants to wait on and cook for the sick poor who are housed in isolated positions? Yes; I handed in a summary of the scheme to the Chairman with the figures attached to it.

2576. I suppose that additional expense could be got over by detaching a number of the healthy poor from their companions in misfortune, and allotting them to the work of attending on the sick? That is done now. That is part of the scheme. For instance, we would not want trained nurses in Group 2.

2577. So that if it were proposed by this Committee to house a number of the healthy poor at Rookwood, and a number of the healthy poor at Liverpool, and all the sick people on some other site, you would still consider it advisable to detach from the healthy poor a sufficient number to perform some of the menial offices required by the sick? Yes.

2578.

S. Maxted, 2578. Have you read the evidence of Dr. Violette? I read it at an early stage.

Esq. 2579. Look at page 48, Question 1303—

Mar., 1896. If you have three asylums with 1,000 inmates in each, if you do away with them and group them into one asylum, do you not think that the man who has to manage and superintend any one of those asylums would be competent to manage the amalgamated institution? He would want more assistants.

But in saving the salaries of two superintendents, would there not be a great deal of money saved? More assistants would be required. You would save a few pounds; but nothing considerable.

? That is incorrect.

2580. You think there would be a greater saving? There would be a saving of £4,200 in salaries alone.

2581. In thus concentrating all the patients, you would not be able to save more than one medical officer? Yes, one.

2582. And one dispenser? Yes; you would. You could get an assistant medical officer, who would be able to do the dispensing with assistance.

2583. You think, then, that one chief medical officer, and one assistant medical officer, who would also dispense the drugs, would be sufficient for the whole concentrated pauper sick? I have no doubt whatever about it.

2584. You would also save the wages of two superintendents? Yes.

2585. That would involve the engagement of deputy or under-superintendents? Yes. I provided for a lay superintendent, for a chief medical officer, and an assistant medical officer.

2586. Would not your proposal to substitute in many instances paid women nurses for male nurses, who are now chiefly healthy inmates, somewhat increase the cost of your proposed scheme? We have a good many male trained nurses at present.

2587. I understood you to say you proposed, in many instances, to substitute women for them? Yes; and it would rather lessen the cost.

2588. Are these male nurses paid the ordinary wage of hospital nurses? Yes; some of them are paid very good salaries—as high as £35 a year with board and lodging, or a rent allowance of £12 and a ration.

2589. Are you not of opinion that the clayey soil of Rookwood, its tendency to hold damp, its exposure to extreme cold and extreme heat, render it an unsuitable site for consumptive cases? For consumptive cases. I do not want the consumptive cases there at all. I have said that all along. I want to get rid of them. I have said, too, that I should be very glad if the cancer cases could go to the Coast Hospital. The only objection to that is the cost.

2590. Otherwise you approve of the concentration scheme? Yes; I am strongly in favour of it for the reasons I have given, and I have seen no reasons yet given against it.

2591. You have no site you would specially recommend for the consumptives? No; I have not had occasion to think that question out.

2592. You are aware that the Glenfield Farm is a leasehold? Yes. Of course you could resume any quantity of it you wanted.

2593. And that the lease expires in June? Yes.

FRIDAY, 6 MARCH, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.

The Hon. JOHN DAYLES, C.M.G.

The Hon. JAMES HOSKINS.

The Hon. WILLIAM JOSEPH TRICKETT.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Erection of Buildings at Rookwood for Infirm and Destitute Persons.

Edward Bellingham Price, Esq., M.I.C.E., Assistant Engineer, Department of Public Works, sworn, and examined:—

E. B. Price, 2594. Chairman.] You visited the site near Campbelltown? Yes; on three occasions.

Esq., 2595. Mr. Lee.] On one occasion you were present on the visit of the Public Works Committee? Yes; M.I.C.E. on the second occasion I was there with them.

6 Mar., 1896. 2596. You are thoroughly conversant with the contemplated position of the buildings? Yes.

2597. And the nature of the soil? Yes; it is light sandy soil.

2598. And you have devoted special attention to the question of a water supply combined with electric lighting? Yes; I find there is a very good supply to be obtained from the George's River. I examined the river on three different occasions—the last time accompanied by Mr. Scrivener, the District Surveyor.

We found that the river consists of a chain of water-holes with rapids and falls between. One of the water-holes is a very large one—about 1 mile long with no fall. At the lower end we found a very good site for a dam. The river there is confined between two large sandstone rocks, about 25 feet high, and the water is only 40 feet wide at this spot. It is an admirable site for using an arched dam. By using an arched dam, you reduce the quantity of concrete by more than one half, and the dam is really stronger. The advantage of that site is, not only that the dam will be very cheap, but that it will impound a great quantity of water. I estimate that a dam which will raise the surface of the water 25 feet will back it 2 miles. I took out the quantities, and found that a dam could be constructed of concrete for a little over £1,000. The pond which that would make would hold about 180,000,000 gallons—more if anything. That would provide 1,000,000 gallons a day for 180 days, supposing the river ceased to flow. The river has never been known to cease to flow yet, so that it would be a sufficient amount to allow for storage. It would be sufficient to pump 100,000 gallons a day up to the asylum, providing the power and water at the same time. The height to which the water would have to be raised may be taken at about 280 feet—that is from the mean surface of the water in the river to the top water-level in the service reservoir. These are only aneroid levels, but they have been carefully checked.

2599.

2599. What will be the height of the reservoir? The height above sea-level is about 465 feet, and the height of the proposed site for the asylums is 390 feet. That would give a pressure of 75 feet from the surface of the water in the reservoir to the surface of the ground at the asylums, which would be sufficient to command a three-storey house.

E. B. Price,
Esq.,
M.I.C.E.

6 Mar., 1896.

2600. Would be more than sufficient to command a roof of a two-storey building? Yes; I do not think a two-storey house would be over 50 feet high to the top of the roof. We should have 25 feet to spare. It will only be a short pipe, and there will be ample pressure. I have prepared an estimate of the cost of the scheme as follows:—

PUBLIC WORKS DEPARTMENT.

Abstract of Estimate for Water Supply for Asylums proposed to be built near Campbelltown, including power for Electric Light.

Description of Work.	Quantities.	Rates.	Amount.	Total.
		Per c. yard.		
		£ s. d.	£ s. d.	£ s. d.
Dam, concrete arch, 100 feet radius, 30 feet high, 4 feet wide on top, 8 feet at base.	600 yds.	1 5 0	750 0 0	
Rock excavation .....	.....	.....	100 0 0	
Temporary dams, &c. ....	.....	.....	150 0 0	
Valves, &c. ....	.....	.....	50 0 0	
15-inch steel main to turbine	660 yds.	.....	600 0 0	1,050 0 0
Turbine power-house .....	.....	.....	.....	600 0 0
Turbine pump and gearing .....	.....	.....	.....	250 0 0
Engineer's cottage .....	.....	.....	.....	300 0 0
Rising main, 6-inch steel	660 yds.	.....	.....	300 0 0
Service reservoir (concrete), capacity, 500,000 gallons .....	.....	.....	.....	1,300 0 0
Reticulation, 6-inch cast-iron	¾ mile.	.....	.....	600 0 0
Engineering and contingencies, 10 per cent. ....	.....	.....	.....	4,700 0 0
				470 0 0
Total cost of water and power supply .....	.....	.....	£	5,170 0 0
Add, for dynamos, wire, accumulators, and fittings, complete..	.....	.....	.....	1,000 0 0
Estimated total cost for water-power and electric lighting and electric-power for sawing firewood, chaff-cutting, churning, &c.	.....	.....	£	6,170 0 0

4th March, 1896.

EDWD. B. PRICE,
Assistant Engineer for Public Works.

2601. Do you think you have made ample provision to cover the whole cost of this work;—you propose to do a good deal—to get water, provide electric lighting, and surplus power? I have only allowed, in estimating for the electric light, for a population of about 1,000.

2602. That would be for two or three buildings. If you put the whole 4,000 people there at some future time you would have to add to that item? But I have provided in the water-power sufficient power for turbines, and I have allowed pipes large enough to supply power for over the 4,000. It would provide over 100,000 gallons per day for water supply and irrigation—that is sufficient for a population of over 3,000 or 4,000.

2603. Supposing, in the course of years, it were decided to increase the number of the people there, by about what amount would you supplement that estimate? I would provide another turbine, at a cost of about £200. That is all that is required. Also a small pump.

2604. And what about lighting? In connection with the electric light you would have to provide another dynamo and more wires and fittings for the extra buildings, which would probably come to another £1,000. With another £1,000 added to that, I think you could double the water supply and electricity. I have provided for a 15-inch pipe, but 12-inch is quite sufficient for present purposes. I have also made the dam 25 feet high, whereas 15 feet would be high enough at present. If it were to be a building to contain only 1,000 persons, I might provide for a 12-inch instead of a 15-inch pipe, and for a 4-inch instead of a 6-inch rising main.

2605. The increase is with a view to future extension? Certainly; to a population of 4,000 or 5,000.

2606. There is nothing to prevent an additional dam being built on the river, or this dam being added to? You can add to the height of arched dams without increasing the width of the base.

2607. What would be the cost of working that power? The principal cost would be the payment of an engineer to work the electric lighting plant. If it were only pumping water ordinary labour would do, but you would have to provide a man who understood electric appliances. If you provided him with a house free you would get him for £150 a year.

2608. And he could do all that was required without superintendence? Yes; because during the day he could leave the turbines working. They would require no attention, and he could attend to the overhauling of the electric fittings, and so on. He could pump all the water required in ten hours, and generate all the electricity in four hours or less.

2609. Can you tell the Committee anything as to the disposal of the sewage and effluent matter? The simplest way to dispose of it is to use that deep sandy area of 45 acres as a sewage farm. It is wonderfully well adapted for the purpose—in fact, the same seems almost of unlimited depth. In any way, if it is 4 feet thick it is quite sufficient; and it is well suited, because there are creeks at both sides at which the effluent would finally drain out.

2610. The effluent, after it made its appearance, would do so after it percolated through? Yes; it would have to percolate a great distance.

2611. Consequently it would be almost pure? It would be absolutely pure.

2612. To which of the creeks would it find its way? To Smith's Creek or to Peter Meadow's Creek.

- E. B. Price,
Esq.,
M.I.C.E.
6 Mar., 1896.
2613. Do they empty into George's River above the dam? Peter Meadow's Creek empties about 4 miles below the dam, and Smith's Creek a great many miles below.
2614. In time of flood the effluent might become surcharged, but it would certainly purify itself before reaching the river? Falling over waterfalls and travelling through sandy beds would purify it.
2615. Would there be any danger of that percolation contaminating George's River? Not the slightest. I do not think any chemist could detect it where the creeks met the river.
2616. On what basis do you estimate the capability of the sewage farm? In England, where these farms are used pretty generally, they allow a population as great as 1,000 persons to every acre. This is particularly suitable soil—it is much better than the average, and it would be quite safe to allow more. That 45 acres when properly cleared of timber, and with vegetables growing on it would completely purify the sewage of 50,000 inhabitants.
2617. Would the assistance of water from the surface reservoir, of which in your opinion there will be an ample supply for the purposes of irrigation? Yes. At first they could not supply enough sewage to irrigate all that land. The water supply from the river would not only make up the deficiency in the shape of water for irrigating that portion, but it would also supply water for irrigating other parts of the land suitable for fruit-growing and vegetables.
2618. The soil you say is particularly suitable, and being situated at a great distance from Campbelltown, it is not probable that any surface nuisance is likely to arise? It is utterly impossible. It would soak away so fast that it would never be seen again.
2619. Now as to the disposal of the solid matters? They would be entirely taken up by the vegetation.
2620. Is there enough land in the vicinity to admit of this stuff being disposed of, and the ground utilised? Yes, ample. All the land there is particularly suited to manure, it is light and porous and would be greedy of manure.
2621. Most of that large area is covered with eucalyptus? Yes.
2622. Would you suggest the destruction of that? No; a large area should be cleared. For instance, the irrigation area should be cleared to let the sun in, but the other area should be cut into belts. If a good belt of timber were left between the asylum and the irrigation farm, it would be a great prevention of any possibility of smells, and it would be a good shelter as well. I also think a belt of timber should be left between the George's River and the asylum.
2623. You suggest a judicious clearing? Yes; leaving it in belts.
2624. Do you know anything of the purity of the water in the George's River? I never had it analysed, but I do not see how it can be anything but pure. There is practically no settlement on the river.
2625. Of course you have to look a good many years ahead? I believe you could run sewage 10 miles above George's River, and you would get no trace of it lower down.
2626. *Chairman.*] In point of fact, the catchment area of the river is likely to be for all time very sparsely settled? Yes. Any good land that is about the river is on the other water-shed as it were. It does not drain into the river, but away from it.
2627. *Mr. Lee.*] You know the site which the Committee thought would be suitable for the buildings? Yes.
2628. What is your opinion as to the natural drainage of the storm waters on that site? It would be absolutely perfect. The site lies between two creeks running parallel—a branch at Smith Creek and Peter Meadow's Creek. They run parallel, and the proposed site is a rocky rise between the two. There is a 70-foot fall into the creeks on each side.
2629. Which would admit of natural drainage? Yes.
2630. So that in case of extremely wet weather that part of the country is not likely to become sodden? No; the ground is porous or very steep. The surface is so sandy that twenty hours after heavy rain it would be quite dry.
2631. Do you consider the position which is easy of access from Campbelltown? Yes; there are fair roads leading to it, and they could be improved by cutting off the tops of two hills.
2632. Then there would be no difficulty in obtaining supplies and removing patients to and from the asylum? None whatever.
2633. There is another point as to the situation of a cemetery there? I did look for a site for a cemetery, but there are plenty of sites about there which would be quite suitable—of sandy soil, and well drained.
2634. And which would drain into Peter Meadow's Creek? Yes.
2635. *Mr. Wright.*] What fall have you for your pipe-head? I have taken the 50 feet as the mean fall. I could have 60 feet when the river is in flood, and rather less in time of drought. I can depend on 50 feet.
2636. With a 15-inch pipe? Yes.
2637. The same fall with a 12-inch pipe would not work a Pelton wheel? A Pelton wheel is not supposed to be economical under 100 feet.

Sydney Maxted, Esq., Director of Government Asylums, recalled, sworn, and further examined:—

- S. Maxted,
Esq.
6 Mar., 1896.
2638. *Chairman.*] How do you account for the difference in the number of paupers in Victoria and New South Wales,—is there anything in the two systems which would account for it? We deal very largely in hospital cases here, and they do not there. For instance, they do not have cancer patients in the Government asylums, nor the consumptive or ophthalmic patients. That would make one difference.
2639. Would it account for the whole difference? No.
2640. Therefore, you have no definite statement to make with regard to that? No.
2641. The Victorian system deals with the aged poor separate from the sick poor? Principally separate from the sick poor.
2642. What is the Victorian system? Partly Government and partly voluntary. They are subsidised.
2643. And different asylums in different parts of the country? Yes; they have an asylum at Ballarat, and two in Melbourne—the Benevolent and the institution known as the Immigrants' Home.
2644. You approve of the whole of the paupers of the colony being concentrated on one site and not kept in various parts of the colony? Yes.
2645. With regard to Queensland, have you any explanation to make with reference to the apparent difference in numbers of paupers in proportion to the population? I know they do not deal as largely there

there with hospital cases, but that will not account for the whole difference. The cancer patients in Victoria cost £73 per head.

2646. How many out of the 1,000 in Group 1 may be regarded as permanent hospital cases? Quite one-third.

2647. You have seen the statement made in the first instance by Mr. Vernon with regard to the people to be accommodated in Groups 1, 2, 3, 4, and 5? Yes.

2648. That totals up to 3,300? Yes.

2649. Taking the same proportions, and regarding the number as 2,900, we get a fair approximate of the number? You would get then from 1,400 to 1,500 hospital patients.

2650. You told us that one medical man will be enough to look after 3,000 of the aged poor? Two medical men.

2651. You said one and a dispenser? A medical man and an assistant at £300 a year to act as dispenser as well.

2652. *Mr. Humphery.*] In reply to Mr. Trickett you spoke about a local rate to cover the cost of the maintenance of paupers;—how would you carry that suggestion out? The plan would be to have that matter dealt with under the Local Government Bill.

2653. I thought, as you had referred to a local rate, you had given the matter some consideration, and had devised some scheme by which it could be carried out? I have the schemes here of other places.

2654. Tell me how you purpose to apply it? I will read what I state in my report for 1890:—

Local rates to be chargeable for maintenance (wholly or in part) of all dependent persons transferred from their respective districts to Government asylums.

That is intended to apply only to special applications? Yes, to the subsidised districts which would improperly get rid of their poor. I do not mean a general poor rate.

2655. I called your attention yesterday to the fact that the group for casuals would be about half a mile from the nearest administration group of buildings, assuming your present suggestion be carried out? Yes.

2656. Will not that entail a separate service? It would entail having a separate kitchen, and somebody, of course, to look after it. That is provided for in the figures. That would not want much looking after.

2657. That would not increase the estimate of the cost of management at Rookwood? No; I have been considering the figures since, and I am perfectly sure I left a very considerable margin.

2658. The suggestion for the removal of the consumptive, cancer, and ophthalmic patients is not part of the scheme placed before the Committee? No; they are included.

2659. That is a new suggestion? Yes.

2660. Wherever they are placed, will it not be necessary to have medical attendance? Yes.

2661. Therefore the expenses incidental to providing for these particular patients would be additional to the estimate of £5,620? Of course it would bring about a reduction in this way: If you took them away you would only want one medical officer for the remainder of these people.

2662. Without an assistant? Yes; the greater part of his time would be taken up in attending to the isolation groups.

2663. After the removal of these particular patients, you would then have from 1,000 to 1,500 hospital patients? One thousand.

2664. Would not their presence at Rookwood necessitate a resident medical officer? It would.

2665. Would that resident medical officer be able to attend to the whole of the 3,000 patients without any assistants? He would not have 3,000 patients.

2666. But they would be under his care, although the majority of them would probably be healthy. The whole of them would receive his care if it were required? Of course, if they fell sick, they would receive his care.

2667. So that practically he would have charge of something like 3,000 patients, of whom from one-third to one-half would be inmates of the hospital wards? Not 3,000; he would have 2,500. There would be 500 casuals; 1,000 in Group 2; and 1,000 in round numbers, in Group 1.

2668. But you are making provision for about 3,300 patients, and must always keep that in view? Of course, if the institution expanded, you would want more medical assistance.

2669. Therefore, as a matter of fact, after the removal of the consumptive, cancer, and ophthalmic patients, you would really require a resident medical officer and an assistant to deal with 3,000, of whom 1,500 would be permanent hospital patients? I might answer that by saying "Yes," because if we did not have an assistant, we would require a dispenser at £150 a year. Of course, if you took away the three isolation wards, you would have to provide a distinct service.

2670. Now with regard to the comparative cost of the different asylums. What is the cost per head at Newington? £12 17s.; George-street, £13 16s. 3d.; Macquarie-street, £14 17s. 2d.; Liverpool, £15 19s. 4d. They are fairly close in each case, except in regard to the women, who are less. Rookwood is high—£22—for the reason I explained the other day. It will be lower this year.

2671. At Newington you have mixed inmates—inmates of all classes; healthy women, consumptives, and women suffering from cancer and rheumatism? Yes.

2672. Therefore, the £12 17s. may be taken as a fair estimate of the cost of economically managing an institution of from 600 to 700 patients? Yes.

2673. Do you consider that a high or a low cost? I think it is an exceedingly low one, considering you have all the other hospital cases there.

2674. Do you expect to do better than that at Rookwood? If this scheme is carried out in its entirety I expect to do it at about that.

2675. Including all expenses, do you expect to maintain the inmates at Rookwood at less than £12 17s. 6d. per head? At £12 per head, I should say.

2676. At Parramatta you have two doctors? One—Dr. Waugh.

2677. Have you not Dr. Brown as an assistant? No; Dr. Brown is the visiting medical officer to the Newington Asylum.

2678. Do you propose to dispense with Dr. Waugh, supposing the institution is removed? One of them will have to be dispensed with, of course.

2679. He is at present the manager of 1,500 patients, besides being medical officer? Yes.

2680. And you propose in his place to appoint a lay superintendent at Rookwood, at a cost of £400? Yes.

2681. Where will the saving be effected in regard to that particular item? We have an assistant superintendent who helps Dr. Waugh now pretty much at the same salary. 2682.

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- S. Maxted,
Esq.
6 Mar., 1896.
2682. Would you dispense with him? No; probably he would be transferred. There would only be one superintendent at Rookwood.
2683. What will you do with the matrons at Parramatta? There is one who will be transferred. I have provided for two. There is one already there and another would be transferred.
2684. Will not the effect of the proposed change be this: that you will have to place one of the present matrons on the retired staff, or transfer her at a reduced salary to Rookwood? That will be the effect of it.
2685. It appears to me, if you are going to retire all the officers at Parramatta, and appoint new ones at Rookwood, that the result will not be a saving? But you retire a number of officers, and simply reduce your staff. It is simply a question of reducing the staff. I propose to reduce the staff to one which costs £5,625.
2686. At Parramatta, Liverpool, and the other asylums, you have provided for £2,800 in wages and allowances to inmates? Yes.
2687. And in your estimate of £5,600, you have reduced that to £1,000? Yes.
2688. What is to prevent you, without moving to Rookwood at all, saving the difference between £2,800 and £1,000? Because you must have a certain number of working inmates at each of these institutions, and the number can be reduced if I had them concentrated.
2689. In what way can you reduce the number? If the institutions are concentrated, there will not be so much work to do.
2690. Will you explain how that is practicable? I cannot give you any other answer than that, which seems to me very clear.
2691. What necessity is there to pay £2,800 now if you think that, by going to Rookwood, it will only be necessary to pay £1,000? Because where you have separate scattered institutions, you must have separate working staffs.
2692. You propose to reduce the gratuities from £2,800 to £1,000? Yes.
2693. Is it not just as practicable, at the present moment, to reduce those gratuities to inmates from £2,800 to £1,000, as to effect a reduction by simply removing from Parramatta and Liverpool to Rookwood? No, it is not; because you have separate institutions, and you must have separate working staffs.
2694. Why would you not require the same number of assistants amongst the inmates if you removed to Rookwood? Because you would not have the same ground to go over.
2695. Are you not aware that, according to the scheme you are proposing, to have fifty or sixty pavilions scattered over 60 or 70 acres of ground? Yes.
2696. And do you not propose to have a group of buildings half a mile from No. 1 Group on the plan? Yes.
2697. And yet you say the necessary attendance required for the inmates will be less than that which is required at the present time? It will be very largely reduced.
2698. I suppose Newington is a well-conducted institution? As well as anywhere.
2699. And there are between 600 and 700 inmates there? Yes.
2700. And the most you hope to effect, by concentrating 3,000 people at Rookwood, is a reduction from £12 17s. to £12? That is not it—not from £12 17s. to £12, because the men cost more; but from an average of £15 to an average of £12. At Liverpool the cost is £15 19s. 4d.; at George-street it is £18 16s. 3d.; and at Macquarie-street, £14 7s. 2d. If you strike an average you will get pretty close to £15.
2701. You say it is more costly to maintain males than females? Yes.
2702. How does the additional cost arise? Probably the rations cost more in proportion.
2703. In Newington, as opposed to George-street, you have every description of inmate? Yes.
2704. And the medical comforts of the patients there ought to cost more? The medical officer's salary is a good deal less, and the cost of inmates is always less.
2705. If you were to remove the inmates from Liverpool to Rookwood, would you be able to dispense with the medical officer there? Unless you transferred, he or Dr. Waugh would have to go to the place, that is quite clear.
2706. How would you provide for the consumptive, cancer, and ophthalmic patients;—would not a medical officer be necessary if you removed that particular class of patients from Rookwood? Of course if you break up the scheme you would want a new service altogether.
2707. But do you not suggest breaking up the scheme in that particular? Yes.
2708. Would you not want a medical officer then, and a separate staff? Yes.
2709. Assuming that the estimate of £1,800 to be saved in gratuities is a doubtful one, and that you would have to provide additional service and kitchens for the casual group, which you propose to place half a mile from the existing group at Rookwood, and that you would have to provide also for the pensions of the officers, who would not be required, and for new attendants at reduced salaries, would not your proposed saving of £4,225 be very greatly diminished? The pensions come from another fund altogether, not from the Consolidated Revenue, but from a fund in which these people have a right. I may say that I do not propose to provide a separate service for the casuals. None is necessary beyond what they have now.
2710. But you will have to place them half a mile away? But they have their own kitchen attached to the place now.
2711. Could not the proposed saving of £250 to the ophthalmic surgeon be as easily effected at the present time without moving the patients to Rookwood? That saving could be effected by another Department.
2712. Why could not the ophthalmic surgeon be dispensed with now as later on? I think he could.
2713. Assuming the £1,800 to be equally doubtful, that would bring your saving to £2,000? I do not assume it to be doubtful. I am very emphatic about that.
2714. Is it not a fact that you now pay £2,800 in gratuities? Yes.
2715. And you propose to reduce it to £1,000 by going to Rookwood? Yes.
2716. Could you not reduce it at present without going to Rookwood? I do not think you could. You have to pay for separate services at each place.
2717. Assuming you could reduce it, would it not bring the total saving to be effected by removing the patients to Rookwood to about £2,200? Is it fair to ask me to say "yes" upon an assumption which I consider to be wrong? My answer is that I do not think that saving could be effected now, unless I struck off all the gratuities.
2718. That £1,800 forms portion of the £3,700 total you expect to save by going to Rookwood? Yes.

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2719. In any case you would want a resident medical officer at Rookwood? Yes.
2720. To look after the consumptives? Yes, and others.
2721. Where is your medical officer in this scheme for attending to the consumptive patients? I can only answer that by saying that the scheme provides for the consumptive patients being dealt with at Rookwood; and that two medical officers are provided for.
2722. But according to your suggestion you are going to get rid of them, and are going to put them under separate management? Then you would want a new staff.
2723. It seems to me, then, that taking the view I have endeavoured to present to you with regard to the gratuities, and the necessity for an additional medical officer to look after the consumptives, the total saving upon your own estimate, without regard to the number of matrons you would have to retire in order to make place for those who are to be paid on a reduced scale, would not reach £2,000? Not if you break up the scheme.
2724. If you bring it down to less than £2,000, and propose to place there nearly 3,000 paupers, how can you save £3 a head, which would amount to £9,000? You cannot do it if you break up the scheme.
2725. Therefore it is impracticable? It is, if you break up the scheme.
2726. Seeing that with less than 1,000 inmates, Newington is as perfectly managed as any institution in the country can be, why should not Liverpool be placed upon a precisely similar footing if you remove from Liverpool all the sick and hospital patients? There is no reason why Liverpool should not be well managed if you retain it for healthy patients, but I have told you that if you do you will keep a lot of healthy men in an unnecessary institution needlessly idle.
2727. I am speaking now of retaining Liverpool with the maximum number of inmates you can place there, without concentrating the whole of the patients at Liverpool. I want you to think of healthy paupers. Can that be done? It can be done, undoubtedly.
2728. Assuming you have healthy paupers at Liverpool, would you require a medical officer at all? You would only require a visiting medical officer. You would require a lay superintendent to manage the place, and a visiting officer to go over it every day.
2729. That would considerably reduce the cost of management? Yes.
2730. You say it is far better, instead of having a matron in charge, to have a male superintendent? Yes.
2731. Would there be any difficulty in effecting that change without removing the whole of them to Rookwood? That change is already suggested.
2732. Therefore, a portion of the economy you propose to effect by removing to Rookwood you have already suggested with regard to Liverpool? Yes.
2733. Assuming that at Rookwood, instead of having, as you propose to have, 1,500 permanent inmates of the hospital wards, you have only the healthy paupers, would you need a resident medical officer? No; not if you have only healthy patients.
2734. Then we come to this—that by effecting a change at Liverpool, having healthy paupers only, and having similarly healthy paupers at Rookwood, you require medical officers only to deal with the hospital patients? Yes.
2735. And the consumptives? You have not suggested where you are going to put that 1,000 in Group 1—the group which contains the epileptics, and people suffering from heart disease, &c.
2736. Assuming that you have at Rookwood similarly healthy patients to those you might have at Liverpool, you would not require a resident medical officer? No.
2737. Therefore, if we put together the whole of what may be regarded as hospital patients that group alone would need a resident medical officer? It would.
2738. By dividing the whole of the pauper inmates in that way, do you not think that a great saving could be effected upon the proposed scheme,—that is, to provide specially for the permanent hospital inmates and the consumptives, leaving Liverpool and housing 1,000 inmates? I take it under the proposal you have just made that you would first have Liverpool with healthy inmates, a separate management staff, and a visiting medical officer. If you propose to keep the healthy inmates only at Rookwood—say, 1,000 of them—you will require a separate management staff and a visiting medical officer at (say) £300 a year. Then you will have Group 1, which contains 1,000, who may be classed as sick people, to be separately dealt with in addition to the cancer, ophthalmic, and consumptive people.
2739. Roughly speaking, there would be 1,800 healthy paupers and 1,200 sick? From 1,600 to 1,800 paupers, and from 1,200 to 1,400 sick.
2740. Would it be advisable to deal with the 1,200 sick persons apart entirely from the healthy paupers? Of course it would, and that is part of my scheme. That would include the cancer, ophthalmic, and consumptive patients, and the 1,000 in the other group.
2741. Would it be advantageous to concentrate the whole of the sick in one locality on a large area of ground? That would mean a tremendously expensive scheme. It would be more expensive than the present separate institutions. Of course it would be possible. I think the Group 1 people would have to be apart from the Group 4 people.
2742. But would it not be advantageous and desirable to deal with the sick entirely apart from the healthy so as to concentrate the attention of the medical officer? But I want to know which you consider the sick people. Are Group 1 considered among the sick people, because we have not dealt with them yet at all?
2743. If you were asked to classify them, how would you do? I would put the cancer, ophthalmic and consumptive divisions away by themselves somewhere.
2744. Numbering about how many at the present time? Between 400 and 500. Then I would classify the patients suffering from epilepsy, heart disease, rheumatism, and paralysis, and the patients who come from the metropolitan and country hospitals to be built up. That is the second division, numbering nearly 1,000.
2745. You will have to provide, therefore, for 1,400 sick and consumptives? Yes.
2746. For that class, would it be desirable, in your opinion, to make special provision? For the consumptives, cancer and ophthalmic patients only. For the others no special provision is necessary.
2747. Instead of having a mixed institution as you have now? There is no special provision necessary for the second class—the patients who do not require constant medical attendance. They should be near the healthy patients I think—at least on the same estate.
2748. In the same buildings? No; not in the same buildings.

2749.

- S. Maxted,
Esq.
6 Mar., 1896.
2749. You think, instead of separating them from the healthy patients, that they had better be mixed with them? No; kept in a separate group on the same estate.
2750. You see no necessity for separating them? No, except as described.
2751. After classifying them, you think they might occupy the same locality? Yes.
2752. And that one resident medical officer would be sufficient? Yes; if you take away the hospitals.
2753. *Chairman.*] If provision is made for 1,000 hospital patients at present, will it fairly well cover the number of patients we are likely to find in the present pauper population of 2,900, including the cancer, consumptive and ophthalmic patients? I do not think so.
2754. Would 1,200? The hospital returns given to the institution are 1,400 or 1,500.
2755. Would you say that room for 1,400 would cover the hospital patients? I should think so.
2756. Would you stand by it? I cannot stand by it until I get the correct figures, but approximately that would be about correct.
2757. *Mr. Humphery.*] You are aware that Mr. Davis, the engineer, expressed the opinion that there would be a large saving effected if the buildings were not scattered as proposed, and that if, instead of buildings containing fifty or sixty, you had buildings of two storeys which would hold 240 or 250 each? Yes, put closer together.
2758. So that you would have them under less scattered supervision? But that would do away with the principle of classification. It would be lumping them up together which I object to. I understand Mr. Davis proposed to put the inmates in two-storey buildings, which would carry 240 each, all close together.
2759. You have certain buildings there at the present time? Yes.
2760. And if in addition you make provision by having two-storey buildings containing 240 inmates instead of cottage buildings containing sixty each, the drainage would cost some £3,000 less? Yes, but he said the same thing would be secured by putting Group 3 nearer the medical superintendent's residence to the north of which is as good a site as you can get.
2761. What distance from the proposed site? Close on half a mile.
2762. Would it not be attended with considerable inconvenience to have two groups separated by half a mile? No, they would have their own kitchen, and their own cooking there.
2763. Would it not be practically two institutions? Yes, that is just what we want. That is proposed at present, the only difference being that you would put them on the northern spur, instead of on the other side of the road.
2764. So that the economy which would be effected by concentration would be very considerably lessened, if instead of grouping the whole of the buildings together as proposed by the plan, you were to separate the groups by half a mile? It would not; I have explained that very often.
2765. *Chairman.*] Then you think we may come to the conclusion that there are 1,500 healthy paupers, and 1,400 chronic sick? In round numbers that is approximately correct.
2766. *Mr. Trickett.*] You were pressed yesterday to state whether the present number of 3,000 paupers was not likely to increase as the colony increases? Yes.
2767. Do you think that if the provisions suggested in page 41 of your report for 1890, in regard to relatives providing for the maintenance of inmates, and in regard to the provision of uniform intercolonial legislation, and so on, were carried out, they would have a tendency to reduce the number? Yes, to very largely reduce it.

TUESDAY, 10 MARCH, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.
The Hon. JOHN DAVIES, C.M.G.
The Hon. JAMES HOSKINS.
The Hon. WILLIAM JOSEPH TRICKETT.
HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.
JOHN LIONEL PEGAN, Esq.
THOMAS HENRY HASSALL, Esq.
GEORGE BLACK, Esq.
FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Erection of Buildings at Rockwood for Infirm and Destitute Persons.

William Odillo Maher, Esq., M.D., Visiting Ophthalmic Surgeon to the Government Asylums, sworn, and examined:—

- W. O. Maher,
Esq., M.D.
10 Mar., 1896.
2768. *Chairman.*] What is your position? I am Visiting Ophthalmic Surgeon to the Government Asylums.
2769. You are also engaged in private practice in Sydney? Yes.
2770. Have you any knowledge of the scheme before this Committee? I have not very much knowledge of the scheme. I only saw the plans here a few minutes ago.
2771. Do you require your examination to be limited solely to the ophthalmic patients? Yes.
2772. Not to general principles? No.
2773. If you care to make a statement, the Committee will be glad to hear your views in regard to things as they are, and whether you think that this proposal will be an improvement or not? I certainly think that the buildings and the arrangements for the treatment of ophthalmic patients could be improved upon, and I do not hold with having ophthalmic patients—many of whom suffer more or less from contagious disease—associated with the other inmates of the asylums. I think that they should have a separate institution for themselves.
2774. Do you approve of the present buildings at Parramatta? They could be improved upon very much.
2775. Is it well to have a population of ophthalmic persons in the centre of a town? No; it is not a desirable thing to have.
2776. You think that, as a general principle, an ophthalmic hospital ought to be widely apart from any population at all? It ought to be fairly isolated.
2777. From hospital patients or the ordinary public? Yes.

2778.

2778. *Mr. Fegan.*] I suppose you were not consulted in any shape or form as to the advisability of grouping these persons, and amongst them the patients you are more particularly interested in? No; I have not been consulted in any way about it.

2779. I suppose, as far as the position of Rookwood is concerned, is it not against the treatment of ophthalmic patients? In what respect? W. O. Maher,
Esq., M.D.
10 Mar., 1896.

2780. I mean as regards the climate, the soil, or the surroundings? Not that I know of, except that I do not think it is a desirable thing to have patients who have a quantity of discharge coming from their eyes near a water reservoir. But as far as the treatment of the patients goes, the locality is good enough.

2781. Your great objection is that it is so near to the reservoir from which the people of Sydney obtain their water? Yes; I think that is a tangible objection to the proposition.

2782. Have you in your mind's eye any suitable place which you can recommend? I have not thought of any.

2783. Parramatta would not be a suitable place? It is rather a populous place, but still I do not know that it is so very unsuitable.

2784. How many patients have you there at present? A little over 200.

2785. In one asylum? Yes; but there are other inmates also.

2786. Have you any at Liverpool? No. All the patients are transferred from the different asylums to the Macquarie-street Asylum, where I attend to them.

2787. They are treated separately, and kept separately from the other patients? No. They are supposed to have separate wards, separate basins, and separate towels, and as far as possible we avoid the discharge getting from their eyes into the eyes of the other patients. But still there are other inmates who have not ophthalmic disease.

2788. It is only recently that these people have been kept separate? They are not actually kept separate, because there are other inmates in the asylum who have not ophthalmic disease.

2789. It is not very long since the separate treatment was brought into vogue there? I could not say definitely when it was introduced, but I should say it was introduced six or eight years ago.

2790. There has been a time since the institutions have been established when the patients have been put together, no difference at all being made? Yes; they used to be distributed amongst the different asylums at Parramatta and Liverpool.

2791. Did not that show great ignorance as regards the necessity for the separate treatment of these people;—I suppose you were astonished when it first came to your knowledge that they were not treated separately? I think the doctor who preceded me also pointed out the necessity of having one institution for the treatment of these patients.

2792. Have you been over the ground where it is proposed to establish the new institutions? No.

2793. You have not seen the ground? No.

2794. As far as the site is concerned, you have no knowledge except from the plan you saw on the easel here? That is all.

2795. Was no information given to you that this idea had entered into the minds of the Department? None.

2796. Do you mean to say that you have been treating over 200 patients and have not heard of any proposed alteration being made? I have heard of a proposed alteration, but I have been in no way consulted in the matter. Incidentally I have heard people talking about it.

2797. Has not Dr. Waugh, the Medical Superintendent of the Parramatta Asylums, mentioned the matter to you? I have had no conversation with him on the subject. I have not met him to speak to excepting once.

2798. You believed that the ophthalmic patients should be kept entirely separate from any other patients? Yes; they should be kept apart from the others.

2799. Looking at the plan of the proposed three hospitals, do you think that the consumptives' hospital and the cancer hospital will be too near to the ophthalmic hospital? I presume the ophthalmic patients would also be able to walk about the ground.

2800. They would associate with the other patients in the ground? That would be objectionable. They should be kept entirely by themselves.

2801. Therefore, you would recommend that there should be a separate institution with separate grounds for ophthalmic patients? Yes.

2802. *Mr. Black.*] Do you know of any site which you would suggest as a suitable one for the treatment of ophthalmic patients? No; but I think there are very many sites that there is no objection to if the patients are kept to themselves and are not associated with the other inmates of the asylums.

2803. There would be no objection to the grouping together of hospitals for the treatment of cancerous, consumptive, and ophthalmic cases, provided, I suppose, that the institutions are erected at a distance of 100 or 200 yards from each other? Provided that the patients do not associate together.

2804. If the patients were prevented from associating with the others, then the distance which the hospitals would be removed from one another would not matter so much? No.

2805. Of course, the further the hospitals are apart the less the danger of their intermingling? Certainly.

2806. There are no especial climatic conditions favourable to ophthalmia;—has the sea air any effect at all? I do not think it has any very material effect on ophthalmia. The heat and glare of the sun have far more effect on it than anything else.

2807. The glare off the white sand, I suppose? Yes; and the heat.

2808. But I suppose a sheltered position and the absence of strong winds would be advantageous? Certainly.

2809. *Mr. Wright.*] I understood you to say that you believe in the perfect isolation of ophthalmic patients? I believe it is preferable that they should be kept to themselves.

2810. Is it customary in other parts of the world to perfectly isolate people suffering from ophthalmia? I cannot tell you. I do not know much about the systems in the old country, but I know that there are many cases on record in which this disease has spread to a great number of the inmates in poor-houses, and where it has spread through regiments of soldiers.

2811. The danger from infection, I presume, is considerable? It is not very great, but still it exists, and at times one does not know why it does at certain times—it spreads to a great number of individuals.

2812. Given a hospital of the size of the hospital indicated on the plan, built on 40 or 50 acres of land, and surrounded by a secure fence, do you think that would secure perfect isolation? Perfect. It would not be necessary to have such a quantity of land in order to secure isolation.

- W. O. Maher, Esq., M.D.
10 Mar., 1896.
2813. That, you think, would secure perfect isolation? Yes.
2814. Irrespective of what the other surroundings might be? Yes.
2815. As regards the proposed site at Rookwood, the country is rather high, and completely denuded of timber, and would be exposed, not only to a considerable amount of heat, but to all the prevailing winds—the strong westerly winds, and to strong north-easterly winds;—would you consider that objectionable? I should think it preferable to have a more sheltered position.
2816. Sheltered by timber, I suppose? Yes.
2817. You have 200 ophthalmic patients? There are about 207 or 210 of the inmates who are on my books, but they are not all suffering from ophthalmia. They have had diseases which have effected their eyes, producing more or less blindness, or suffering from some progressive disease of the eyes.
2818. Are you aware whether there are any such patients in Rookwood and Liverpool Asylums? I think there cannot be, because the medical attendant at each place has been instructed to send all ophthalmic cases to the Macquarie-street Asylum.
2819. You consider that the whole lot numbers about 200? I think so.
2820. You have not been on this site? No.
2821. You are aware that within a very short distance of the proposed site, there is an open reservoir containing 36 acres of water, from which the water supply of Sydney is drawn? I understand that there is.
2822. I understand that you consider it very unwise to put an ophthalmic hospital near that open reservoir? I think so.
2823. *Mr. Hoskins.*] You expressed a wish to be examined by the Committee? No; I merely mentioned the fact that if the Committee thought that my evidence would be of any value, I should be very pleased to attend, but beyond that I expressed no wish.
2824. Did you not express a desire to be examined by the Committee with a view to expressing your opinion that it would be very unwise to have ophthalmic patients located in any place where hospital cases were located? I think it is unwise.
2825. That is your principal reason for coming here? That is my principal reason.
2826. *Mr. Davies.*] In all well-conducted hospitals is it not the usual practice to isolate the ophthalmic patients? They have their wards to themselves.
2827. The inmates of the hospitals at Parramatta, especially at the Macquarie-street one, have been allowed to mingle together? Yes; there has always been a number there who have not been under me, on account of their having no disease of the eyes.
2828. There has been no practical isolation of the ophthalmic patients? No; except that as far as possible, all ophthalmic cases have been sent to the Macquarie-street Asylum. But at that asylum there have always been other cases as well as ophthalmic cases.
2829. You are of opinion that these cases should be absolutely isolated? I think it would be wisest to have them isolated.
2830. What has been the result of the isolation of ophthalmic patients in the case of the city hospitals? I think it allows no possibility of the spread of ophthalmia. I think it is desirable to have ophthalmic patients away from the general hospital.
2831. Have these patients improved to a much larger degree than they would have done had they been associated with the other patients in the hospitals? I think they have.
2832. Your contention is that provision should be made for the absolute isolation and treatment of ophthalmic patients? Yes.
2833. It is the only effectual way of giving relief? I do not say that, so much, as that it is a great preventive of the disease spreading among the other inmates.
2834. During your visits to the hospital at Parramatta have you noticed any great spread of the contagion? I have not noticed any great spread of it, but I have noticed isolated cases. Of course, they adopt certain precautions. Those who have ophthalmia have separate wards, separate basins, and separate towels, in order, as far as possible, to prevent any contagion; and if these precautions are scrupulously taken the risk is not great.
2835. That is done to a large extent? Yes; but still we know that an epidemic from time to time in the old country has broken out amongst these institutions and among soldiers, and it has spread very rapidly. Why it occurs at certain times and not at others I am not in a position to say, but that it does occur is an undoubted fact. It is to guard against the possibility of that that I think these patients should be isolated.
2836. What has been the largest number you have treated at any time for ophthalmia at Parramatta? I could not say definitely for ophthalmia.
2837. For affection of the eyes? There are on the books about 210. That is as large a number as there has ever been.
2838. You do not attribute that large number to the want of isolation? I do not think so. There are a few who have contracted the disease in Macquarie-street Asylum, but the number is few.
2839. Have those who caught the contagion in the hospital been cured, or does it stick to them? It may stick to them for years if they get true granular ophthalmia.
2840. Have you many extreme cases? There are, I should say, about seventy cases with more or less discharge from the eyes, but the very bad cases are always sent down to the Moorecliff Hospital, as I see them more frequently there than I would at Parramatta, and they get more skilled nursing.
2841. You do not favour the proposal to concentrate the whole of the paupers suffering from all kinds of ailments, old age and infirmity, in one block at Rookwood? Not with the ophthalmic cases.
2842. Would you like to express an opinion with reference to the others? I should prefer not to do so.
2843. *Chairman.*] Have you any further statement to make? No.

Walter Liberty Vernon, Esq., Government Architect, sworn, and further examined:—

2844. *Chairman.*] You desire to hand in a statement to the Committee? I beg to hand in the following statement:—

W. L.
Vernon, Esq.
10 Mar., 1896.

Department of Public Works, Government Architect's Branch, Sydney, 4 March, 1896.
To Public Works Committee,—

BENEVOLENT ASYLUM SCHEME.

I HAVE the honor to submit for your information the following memoranda relative to dividing up the single scheme of Rookwood into three schemes of Liverpool, Rookwood, and Campbelltown:—

1st. Liverpool.—To permanently accommodate 800 able-bodied patients, an expenditure of £1,000 would, I find, do little more than put the present buildings in a proper state of repair.

Assuming that the 800 are able-bodied patients, I consider the following works should be carried out:—

New store-room	£350
Improvements to kitchen and bake-house	400
New cooking-boilers, &c.	200
Improved drainage	250
New shelter shed, &c.	200
General repairs, &c.	1,000
	<hr/>
	£2,400

2nd. Rookwood.—If accommodation is to be found in the present group for 1,000 healthy old men, seven more pavilions will be required, and it will be necessary to build administrative buildings in proportion, and it will not be necessary to build a residence for a resident medical superintendent.

3rd. In choosing a new site for the 800 isolated cases and 600 chronic cases, that could not then be accommodated at Rookwood, namely, 1,400, the buildings should take the form of a general hospital, as much as possible on the pavilion principle, and in that case a medical superintendent's residence would be necessary. It is of course possible, and was always anticipated, that the residence could be built for £1,500, but when stables and outbuildings, and laying on light and water, and other things are considered, my experience has shown that the total cost is little under £2,000 for a building of moderate but comfortable accommodation.

The cost approximately of this scheme would be as follows:—

Cancer and skin disease patients	£6,300
Ophthalmic patients	6,450
Consumptive patients	6,500
Chronic patients	8,400
Medical officer's residence	1,500
Matron's residence	1,000
Nurses and attendants' quarters	2,000
Kitchen	2,000
Special laundry and machinery	2,500
Mortuary	300
	<hr/>
	£36,950

Some of the above items, it will be seen, are modifications of the original estimate, but considering that these buildings must be treated as a hospital, I do not see how they can be reduced, and when it is pointed out that exclusive of drainage, lighting and water, which must necessarily be guided by the circumstances of the locality, the cost comes up to only £31 per bed, I am of the opinion that it would be the cheapest hospital of a permanent character ever erected. It must be recollected that the foregoing contains also no provision for workshops, farm buildings, lodges, and the laying out of the estate. For an institution of this kind these outlays are inevitable.

4th. These pavilions might, I think, be cut down from £1,400 to £1,200, if a number are built together, and certain finish on the existing pavilions is omitted. The quarters for superintendent at £1,000 might be reduced perhaps £150 to £850, but not more. The wardsmen's quarters at £1,500 is quite moderate enough. The class of these buildings is not necessarily expensive, but they must be sufficiently commodious to accommodate the number.

5th. The operating quarters at £1,000. The operating rooms include nurses' night rooms, sculleries, lavatories, &c., and all the adjuncts of the isolation group beyond the dormitory accommodation itself, and I do not think could be safely reduced. The number of nurses for 1,200 patients, even allowing the excessive number of fifty patients per nurse, means a staff of twenty-four, and the matron's quarters include the necessary store-rooms, offices, &c., and is not exclusively for the accommodation of that officer. By an oversight on my part, I believe a sketch for the matron's quarters exclusively is one of the exhibits; my intention was to provide for business purposes, as well as for the accommodation of the matron.

6th. Liverpool being occupied by 800 will save a considerable sum, namely, the cost of pavilions, and the proportionate cost of administrative buildings.

7th. The total reported cost, £108,000, is subject, as is also mentioned in the report, to a deduction, consequent upon 3,000 only being provided for instead of 3,300, and therefore the net amount would be £101,000.

8th. The total future cost, therefore, of housing 3,000 patients under your proposed scheme would be as follows:—

1,000 at Rookwood (with new shelter sheds, &c.)	£16,000
1,200 on new site	36,950
800 at Liverpool	2,400
	<hr/>
	£55,350

The saving on the scheme is, therefore, £46,000, but against this would have to be charged the cost of the drainage, lighting, fire appliances, laying out estate, sundry provisions, supervision, &c., possibly amounting to £8,000, or a net saving of £38,000.

9th. Rookwood.—In finding accommodation for 1,000 at Rookwood, it would be necessary to build new kitchens and administrative buildings, and I have therefore estimated the total cost of the work there to be £16,000, which is included in above statement.

Yours, &c.,
W. L. VERNON.

2845. Is there any point which requires elucidation? I simply want to make it clear that this is an approximate estimate.

2846. Will you take the various items, and tell us why you adopt these particular amounts, beginning with the Liverpool Asylum first? I consider it will cost £2,400 to put Liverpool Asylum into a proper state of repair as a permanent institution for the accommodation of 800 inmates. To erect a complete hospital to accommodate 1,400 patients, including isolation and chronic cases, would cost, assuming the site is a reasonable one, £36,950, to which must be added the cost of lighting, draining, and water supply.

2847. *Mr. Lee.*] What do you mean to convey by the term "suitable hospital;"—do you mean a series of hospitals? I certainly strongly recommend the pavilion system.

2848. Does your estimate provide for one large building? No; I should keep cases of cancer and of skin diseases in one block; ophthalmic cases in another block; consumptive cases in a third block; and chronic cases, making up a total of 1,400, in a fourth block.

2849. Your scheme actually provides for four distinct buildings? I think it would be more correct to say four distinct groups of buildings.

2850.

- W. L. Vernon, Esq.
10 Mar., 1896.
2850. In the Rookwood scheme you put three almost in one group? I would not put 600 chronic cases into one building.
2851. You would have a group for the chronic cases? Yes.
2852. You would place the chronic cases in pavilions? Yes.
2853. That would be a chronic group? Yes.
2854. Would you deal in the same way with the ophthalmic cases? Yes.
2855. And in the same way with the consumptive cases? Yes. The fact is that I have adopted these plans here for these three isolated groups.
2856. You have strongly committed yourself to the pavilion system? Undoubtedly.
2857. On that basis you have made your calculations? I have.
2858. And £36,950 is to cover the cost? Yes; exclusive of other items.
2859. Why do you adhere to the pavilion system for the chronic cases;—why would not a two-storey building do for them? A pavilion system does not necessarily mean a series of one-floor buildings; it may also include two-floor buildings, but they should not be above a certain size, and they should be to some extent separate one from another.
2860. But has not your proposal up to the present time, as regards the pavilion system, been strictly confined to a one-storey building? Certainly. I prefer one storey, but I do not see any great objection to two storeys.
2861. At all events your estimate is for one storey? Yes.
2862. What is your great objection to two storeys for chronic cases? Because I think the tendency in all modern institutions of this character to obtain a one-storey building, and there is no reason why it should not be adopted, when you are making a new departure.
2863. Can you tell me the difference in cost, if any, between housing this number of chronic cases in one storey and housing them in two storeys? The difference in cost, if one staircase only is provided is, as far as I can tell, about £175 less than double the cost of a single floor. For instance, a pavilion of one floor would cost £1,200, and with two floors it would cost £2,400 less £175, that is when one staircase only is required. It would cost £2,225 as against £2,400.
2864. *Mr. Black.*] You would save £175 on each pair? Yes.
2865. *Mr. Wright.*] One roof and one basement would cost as much as your staircase? Yes. I must consider other things as well. I have to thicken the walls of the ground-floor, I have to make a staircase sufficiently roomy and easy to admit of persons being taken up and down on stretchers in time of panic, and so on. I cannot see how the cost can be very much reduced.
2866. *Chairman.*] It means a saving of £4,000 in the case of 1,400 people? It is a saving of nearly £3 per head.
2867. *Mr. Humphery.*] Have you taken into consideration the cost of the verandah? I have not. I do not think it comes much into the calculation.
2868. *Mr. Lee.*] You estimate that it will cost £2,500 for the laundry and £2,000 for the kitchen;—what class of building do you propose to erect? In both cases the class of building would be of the simplest and cheapest description possible, consistent with being of a substantial character to stand the wear and tear of machinery. It would be built with brick, and have a slate or iron roof.
2869. What machinery do you require? In the laundry you would require a complete set of laundry machinery, commencing with washers, and going through with the centrifugal driers, the wringers, the drying closets, and the mangers.
2870. There is nothing very particular about that—nothing more than could be carried on in an ordinary slab building? You would not build a slab building with loan money, I should imagine.
2871. The machinery you mention could be erected in an ordinary wooden building? It could.
2872. It appears to the Committee that it is a large item, and we want some information upon this point? I can only compare it with the laundries which have been erected. I could not give you the rates just now, but I assure you that a laundry for 600 or 700 patients has, in other cases, cost considerably more than this laundry for 1,400 patients is estimated to cost.
2873. Does your estimate of £2,500 cover the building or the machinery? It includes the building and outfit.
2874. What will be the size of the laundry? I presume it will be built in proportion to the number of the inmates. The laundry will be built with, first of all, a receiving-room to receive the dirty linen and the necessary pits in which to put the worst of the linen; then a large room in which it is washed, probably a room measuring 60 by 40 or 45, including the machinery; then a drying closet, measuring 20 by 20, or 25; then an ironing room, of almost the same size as the large washing-room; and, finally, the dispensing-room, in which all stored clean things are dispensed.
2875. With reference to the kitchen, I presume the £2,000 is intended to provide for stoves and other appliances, as well as the building? Inclusive.
2876. Boilers if necessary? I have not distinguished between boilers for the kitchen and laundry, because I understood that the joint cost of the two would cover the cost of the boilers.
2877. Of what do you propose to build the new hospital? Brick walls. In the case of the cancer patients I should put down a solid floor—not a wooden floor—and I should plaster the walls with the cleanest and hardest plaster which is suitable, with Kean's cement, or an anti-septic cement of some description, and I would line the ceilings with small corrugated iron.
2878. As nearly fire-proof as you can make them? Yes. For the chronic cases I certainly would have brick walls, but wooden floors would do in their case; and the roof in each case would be lined with small corrugated iron.
2879. How would the roof be covered? With large corrugated iron.
2880. No tiles? I do not propose to use them.
2881. *Mr. Fegan.*] I understood you to say when you first appeared before the Committee that you had consulted the medical officers in reference to these plans of yours? I did.
2882. Where were the medical officers when you consulted them—in your office? We first met at the office of the lady superintendent at Rookwood, and then we walked over the different ridges of the estate, and jointly visited the different sites.
2883. You say "we walked";—to whom do you refer? The three medical officers, Mr. Maxted, Mr. Green, myself, and my assistant, who has Rookwood in his charge.

2884. The three medical officers were Dr. Beattie, Dr. Waugh, and Dr. Brown? Yes.
2885. You are sure of that? Absolutely sure.
2886. Would it be strange to you to hear that some of the medical officers have told the Committee that they were not consulted in the matter? It would not be correct to say that these three gentlemen were not consulted, because they were.
2887. And their opinion is embodied in the shape of a plan here? The plan exactly follows the concensus of opinion expressed on that afternoon; but I do not think these medical officers saw the plan. In fact, I know that they did not.
2888. You were led by their opinion to present the plan in this form to the Committee? The opinion was unanimous.
2889. Should a saving of £3 per head be considered of greater importance than a suitable building for these people? I do not think it should. My opinion is strongly in favour of the one-floor pavilion system. I do not say that the other system is not a good one.
2890. You believe that one floor would be far more convenient as regards the management of the hospitals, and of the wards, and ultimately as regards the working of the institutions as a whole? That is my opinion.
2891. *Mr. Black.*] Do you think that in the erection of hospitals at Campbelltown any considerable sum could be saved by using the timber growing on the ground in the construction of the stables, laundries, weather-sheds, workshops, and so on? I do not know the particular estate to which you refer.
2892. If the timber is all right there would be some saving? I do not think it would be advisable, as loan money is to be spent, to erect a building that would not last some considerable time.
2893. If the timber on the ground is ironbark and blackbutt it would be likely to last a considerable time? I do not think if slab or other buildings were erected properly they would be likely to give in for twenty years.
2894. In your estimate did you include the drawing of the bricks for the erection of the laundry and the stables? I imagine that if you built at Campbelltown, where there is a brick soil, the contractor would naturally make his own bricks on the site.
2895. You think there is clay to be got there? I should think so. Anywhere around Campbelltown you can get brick earth.
2896. You do not think there would be any great saving from the utilisation of the timber? I would give a very guarded opinion as to the timber, because my own impression is that all the timber has been so culled that there is very little left which could be put into a permanent building. I know that that is the case down Goulburn way.
2897. *Mr. Wright.*] Coming back to the question of kitchens and laundries, in your plans here you have three hospitals grouped together with one kitchen to serve three institutions? Yes.
2898. If it were deemed necessary that the three hospitals should be kept 200 or 300 yards apart from one another, it would necessitate having a kitchen for each hospital? Not unless they were a very wide distance apart.
2899. Supposing it were considered necessary to put each hospital in an area of 20 acres by itself? I would not recommend that it should be done, because it would be scattering the administration, which would be hardly advisable.
2900. Supposing we are advised that it is necessary that the ophthalmic hospital should be distinctly isolated from the other buildings, and that the ophthalmic patients should have a moderate amount of ground in which to exercise themselves apart from the other patients, I suppose it would be necessary to provide a separate kitchen for that hospital? If it were, say, 300 yards away from the main building, I think it would be necessary.
2901. An expert has stated that there should be no commingling of ophthalmic patients with the other patients;—would that add materially to your estimate? It would mean the cost of another kitchen.
2902. Would it reduce the cost of the large kitchen also? Very little.
2903. Say we require a kitchen for 200 patients, would it cost the same amount to build that kitchen as it would cost to build a kitchen for 800 or 900 patients? My proposal is to build a kitchen for 1,400 patients, and if you deduct 200 patients from that number the reduction in the cost would be very small.
2904. Will it add materially to the cost? I would not propose, in a separate kitchen for 200 patients, to put down what is called a kitchen plant. I would be content with something very much simpler.
2905. A simple, inexpensive building would answer the purpose? I do not say it would answer so well. I would not recommend it at all.
2906. Under the circumstances I mentioned it would become a necessity to have a separate kitchen and separate cooking appliances? Such a case has never come under my notice before. I think it is a very extreme opinion, even from a medical man.
2907. What will it cost to build a kitchen to cook for 200 patients? Probably £600 or £700. It does not mean a kitchen only; it means the adjuncts to a kitchen—larders and a scullery.
2908. Your estimate would be increased by that amount if we decide to have a separate hospital? It would.
2909. Can you state roughly the superficial area of the laundry which is to cost £2,500. You can build a first-class residence for a gentleman in Sydney for £2,000 or £2,500, and it strikes me that £2,500 is a very large sum to pay for a mere laundry? It is not when you come to consider that you are providing washing accommodation for 1,400 inmates and drying accommodation as well. The fact is, it is very small.
2910. I suppose a great deal of the amount is for the boilers? Yes; you must have the best machinery, and you must pay for the patents.
2911. I suppose the bulk of the expense is for the machinery and boilers? I should think it is about 50 per cent. machinery and about 50 per cent. building.
2912. *Chairman.*] If that power were found you otherwise, you could save that sum? I could save the steam power.
2913. *Mr. Wright.*] The building would cost £1,200? From £1,200 to £1,500.
2914. You ought to put up a pretty large building with only bare walls and no interior fittings for £1,500, or even for £600 or £700? It is the extent of a building of this description which runs into the cost, no matter how inexpensive the material is which you may use.
2915. In your estimate, you have not gone in for any unnecessary expensive work? None whatever.
2916. They are all plain substantial buildings? As plain as possible, but substantial. 2917.

W. L.
Vernon, Esq.
10 Mar., 1896.

W. L.
Vernon, Esq.
10 Mar., 1896.

2917. *Mr. Hoskins.*] Have you ascertained the probable cost of altering the Randwick Asylum to accommodate temporarily 700 or 800 patients from the Parramatta and Liverpool Asylums, provided that the Government obtain the consent of the trustees of the Randwick Asylum to its being used for that purpose? I have had the following estimate prepared:—

Floors, general repairs, and stairs...	£300
Verandahs, roof, posts, plates, &c.	250
Guttering, roof and down pipes	100
Painting, cleaning down, new doors, &c.	300
Abolishing internal lavatories, baths, &c., and making good floor	200
Drainage taken up, remodelled, and relaid, properly trapped and vented, keeping present main to "farm"	400
Cement baths altered and drained	100
Two shelter-sheds	250
Gas service renewed and remodelled	250
Fire service renewed and remodelled	200
Total	£2,350

Then I have a separate item of £1,000 for a new kitchen, laundry, and cooking plant, which, of course, is an approximate amount, making a grand total of £3,350 to accommodate 543 patients.

2918. Have you not also to provide for the children? Provision would have to be made for the children.

2919. *Mr. Trickett.*] What did you put down in the statement you handed in for the ophthalmic branch? £6,450.

2920. Does that include a kitchen and administrative buildings for that particular branch? No. It includes the buildings connected with the patients only.

2921. Then the kitchen, scullery, laundry, workshop, and stores in connection with that branch you propose to use in common with the other two? I do; in fact, in common with all four.

2922. Dr. Maher, an eminent ophthalmic authority, has stated here that there would be a great fear of contagion if the ophthalmic branch were in any way connected with any other part of the buildings to be erected; that it ought to be provided with a separate wash-house, and separate appliances;—if that idea were carried out, would it not considerably increase the expense of the ophthalmic branch? If the ophthalmic wards could not be treated administratively with the others, it would necessarily cost more.

2923. I understood Dr. Maher to say, distinctly, that the ophthalmic branch must be perfectly isolated—in fact, almost fenced round, so that the patients could not mingle with the other patients;—I suppose that would increase the expense considerably? It would.

2924. To what extent would it increase that estimate of £6,450? It would involve the cost of another kitchen, and the cost of a small complete laundry, and possibly it might necessitate the building of a separate nurses' establishment.

2925. And separate operating quarters? I certainly am not prepared to follow the opinion of a medical man in that respect, because I have never heard that opinion advanced before.

2926. I do not want to ask you whether you agree with his opinion, but I wish to know whether, if the opinion is a correct one, it will not necessarily increase the cost? It would increase the cost from £1,000 to £1,200 at least. The laundry, of course, would be on a small scale, and it would have to be worked without machinery.

2927. There would have to be another kitchen? Yes.

2928. If the same procedure were required with regard to the cancer and the consumptive hospital, that would also increase the cost of the buildings? Undoubtedly, in the same proportion. I think the consumptive hospital would be rather more, because the proportion of inmates is larger there than it is in the case of an ophthalmic hospital.

2929. Can you state in round numbers what would be the extra expense if these three kinds of disease had to be treated separately, either at Rookwood or at Campbelltown? About £4,000, exclusive of any special arrangement for nurses.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

Erection of Buildings at Rookwood for Infirm and Destitute Persons.

APPENDIX.

A.

[To Evidence of F. Chapman, Esq.]

INFORMATION RESPECTING RESIDENCES CONTIGUOUS TO LIVERPOOL ASYLUM.

Sir,

Town Hall, Liverpool, 2 March, 1896.

According to a report of Mr. Green's evidence (re Rookwood Asylum question), given before your Committee, as published in *Daily Telegraph* of 27th February, I notice he is made to say that the nearest house to the Liverpool Asylum is that of the station-master, some 300 yards away. I wish to point out that this is erroneous, as the pencil line on the accompanying tracing will show. The dotted line on same tracing (a radius of 440 yards from Asylum) shows twenty-nine residences, or a population of, say, 145 persons; the public school, with between 300 and 400 scholars; and the Orphanage (R.C.), with about 70 children. A 500 yards radius from the Asylum would take in portions of Macquarie-street, the principal thoroughfare of the town.

I have, &c.,

F. CHAPMAN,

Mayor

(on behalf of the Council).

The Chairman, Parliamentary Standing Committee on Public Works.

B.

[To Evidence of S. Maxted, Esq.]

GOVERNMENT BENEVOLENT ASYLUMS.

ANALYSIS of Salaries and Wages paid from 1st January to 31st December, 1895.

Institution.	Doctor.	Matron and Sub-Matron.	Stipends.	Clerks and Store-keepers.	Attendants.	Dispenser.	Bakers.	Wages and Gratuities.	Overseer and Managers.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Liverpool.....	515 0 0	391 0 0	100 0 0	165 15 0	265 13 8	100 0 0	157 3 4	623 12 8	....	2,327 4 8
Macquarie-street....	235 0 0	190 0 0	50 0 0	141 6 8	307 12 11	....	259 15 0	220 2 5	....	1,403 17 0
George-street.....	235 0 0	272 0 0	50 0 0	230 16 3	533 7 0	100 0 0	....	408 14 4	....	1,558 17 7
Rookwood.....	....	190 0 0	100 0 0	237 16 7	221 13 4	37 10 0	....	1,287 1 6	77 10 0	2,151 11 5
Glenfield.....	142 13 4	....	....	60 0 0	....	....	....	270 18 6	100 0 0	573 11 10
Total.....	£ 1,127 13 4	1,043 0 0	300 0 0	855 14 6	1,328 6 11	255 10 0	416 18 4	2,810 9 5	177 10 0	8,315 2 6

B 1.

EXTRACT FROM STATISTICAL SURVEY, 1893-94—CHARITY VOTE.

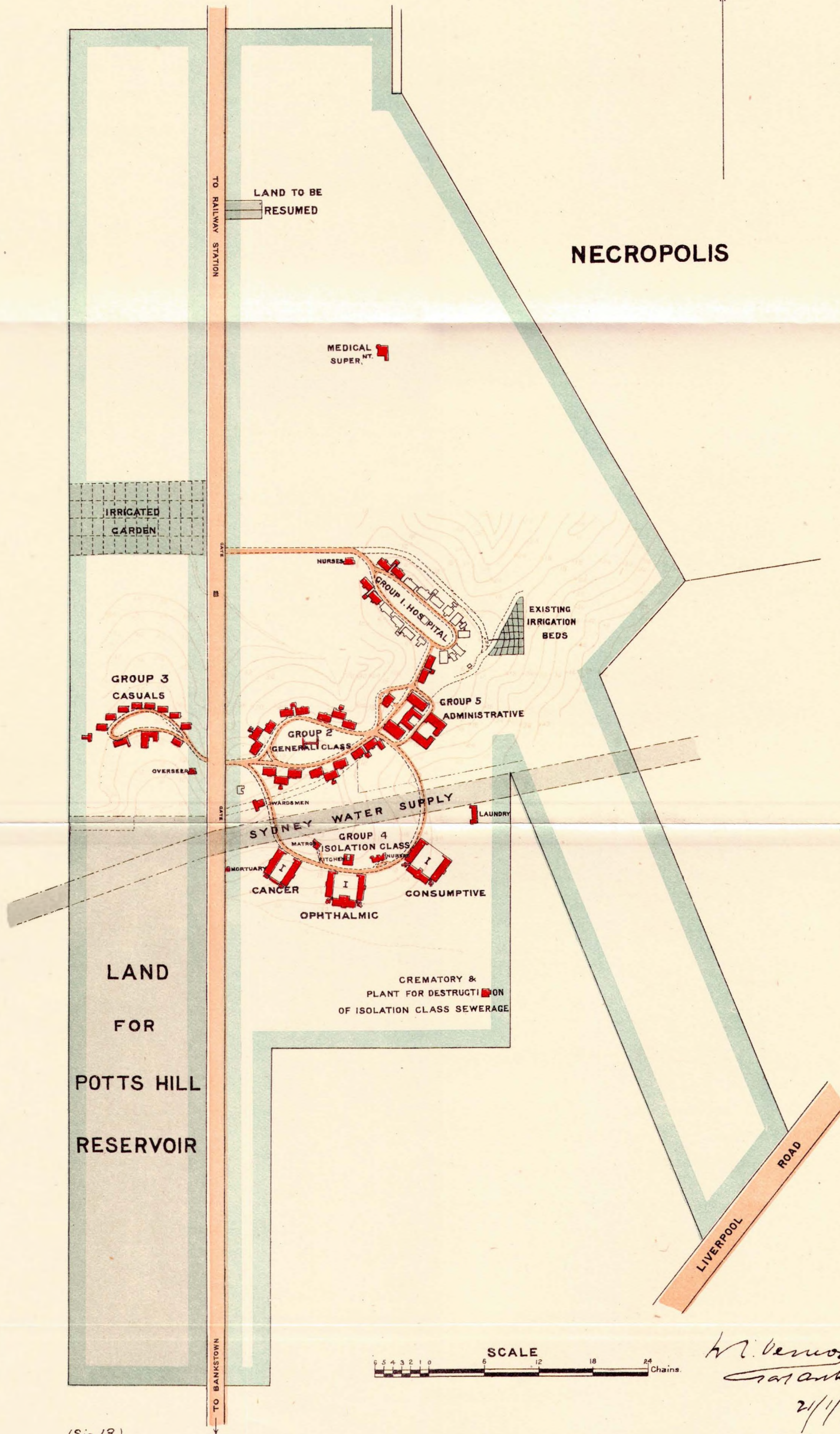
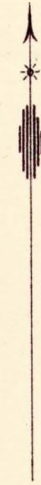
Lunacy.....	£86,753
Hospitals.....	65,742
Aboriginals.....	15,254
Asylums.....	54,830
State children.....	32,708
Subsidies to Benevolent Societies.....	20,210
	£284,497

[4 plans.]

Sydney : Charles Potter, Government Printer—1896.

ROOKWOOD

SHOWING
DEPARTMENTAL SCHEME



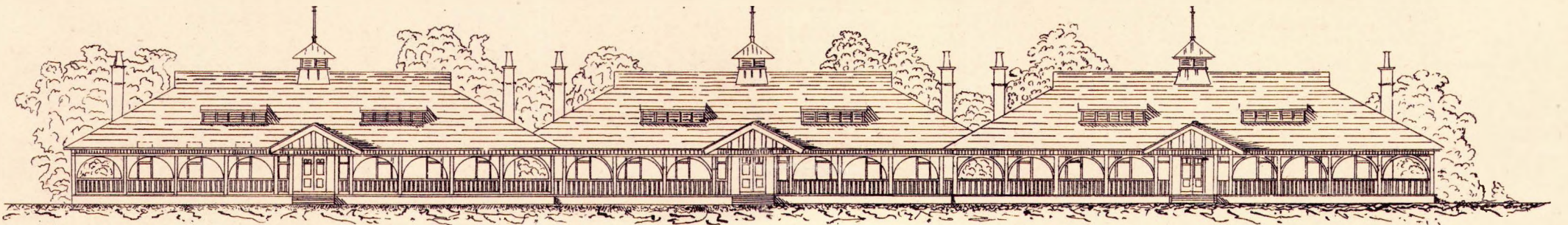
(Sig 13)

SCALE
0 5 10 15 20 24 Chains.

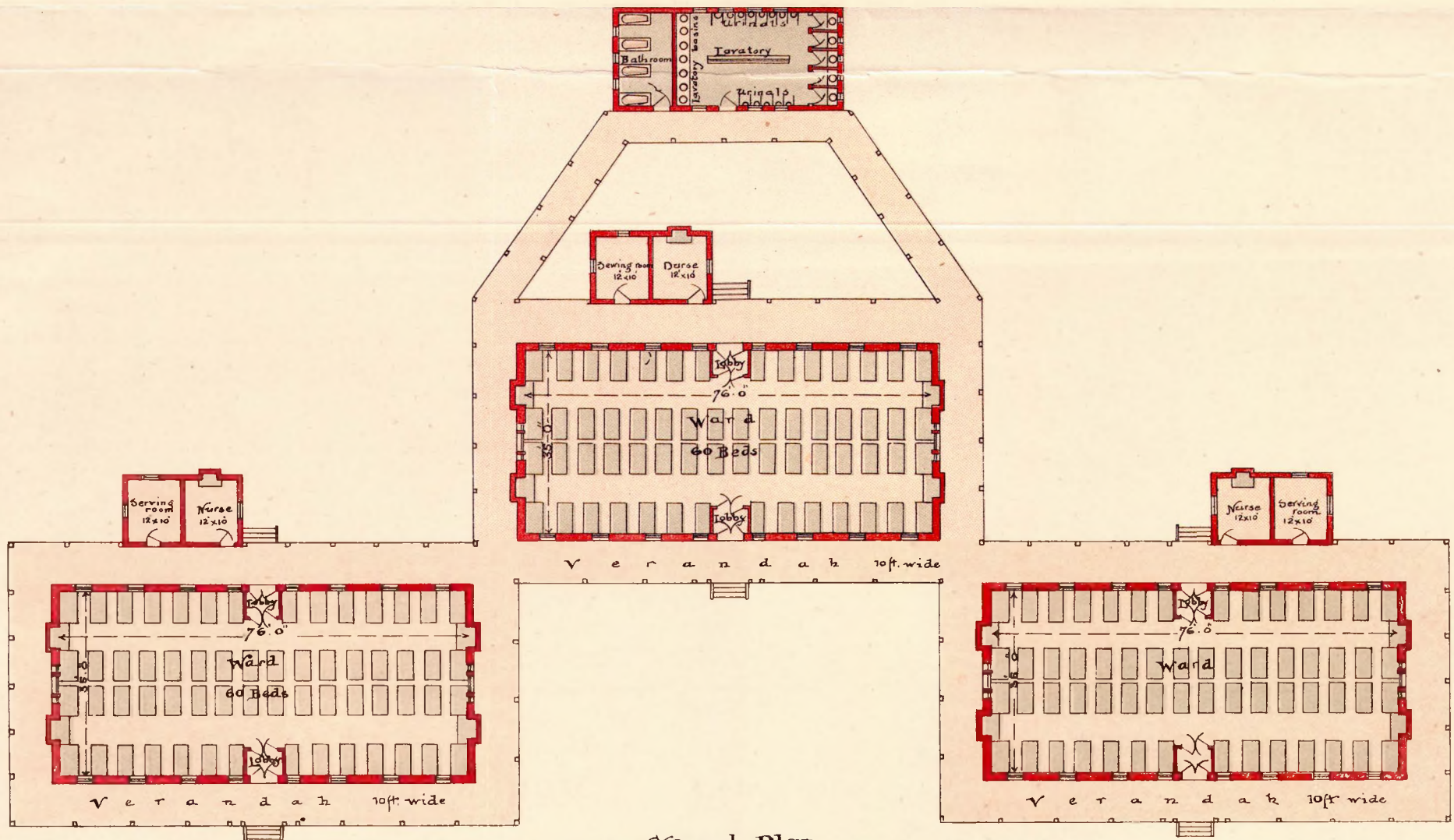
M. Vernon
Crash
2/1/96

Rookwood Asylum : General Class : Group N^o 2.

Combined Pavilion

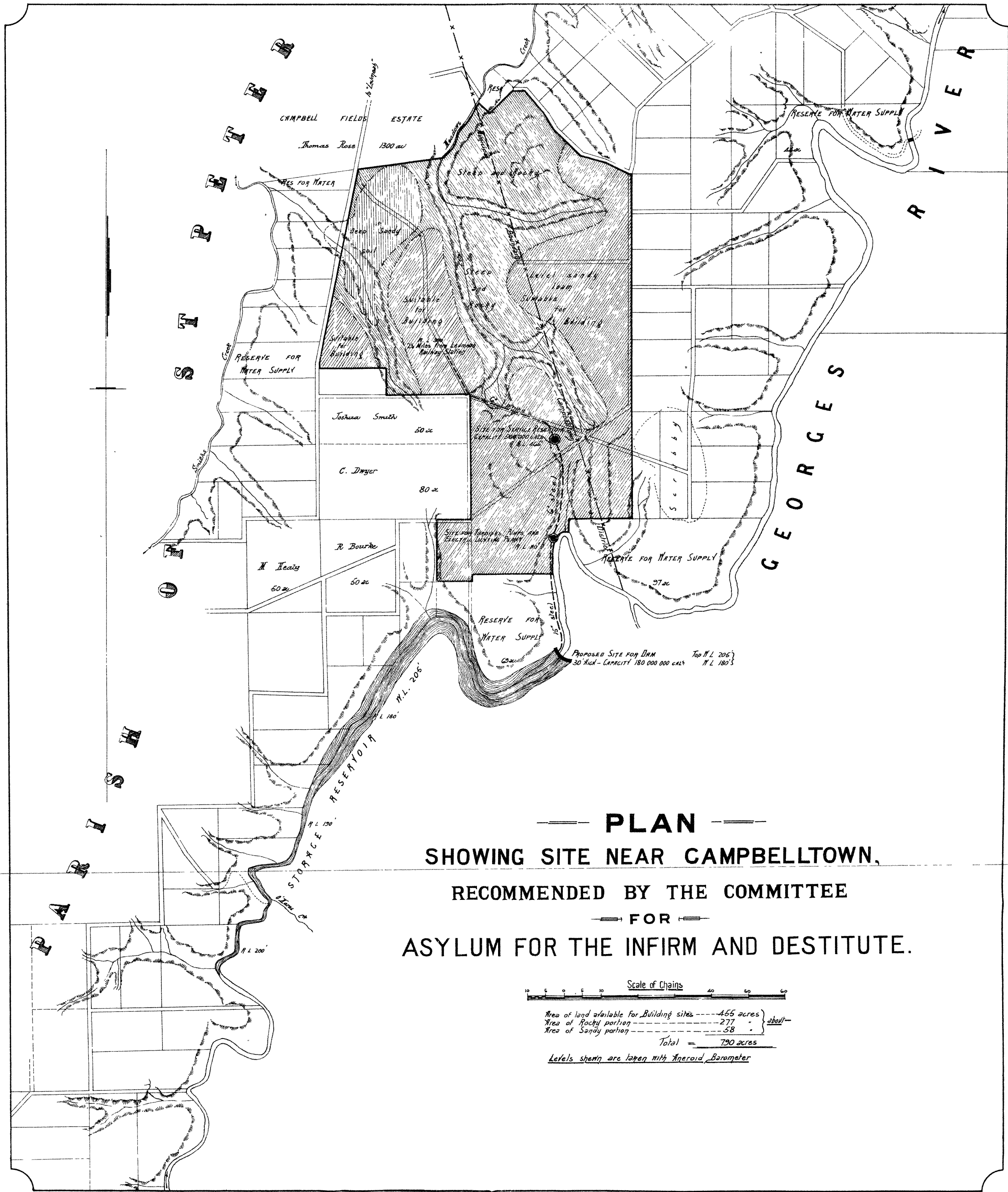


— Elevation —



— Ground Plan —

H. A. Vernon
J. W. Cook
 21/1/96



PLAN
SHOWING SITE NEAR CAMPBELLTOWN,
RECOMMENDED BY THE COMMITTEE
FOR
ASYLUM FOR THE INFIRM AND DESTITUTE.

Scale of Chains
 0 10 20 30 40 50 60

Area of land available for Building sites ----- 455 acres
 Area of Rocky portion ----- 277
 Area of Sandy portion ----- 58
 Total = 790 acres

Levels shown are taken with Aneroid Barometer

1896.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

INSPECTOR-GENERAL OF THE INSANE.

(REPORT FOR 1895.)

Presented to Parliament, pursuant to Act 42 Vic. No. 7, sec. 73.

Printed under No. 19 Report from Printing Committee, 24 September, 1896.

The Inspector-General of the Insane to The Chief Secretary.

Sir, Lunacy Department, Inspector-General's Office, Gladesville, 14 September, 1896.

I do myself the honor, in accordance with the 73rd section of the Lunacy Act of 1878, to submit for your information a report on the state and condition of the Hospitals and other Institutions for the Insane for the year ending 31st December, 1895.

I have, &c.,

F. NORTON MANNING,
Inspector-General.

On the 31st December, 1895, the number of insane persons under official cognisance was 3,720, and their distribution was as follows:—

Institution.	Number on Register.			Number on Leave.		
	Male.	Female.	Total.	Male.	Female.	Total.
Hospital for the Insane, Gladesville	514	334	848	5	20	25
Do Parramatta (Free)	672	381	1,053	9	9	18
Do do (Criminal)	39	13	52	.....	.....	.....
Do Callan Park	444	392	836	6	8	14
Do Newcastle	156	151	307	1	.....	1
Do Rydalmere	300	131	431	.....	.....	.....
Do Kenmore	146	.....	146	1	.....	1
Licensed House for the Insane, Cook's River.....	16	21	37	.....	.....	.....
Do do Ryde .....	.....	4	4	.....	.....	.....
Do do Picton—Swiss Cottage .....	.....	1	1	.....	.....	.....
Do do Picton — Woodland Cottage .....	.....	1	1	.....	.....	.....
South Australian Hospitals	2	2	4	.....	.....	.....
Total.....	2,289	1,431	3,720	22	37	59

The number at the close of 1894 was 3,587, so that the increase during the year amounted to 133, of whom 91 were males and 42 females.

The increase was above the average for the last twenty years, but somewhat below that for the year 1894. In the four years 1892 to 1895 inclusive, the number of insane persons under care has increased by 586, and this has added very materially to the cost of this unfortunate class, not only in the charge for maintenance, but in the necessary provision of buildings in which to accommodate this abnormal influx. The increase in number for the last twenty years is shown in the following return:—

Year.	Increase.	Year.	Increase.	Year.	Increase.
1876.....	43	1883.....	96	1890.....	128
1877.....	89	1884.....	121	1891.....	32
1878.....	87	1885.....	119	1892.....	178
1879.....	95	1886.....	74	1893.....	113
1880.....	88	1887.....	104	1894.....	162
1881.....	119	1888.....	76	1895.....	133
1882.....	98	1889.....	76		

Total for twenty years, 2,031, or an average of 101 a year.

The causes which led to an unusual increase during 1892-3 and 4, and which were pointed out in my report for the latter year, appear to have been still in operation during 1895.

The proportion of insane to population, which from 1872 to 1891 was nearly stationary, and in the latter year stood at 1 in 371 to 2.69 per thousand, has, during the last four years, slowly risen and now stands at 1 in 343 or 2.91 per thousand. The following return, however, shows that the proportion of insane to population has not yet reached that which exists in England, Scotland, or Ireland.

The proportion of insane to population in New South Wales for the last twenty years, and also the proportion in England for the same period, and the proportion in Scotland and Ireland for each year from 1881 to 1894 is shown in the following return—

Year.	Population of New South Wales.	Total Number of Insane in New South Wales on 31 Dec.	Proportion of Insane to Population in New South Wales.	Proportion of Insane to Population in England.	Proportion of Insane to Population in Scotland.	Proportion of Insane to Population in Ireland.
			Per M.	Per M.	Per M.	Per M.
1876	629,776	1,740	1 in 361 or 2·77	1 in 368 or 2·71	.....	.....
1877	662,212	1,829	1 in 362 or 2·76	1 in 363 or 2·75	.....	.....
1878	693,743	1,916	1 in 362 or 2·76	1 in 360 or 2·77	.....	.....
1879	734,282	2,011	1 in 365 or 2·74	1 in 363 or 2·75	.....	.....
1880	770,524	2,099	1 in 367 or 2·72	1 in 353 or 2·83	.....	.....
1881	781,265	2,218	1 in 352 or 2·84	1 in 352 or 2·84	1 in 370 or 2·70	1 in 386 or 2·59
1882	817,468	2,307	1 in 354 or 2·82	1 in 348 or 2·87	1 in 369 or 2·72	1 in 372 or 2·68
1883	869,310	2,403	1 in 361 or 2·77	1 in 345 or 2·89	1 in 365 or 2·75	1 in 358 or 2·78
1884	921,129	2,524	1 in 364 or 2·74	1 in 345 or 2·89	1 in 363 or 2·77	1 in 350 or 2·85
1885	980,573	2,643	1 in 374 or 2·67	1 in 348 or 2·87	1 in 358 or 2·82	1 in 344 or 2·90
1886	1,030,762	2,717	1 in 379 or 2·63	1 in 349 or 2·86	1 in 358 or 2·82	1 in 335 or 2·98
1887	1,042,919	2,821	1 in 369 or 2·71	1 in 346 or 2·88	1 in 352 or 2·89	1 in 319 or 2·13
1888	1,055,740	2,898	1 in 374 or 2·67	1 in 344 or 2·90	1 in 345 or 2·95	1 in 307 or 3·25
1889	1,122,200	2,974	1 in 377 or 2·65	1 in 341 or 2·92	1 in 339 or 3·02	1 in 295 or 3·38
1890	1,170,000	3,102	1 in 377 or 2·65	1 in 343 or 2·91	1 in 335 or 3·07	1 in 288 or 3·46
1891	1,165,300	3,134	1 in 371 or 2·69	1 in 335 or 2·98	1 in 315 or 3·08	1 in 281 or 3·55
1892	1,197,050	3,312	1 in 361 or 2·77	1 in 330 or 3·02	1 in 311 or 3·14	1 in 270 or 3·69
1893	1,223,370	3,425	1 in 357 or 2·80	1 in 326 or 3·06	1 in 310 or 3·22	1 in 267 or 3·74
1894	1,251,450	3,587	1 in 348 or 2·87	1 in 321 or 3·09	1 in 300 or 3·33	.....
1895	1,277,870	3,720	1 in 343 or 2·91	.....	.....	.....

Of the total number on the register at the close of the year 3,720—3,657 were in the Hospitals or Licensed Houses in this Colony, 59 were absent on leave under the provisions of the Lunacy Act, and 4 were in Hospitals for the Insane, in South Australia.

The returns from the Institutions show an increase of 38 on the registers at the Hospital at Rydalmere, of 1 at Parramatta, free, 4 at Parramatta, criminal, 1 at Newcastle, and 1 at the Licensed House, Ryde, whilst there was a decrease of 59 at the Hospital at Gladesville, 1 at Callan Park, and 2 at the Licensed House at Cook's River. The Hospital for the Insane at Kenmore, near Goulburn, appears on the list for the first time, and 146 patients were on the registers at the close of the year. These were all transferred from the overcrowded wards at Gladesville, Parramatta, and Callan Park; patients as a rule being selected who came from the southern districts of the Colony, and whose mental condition was such as would permit of their occupying the rooms temporarily set apart as dormitories in the administrative buildings, workshops, &c., erected under the first contract taken for the new Hospital for the Insane of the southern district of the Colony.

In several prior reports I have dilated on the hardships to the patients, and the expense to the Government which attended the transfer of insane persons—often in an acute stage of the malady—from the district of Broken Hill to the Hospitals for the Insane in the neighbourhood of Sydney.

During the year 1895 an agreement was concluded with the Government of South Australia, under the provisions of the Lunacy Convention Act of 1894, by which the South Australian Government receives and treats in the Hospitals for the Insane in that Colony persons becoming insane in the district of Broken Hill, and dealt with by the justices at that place. This arrangement has worked in a most satisfactory manner, and at the close of the year 4 patients belonging to this Colony were in the South Australian Hospitals.

The following tables show the admissions, discharges, and deaths, the proportion of recoveries, the rate of mortality, the causes of insanity in those admitted, those who recovered, and those who died, the causes of death, the length of residence in those who recovered and those who died, and also the ages, condition as to marriage, religious profession, nationality, and previous occupation of those admitted, and of all under care, as well as the form of mental disorder in those admitted, those who recovered, and those who died during the year:—

TABLE 1.

SHOWING the Admissions, Readmissions, Discharges, and Deaths in the Hospitals and Licensed Houses for the Insane during the year 1895.

In Hospital on 31st December, 1894				Male.	Female.	Total.
	Male.	Female.	Total.	2,198	1,389	3,587
Admitted for the first time during the year	389	220	609			
Readmitted during the year	61	45	106			
Transferred during the year	205	68	273			
				655	333	988
Total under care during the year 1895.....				2,853	1,722	4,575
Discharged or removed—						
Recovered	175	133	308			
Relieved	32	20	52			
Transferred	205	68	273			
Escaped (and not recaptured)	3	.....	3			
Died	151	72	223			
Total discharged or died during the year 1895				366	293	659
Remaining				2,287	1,429	3,716
Average number resident during the year				2,209	1,365	3,574
* Persons under care during the year				2,843	1,718	4,561
* Persons admitted				605	272	877
* Persons recovered.....				168	129	297

* Persons, i.e., separate persons in contradistinction to "cases," which may include the same individual more than once.
† Total cases minus readmission of patients discharged during the current year.

TABLE 2.

TABLE 2.

SHOWING the Admissions, Readmissions, Discharges, and Deaths, with the Mean Annual Mortality, and the Proportion of Recoveries, &c., per cent., in the Hospitals for the Insane, for the years 1876 to 1895 inclusive, and including the Licensed Houses, from the year 1882.

Year.	Admitted.						Transferred from other Hospitals, &c.			Discharged.						Escaped and not recaptured within 28 days.	Died.			Remaining in Hospital 31st December in each year.	Average number resident.			Percentage of recoveries on admissions and readmissions.			Percentage of recoveries on admissions and readmissions for Quinquennial periods.			Percentage of patients relieved on admissions and readmissions.			Percentage of patients relieved on admissions and readmissions for Quinquennial periods.			Percentage of deaths on average numbers resident.			Percentage of deaths on average numbers resident for Quinquennial periods.																										
	Admitted for the first time.		Readmitted.		M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.		Total.	M.	F.		Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.																										
	M.	F.	Total.	M.																																				F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
1876	182	111	293	33	27	60	101	12	113	88	70	158	17	19	36	100	45	145	78	29	107	1072	533	1605	1052	536	1588	40	90	50	72	44	75	7	90	13	76	10	19	7	41	5	41	6	73																				
1877	262	100	362	62	24	86	133	14	147	137	64	201	17	18	35	130	21	151	97	20	117	1147	548	1695	1130	529	1659	42	28	51	61	44	86	4	97	14	51	7	81	8	58	3	78	7	05																				
1878	212	126	338	40	38	78	112	36	148	108	46	154	17	20	37	113	45	158	99	28	127	1174	609	1783	1175	579	1754	42	85	28	05	37	01	42	28	39	86	41	42	6	75	12	19	8	89	6	80	13	77	9	28	8	42	4	83	7	24	7	95	4	88	6	92		
1879	241	128	369	40	26	66	98	12	110	112	58	170	21	28	49	97	17	114	91	26	117	1232	646	1878	1188	620	1808	39	86	37	66	39	08	7	47	18	18	11	26	7	66	4	19	6	47																				
1880	267	145	412	28	30	58	42	24	66	133	63	196	21	19	40	40	35	75	96	40	136	1276	688	1964	1249	665	1914	45	08	36	00	41	70	7	11	10	85	8	51	7	68	6	01	7	10																				
1881	284	134	418	35	27	62	31	9	40	133	73	206	16	14	30	34	19	53	84	26	110	1354	726	2080	1314	700	2014	41	09	45	34	42	91	5	01	8	69	6	25	6	39	3	71	5	46																				
1882	286	142	428	20	25	45	38	14	52	118	84	202	22	16	38	38	14	52	93	48	141	1430	877	2307	1392	854	2246	38	56	50	29	42	70	7	18	9	58	8	03	6	68	5	62	6	27																				
1883	272	161	433	21	22	43	29	145	174	119	75	194	19	11	30	29	145	174	111	45	156	1474	929	2403	1443	904	2347	40	61	40	98	40	75	40	07	42	27	40	89	6	48	6	01	6	30	5	65	8	36	6	66	7	69	4	98	6	64	7	34	5	16	6	52		
1884	281	159	440	20	33	53	130	42	172	103	79	182	16	12	28	107	42	140	4	123	58	181	1552	972	2524	1503	932	2435	34	21	41	14	36	91	5	31	6	25	5	67	8	18	6	22	7	43																			
1885	318	205	523	20	24	44	29	83	112	151	83	234	15	25	40	29	83	112	7	118	49	167	1599	1044	2643	1550	985	2535	44	67	36	24	41	26	4	43	10	91	7	05	7	61	4	97	6	58																			
1886	345	196	541	18	8	26	27	88	115	174	99	273	16	10	26	27	88	115	7	121	66	187	1644	1073	2717	1604	1035	2639	47	93	48	52	48	14	4	40	4	90	4	58	7	54	6	37	7	08																			
1887	302	179	481	30	21	51	19	10	29	115	99	214	11	14	25	19	10	29	4	111	74	185	1735	1086	2821	1670	1052	2722	34	63	49	50	40	22	3	31	7	00	4	69	6	64	7	03	6	79																			
1888	333	196	529	32	27	59	37	14	51	167	108	275	20	11	31	37	14	51	5	132	68	200	1776	1122	2898	1738	1077	2815	46	75	48	43	46	76	41	33	49	30	44	34	5	47	4	93	5	27	4	29	4	36	4	31	7	59	6	31	7	10	7	30	6	36	6	94	
1889	294	186	480	41	29	70	37	12	49	135	109	244	8	4	12	37	12	49	8	1	93	871	209	1822	1152	2974	1785	1104	2389	40	29	50	69	44	36	2	38	1	86	2	18	7	73	6	43	7	23																		
1890	341	215	556	35	20	55	41	33	74	141	116	257	21	8	29	41	33	74	2	4	128	65	193	1906	1196	3102	1827	1133	2960	37	50	49	36	42	06	5	58	3	40	4	74	7	00	5	73	6	52																		
1891	327	212	539	31	26	57	227	34	261	168	129	297	11	17	28	227	34	261	6	167	66	233	1912	1222	3134	1982	1167	3149	46	92	54	20	49	83	3	07	7	14	4	69	8	42	5	65	7	39																			
1892	377	208	585	39	42	81	125	41	166	154	107	261	17	14	31	125	41	166	4	1	122	69	191	2031	1281	3312	1946	1205	3151	37	01	42	80	39	18	4	08	5	60	4	65	6	26	5	72	6	06																		
1893	355	227	582	35	51	86	104	61	165	156	130	286	21	21	42	104	61	165	1	1	172	74	246	2092	1333	3425	2054	1258	3312	38	04	46	93	41	63	39	56	48	06	42	87	5	12	7	58	6	11	5	24	7	51	6	12	8	37	5	88	7	42	7	19	5	54	6	56
1894	395	249	644	31	37	68	84	104	188	162	134	296	27	27	54	84	104	188	1	1	130	69	199	2198	1389	3587	2124	1321	3445	38	02	46	85	41	57	6	33	9	44	7	58	6	12	5	22	5	77																		
1895	389	220	609	61	45	106	205	68	273	175	133	308	32	20	52	205	68	273	3	1	151	72	223	2287	1429	3716	2209	1365	3574	38	90	50	19	43	08	7	11	7	54	7	21	6	83	5	27	6	24																		

Average percentage of recoveries on admissions and readmissions for ten years, 1886-1895	40.38	48.62	43.55
Average percentage of patients relieved on admissions and readmissions for ten years, 1886-1895	4.80	6.09	5.30
Average percentage of deaths on average numbers resident for ten years, 1886-1895	7.24	5.92	6.73

TABLE 3.

SHOWING the Causes of Insanity*, apparent or assigned, in the admissions and readmissions in the Hospitals and Licensed Houses for the Insane, during the year 1895.

Causes of Insanity.	Number of Instances in which each cause was assigned.								
	As predisposing cause.†			As exciting cause.‡			Total.‡		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
MORAL—									
Domestic trouble (including loss of relatives and friends)	1	1	2	7	23	30	8	24	32
Adverse circumstances (including business anxiety and pecuniary difficulties)	1	1	2	20	5	25	21	6	27
Mental anxiety and "worry" (not included under above two heads), and overwork	...	5	5	24	5	29	24	10	34
Religious excitement	...	...	...	9	5	14	9	5	14
Love affairs (including seduction)	...	...	...	1	3	4	1	3	4
Fright and nervous shock	...	...	...	...	3	3	...	3	3
Isolation	...	2	2	...	...	...	...	2	2
Nostalgia	...	...	...	1	...	1	1	...	1
PHYSICAL—									
Intemperance in drink	8	4	12	43	6	49	51	10	61
Do (sexual)	...	3	3	...	...	...	...	3	3
Veneral disease	...	...	...	1	...	1	1	...	1
Self-abuse (sexual)	5	...	5	12	...	12	17	...	17
Sunstroke	5	...	5	3	1	4	8	1	9
Accident or injury	15	1	16	4	1	5	19	2	21
Pregnancy	...	...	...	...	2	2	...	2	2
Parturition and the puerperal state	...	1	1	...	18	18	...	19	19
Convulsions in childhood	2	...	2	...	...	...	2	...	2
Lactation	...	3	3	...	3	3	...	6	6
Uterine and ovarian disorders	...	1	1	...	3	3	...	4	4
Puberty	1	1	2	2	4	6	3	5	8
Change of life	...	...	...	...	4	4	...	4	4
Fevers	1	...	1	...	3	3	1	3	4
Privation and overwork	2	...	2	6	...	6	8	...	8
Phthisis	1	...	1	...	...	...	1	...	1
Epilepsy	18	9	27	24	8	32	42	17	59
Disease of skull and brain	1	...	1	9	1	10	10	1	11
Old age	29	6	35	1	1	2	30	7	37
Other bodily diseases and disorders and chronic ill health	7	9	16	11	12	23	18	21	39
Excess of opium	2	1	3	...	1	1	2	2	4
PREVIOUS ATTACKS	56	42	98	...	...	...	56	42	98
HEREDITARY INFLUENCE ASCERTAINED	24	29	53	...	1	1	24	30	54
CONGENITAL DEFECT ASCERTAINED	26	19	45	...	2	2	26	21	47
OTHER ASCERTAINED CAUSES	...	2	2	2	...	2	2	2	4
UNKNOWN	...	...	...	...	...	...	128	67	185

* These "causes" are taken from the statements in the papers received with the patients on admission, and are verified or corrected as far as possible by the Medical Officers.

† No cause is enumerated more than once in the case of any patient.

‡ The aggregate of the totals exceeds the whole number of patients admitted, the excess being due to the combinations.

TABLE 4.

SHOWING the Causes of Death in the Hospitals and Licensed Houses for the Insane during the year 1895.

	Male.	Female.	Total.
CEREBRAL DISEASE—			
Apoplexy and paralysis	4	...	4
Epilepsy and convulsions	10	6	16
General paralysis	35	4	39
Maniacal and melancholic exhaustion and decay	9	3	12
Inflammation and other diseases of the brain, softening, tumour, &c.	23	12	35
THORACIC DISEASE—			
Inflammation of lungs, pleura, and bronchi	17	9	26
Pulmonary consumption	11	13	24
Disease of heart and blood-vessels	8	7	15
ABDOMINAL DISEASE—			
Inflammation and ulceration of stomach, intestines, and peritoneum	2	3	5
Dysentery and diarrhoea	3	1	4
Albuminuria	...	...	...
Disease of bladder and prostate	2	...	2
Disease of liver	5	...	5
Intestinal obstruction	...	1	1
CANCER	2	1	3
CARIES OF SPINE	1	...	1
ERYSIPELAS	...	...	...
TYPHOID FEVER	...	1	1
GENERAL DEBILITY AND OLD AGE	14	8	22
RODENT ULCER	1	1	2
CARBUNCLE	...	1	1
EXOPHTHALMIC GOITRE	...	1	1
ACCIDENT	1	...	1
SUICIDE	3	...	3
Total	151	72	223

TABLE 8.

SHOWING the Religious Professions of those admitted and readmitted, and those under care in the Hospitals and Licensed Houses for the Insane during the year 1895.

Religious Profession.	Admissions and readmissions.			Under care during the year 1895.		
	Male.	Female.	Total.	Male.	Female.	Total.
Protestant—						
Church of England	205	122	327	1,233	604	1,927
Presbyterian	42	17	59	199	116	314
Wesleyan	18	13	31	94	59	153
Lutheran	8	.....	8	67	11	78
Other Protestant Denominations	23	12	35	122	78	200
Roman Catholic	129	91	220	942	718	1,660
Pagan	8	1	9	76	1	77
Hebrew	3	.....	3	22	9	31
Mahomedan	1	.....	1	9	.....	9
Unascertained	13	9	22	89	37	126
Total	450	265	715	2,853	1,722	4,575

TABLE 9.

SHOWING the Native Countries of those admitted and readmitted, and those under care in the Hospitals and Licensed Houses for the Insane during the year 1895.

	Admitted and readmitted during 1895.			Under care during 1895.		
	Male.	Female.	Total.	Male.	Female.	Total.
British Colonies {						
New South Wales	179	129	308	912	712	1,624
Other Colonies	34	21	55	176	85	261
England	106	53	159	680	320	1,000
Scotland	20	7	27	146	70	216
Ireland	53	34	87	564	457	1,021
France	1	.....	1	19	8	27
Germany	17	3	20	78	22	100
China	8	.....	8	83	.....	83
Other Countries	32	18	50	195	48	243
Total	450	265	715	2,853	1,722	4,575

TABLE 10.

SHOWING the Form of Mental Disorder in the Admissions, Readmissions, Recoveries, and Deaths of the year 1895, and of Inmates in Hospitals and Licensed Houses for the Insane, on 31st December, 1895.

Form of Mental Disorder.	Admissions and readmissions.			Recoveries.			Deaths.			Remaining in Hospital 31st Dec., 1895.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
CONGENITAL OR INFANTILE MENTAL DEFICIENCY—												
(a) with Epilepsy	17	9	26	.....	.....	.....	5	4	9	94	61	155
(b) without Epilepsy	20	19	39	2	.....	2	5	8	13	231	163	394
Epileptic Insanity	20	8	28	7	.....	7	6	3	9	81	50	131
General Paralysis of the Insane	30	2	32	.....	.....	.....	30	4	34	74	4	78
MANIA—												
Acute	33	38	71	34	33	67	8	6	14	75	50	125
Chronic	3	6	9	1	.....	1	10	3	13	222	214	436
Recurrent	17	13	30	5	2	7	1	6	7	49	56	105
Delusional	114	42	156	48	21	69	32	8	40	564	242	806
A Potu	16	1	17	10	.....	10	1	1	2	24	6	30
Puerperal .....	.....	16	16	.....	8	8	.....	1	1	.....	32	32
Senile	3	1	4	1	.....	1	2	1	3	10	8	18
MELANCHOLIA—												
Acute	26	11	37	9	5	14	4	2	6	27	30	57
Chronic .....	.....	1	1	.....	.....	.....	2	2	4	75	57	132
Recurrent	4	2	6	3	1	4	.....	.....	.....	12	14	26
Delusional	93	76	169	45	57	102	12	7	19	290	219	509
Puerperal .....	.....	2	2	.....	2	2	.....	.....	.....	.....	10	10
Senile .....	.....	3	3	1	2	3	.....	1	1	9	8	17
DEMENTIA—												
Primary	15	6	21	6	2	8	2	1	3	119	47	166
Secondary	12	3	15	3	.....	3	10	6	16	239	123	362
Senile	22	3	25	.....	.....	.....	18	7	25	84	31	115
Organic (i.e., from Tumours, coarse Brain Disease, &c.)	5	3	8	.....	.....	.....	3	1	4	8	4	12
Total	450	265	715	175	133	308	151	72	223	2287	1429	3716

TABLE 5.

SHOWING the Length of Residence in those discharged recovered, and in those who have died in the Hospitals and Licensed Houses for the Insane during the year 1895.

	Recovered.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.
Under 1 month	3	.....	3	9	4	13
From 1 to 3 months.....	56	35	91	16	10	26
„ 3 to 6 months	49	25	74	17	6	23
„ 6 to 9 months.....	20	26	46	7	3	10
„ 9 to 12 months.....	11	9	20	15	7	22
„ 1 to 2 years.....	16	20	36	20	7	27
„ 2 to 3 years.....	6	9	15	21	15	36
„ 3 to 5 years.....	6	3	9	15	5	20
„ 5 to 7 years.....	1	3	4	4	3	7
„ 7 to 10 years.....	4	.....	4	4	4	8
„ 10 to 12 years.....	.....	2	2	2	1	3
„ 12 to 15 years.....	2	1	3	4	2	6
Over 15 years	1	.....	1	17	5	22
Total.....	175	133	308	151	72	223

TABLE 6.

SHOWING the Ages of the Admissions and Readmissions, Discharges, and Deaths, and also the Ages of all Patients under care, during the year 1895, in the Hospitals and Licensed Houses for the Insane.

	Admitted and readmitted.			Recovered.			Removed, relieved, &c.			Died.			Patients under care during year 1895.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1 to 5 years .....	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	6	7
5 to 10 years	6	7	13	.....	.....	.....	.....	2	2	1	5	6	28	19	42
10 to 15 years	9	4	13	1	.....	1	4	1	5	1	1	2	36	21	57
15 to 20 years	23	20	43	14	9	23	2	5	7	3	1	4	74	67	141
20 to 30 years	96	60	156	44	44	88	40	16	56	12	6	18	423	280	703
30 to 40 years	141	80	221	49	36	85	65	23	88	37	15	52	740	402	1,142
40 to 50 years	73	52	125	34	26	60	68	13	81	29	15	44	601	392	993
50 to 60 years	48	25	73	19	11	30	48	17	65	34	14	48	548	322	870
60 to 70 years	36	12	48	11	6	17	9	5	14	15	7	22	285	146	431
70 to 80 years	13	3	16	2	1	3	4	6	10	13	6	19	100	56	156
80 to 90 years	5	.....	5	1	.....	1	.....	.....	.....	4	2	6	18	11	29
90 and upwards .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	2	4	.....	4
Total.....	450	265	715	175	133	308	240	88	328	151	72	223	2,853	1,722	4,575

TABLE 7.

SHOWING Conditions as to Marriage in those admitted and readmitted, and those under care in the Hospitals and Licensed Houses for the Insane during the year 1895.

	Admissions and readmissions.			Under care during the year 1895.		
	Male.	Female.	Total.	Male.	Female.	Total.
Single	270	105	375	1,939	734	2,673
Married	139	129	268	588	717	1,305
Widowed.....	19	20	39	116	195	311
Unascertained.....	22	11	33	210	76	286
Total.....	450	265	715	2,853	1,722	4,575

TABLE 11.

SHOWING the Occupations of those admitted and readmitted, and those under care, in the Hospitals and Licensed Houses for the Insane, during the year 1895.

Occupations.	Admitted and readmitted during 1895.			Under care during 1895.		
	Male.	Female.	Total.	Male.	Female.	Total.
Professional { Clergy, military and naval officers, members of the medical and legal professions, architects, artists, authors, civil engineers, surveyors, &c. }	18	.....	18	70	.....	70
Commercial { Bankers, merchants, accountants, clerks, shopkeepers, shopmen, &c. }	48	.....	48	211	.....	211
Agricultural and pastoral { Farmers, squatters, graziers, free selectors, &c. }	30	.....	30	151	1	152
Mechanics, tradesmen, &c., actively employed, and in out-door avocations { Blacksmiths, carpenters, engine-fitters, firemen, sawyers, painters, police, &c. }	52	.....	52	329	.....	329
Mechanics, tradesmen, &c., employed at sedentary or indoor occupations { Bootmakers, bookbinders, compositors, weavers, tailors, &c. }	38	.....	38	190	.....	190
Domestic service { Waiters, cooks, servants, &c. }	16	2	18	82	29	111
Educational and higher domestic duties { Miners, labourers, seamen, shepherds, &c. Governesses, teachers, housekeepers, trained nurses, &c. }	204	.....	204	1,457	.....	1,457
Ordinary domestic work { Servants, charwomen, laundresses, &c. .... }	.....	53	53	.....	432	432
Commercial — actively employed { Shopkeepers, saleswomen, &c. .... }	.....	3	3	.....	71	71
Commercial — employed in sedentary occupations { Tailoresses, needlewomen, machinists, bookbinders, factory workers, &c. .... }	.....	11	11	.....	60	60
Wives of professional men { Clergy, military, and naval officers, members of the medical and legal professions, architects, artists, authors, civil engineers, surveyors, &c. .... }	.....	4	4	.....	23	23
Wives of commercial men { Bankers, merchants, accountants, clerks, shopkeepers, shopmen, &c. .... }	.....	2	2	.....	43	43
Wives of tradesmen, mechanics, &c. { Blacksmiths, carpenters, engine-fitters, firemen, sawyers, painters, police, bootmakers, bookbinders, compositors, weavers, tailors, &c. .... }	.....	18	18	.....	113	113
Wives of agricultural and pastoral men { Farmers, squatters, graziers, free selectors, &c. .... }	.....	10	10	.....	89	89
Wives of { Miners, labourers, seamen, shepherds, &c. .... }	.....	20	20	.....	157	157
No occupation { }	26	75	101	219	341	560
Unknown { }	18	45	63	142	275	417
Total.....	450	265	715	2,853	1,722	4,575

Admissions.

The number of patients admitted during the year was 715—450 males and 265 females—and was larger than the number admitted in any former year. Sixty-two of the admissions were received from the Asylums for the Infirm and Destitute, and the greater number of these patients were aged and demented. Of the total number, 609 were admitted for the first time, and 106 had at some previous period been under treatment in one of the Hospitals for the Insane in this Colony. The proportion of readmissions, though not larger than usual, shows the liability to relapse in cases of mental disease. The ratio of admissions to the general population or the amount of "occurring insanity" during the last twenty years—1876 to 1895 inclusive—is shown in the following return:—

Year.	Admissions.	Population.	Proportion to Population.	Year.	Admissions.	Population.	Proportion to Population.
1876.....	360	629,776	1 in 1,749	1886	567	1,030,762	1 in 1,817
1877.....	457	662,212	1 in 1,449	1887	532	1,042,919	1 in 1,960
1878.....	424	693,743	1 in 1,636	1888	588	1,085,740	1 in 1,846
1879.....	410	734,282	1 in 1,668	1889	550	1,122,200	1 in 2,040
1880.....	476	770,524	1 in 1,618	1890	611	1,170,000	1 in 1,914
1881.....	494	781,265	1 in 1,581	1891	596	1,165,300	1 in 1,955
1882.....	473	817,468	1 in 1,728	1892	666	1,197,050	1 in 1,797
1883.....	476	869,310	1 in 1,826	1893	688	1,223,370	1 in 1,778
1884.....	493	921,129	1 in 1,868	1894	712	1,251,450	1 in 1,757
1885.....	567	980,573	1 in 1,729	1895	715	1,277,870	1 in 1,787

The number of admissions from places beyond the Colony, reported under the provisions of section 4 of the Lunacy Act Further Amendment Act, was 7 only, a much less number than during any preceding year. Steps were taken to recover maintenance for these patients under the provisions of the statute, and only 3 remained in the hospitals at the close of the year.

Transfers.

The number of patients transferred from one hospital to another was 273, and of these 152 were sent from Gladesville, Parramatta, Rydalmere, and Newcastle to Kenmore on the opening of that hospital, 78 were sent to Rydalmere from Gladesville and Callan Park to fill vacant beds in that hospital, 6 were sent from the Hospital for Criminals to the Hospital for Free Patients at Parramatta on expiry of sentence, and 6 weak-minded children sent in error to Gladesville, Callan Park, and Parramatta were transferred to the hospital specially set apart for these cases at Newcastle. The remainder were transferred from one hospital to another for change of air and scene and with the hope of benefiting them in either mental or general health.

Discharges.

Discharges.

The number of patients discharged during the year was 360, and of these 308 had recovered and 52 were relieved, and were so far well that they could be taken charge of by relatives or friends. The recoveries give a percentage of 43·08, and the cases relieved a percentage of 7·21 on the admissions, so that upwards of 50 per cent. so far recovered under hospital treatment as to admit of discharge. The recovery rate is much the same as for some years past.

Deaths.

The number of deaths was 223, and the percentage on the daily average number resident 6·24.

In 1894 the death-rate was 5·77, but the average rate for the last ten years has been 6·73. This rate is decidedly below that in Victoria, where the death-rate for 1895 was 8·27 and the average for the previous thirteen years 7·21, and also below that in South Australia, where the rate in 1895 was 8·00 and the average rate for the previous twenty years 8·4 per cent.

The death-rate at the different institutions was as follows:—Gladesville, 5·96; Parramatta Free, 7·26; Parramatta Criminal, 2·00; Callan Park, 6·36; Rydalmere, 5·08; Kenmore, 2·77; Newcastle, 7·16; and Cook's River, 2·85.

In Table 4 the causes of death are shown. Of the total number, 223, no less than 106 were due to cerebral disease, 65 to thoracic disease—pulmonary consumption being the cause in 24 instances—and 22 to general debility and old age. None of the other causes ran into two figures.

Total number under care.

The total number of patients under care and treatment during the year was 4,575, of whom 2,853 were males and 1,722 females, and the daily average number resident was 3,574.

Leave of absence on Probation.

This system has been continued during the year with the usual satisfactory results.

At the close of 1894, 83 patients were absent, and leave was granted during the year to 103, making a total of 186 on leave during the year. Of these, 83 were discharged recovered, 43 were returned to hospital, 1 died whilst on leave, and 59 were absent at the close of 1895. The period for which leave is granted is usually three months, and it is extended from time to time if the patient remains well enough for home care, though cannot be certified to have recovered from mental illness.

The following return shows the particulars as to leave of absence during the year:—

RETURN showing particulars as to Leave of Absence during the year 1895.

Institution.	Remaining on leave 31st December, 1894.			Number granted leave during the year 1895.			Discharged recovered			Returned to Hospital.			Died whilst on leave.			Remaining on leave 31st December, 1895.		
	M.	F.	Total	M.	F.	Total	M.	F.	Total	M.	F.	Total	M.	F.	Total	M.	F.	Total
Gladesville	15	36	51	5	32	37	9	31	40	6	17	23	...	...	...	5	20	25
Parramatta	8	6	14	11	21	32	7	13	20	2	5	7	1	...	1	9	9	18
Callan Park	8	8	16	13	16	29	9	10	19	6	6	12	...	...	...	6	8	14
Newcastle .....	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	1	...	1
Rydalmere .....	...	...	...	1	...	1	...	...	...	...	1	1	...	...	...	...	...	...
Kenmore .....	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	1	...	1
Cook's River	1	1	2	1	1	2	2	2	4	...	...	...	...	...	...	...	...	...
Total	32	51	83	32	71	103	27	56	83	14	29	43	1	...	1	22	37	59

Casualties.

The casualties during the year were fewer than usual. Three cases of suicide occurred, 2 at Parramatta and 1 at Cook's River, and all of these formed the subject of departmental inquiry in addition to the usual Coroner's inquest. One death resulted from an accidental fall on the back of the head, and another was due to an epileptic seizure. Several determined attempts at suicide were made, but were happily frustrated, and the other accidents which occurred were attended by no serious result.

The receipts of the department from all sources amounted to £14,727 6s. 10d., of which £13,772 6s. 10d. were collected by the Master in Lunacy as contributions towards the maintenance of patients. The sum of £209 17s. 8d. was paid by the Imperial Treasury for maintenance of convict patients. £676 11s. 4d. was received from the sale of fat, old stores, &c., and £68 11s. for rent. The details are shown in the following return:—

TABLE showing Total Receipts on account of Institutions for the Insane during the year 1895.

Name of Institution.	Collected for maintenance of Patients.	Paid from Imperial Treasury for maintenance of Patients.	Sale of Fat and old Stores.	Rent of Land.	Total.
Hospital for the Insane, Gladesville	£ 4,011 3 11	£	£ 214 2 2	£	£ 4,225 6 1
Do Parramatta	2,125 10 7	179 18 0	254 9 11	...	2,559 18 6
Do Callan Park	5,832 13 7	...	146 17 6	...	5,979 11 1
Do Newcastle	803 11 2	29 19 8	17 15 7	...	851 6 5
Do Rydalmere	905 13 11	...	43 6 2	...	949 0 1
Do Kenmore	73 3 8	...	...	...	73 3 8
Licensed House for the Insane, Cook's River	17 10 0	...	...	...	17 10 0
Reception House for the Insane, Darlinghurst	3 0 0	...	...	...	3 0 0
Inspector-General's Office .....	...	...	...	68 11 0	68 11 0
Total	£ 13,772 6 10	209 17 8	676 11 4	68 11 0	14,727 6 10

The total expenditure amounted to £104,846 10s. 7d., and was made up as follows:—Maintenance of patients in Hospitals for the Insane, £100,551 14s. 4d.; maintenance of patients in Reception House, Darlinghurst, £1,589 13s. 3d.; payments to South Australian Government for patients from the District of Broken Hill, £35 3s. 6d.; and general expenses—including cost of Inspector-General's Office, payments to official visitors, maintenance of steam-launch, "Mabel," &c.,—£2,669 19s. 6d.

The daily average number of patients resident was 181 more than during the preceding year, and this, together with the opening and outfit of the new hospital at Kenmore, accounts for the increased expenditure in the hospitals as compared with the year 1895.

The average weekly cost per patient, without deducting collections, was 10s. 11½d., and when collections were deducted, 9s. 4d.

The cost at Kenmore was very high, as the general outfit of stores, bedding, &c., as well as the many expenses incidental to the starting of a new institution, were included in the calculations, and this serves to raise the average cost at all the hospitals.

The following returns show—(1st) the average weekly cost at the hospitals for the last ten years 1886 to 1895; (2nd) the weekly cost at each hospital from 1870 to 1895 inclusive; and (3rd) the particulars of expenditure in the hospitals during the year 1895.

RETURN showing Weekly Cost for Maintenance in Hospitals for the Insane for ten years, 1886 to 1895 inclusive.

Year.	Without deducting Collections.		Deducting Collections.	
	£	s. d.	£	s. d.
1886.....	0 12	7½	0 11	1½
1887.....	0 11	11½	0 10	6
1888.....	0 11	8½	0 10	2
1889.....	0 12	9½	0 11	3½
1890.....	0 11	11½	0 10	4½
1891.....	0 12	1½	0 10	5½
1892.....	0 11	11½	0 10	2
1893.....	0 11	2½	0 9	6½
1894.....	0 10	7	0 8	11
1895.....	0 10	11½	0 9	4
Average for ten years	0 11	9½	0 10	2

The following return shows the weekly cost in all hospitals from 1870 to 1895 inclusive:—

TABLE showing Weekly Cost of Maintenance at Hospitals for the Insane during the years 1870 to 1895 inclusive.

Year.	Gladesville.		Parramatta.		Newcastle.		Callan Park.		Rydalmere.		Kenmore.	
	Collections deducted.	Collections not deducted.	Collections deducted.	Collections not deducted.	Collections deducted.	Collections not deducted.	Collections deducted.	Collections not deducted.	Collections deducted.	Collections not deducted.	Collections deducted.	Collections not deducted.
1870.....	£ 0 12	s. 6	£ 0 12	s. 11	£ 0 9	s. 0	£ 0 10	s. 11	£ 0 18	s. 3	£ 0 10	s. 11
1871.....	0 11	11½	0 12	4	0 9	4	0 10	11	0 18	3	0 10	11
1872.....	0 12	8	0 13	2	0 9	3	0 10	11	0 18	3	0 10	11
1873.....	0 12	7	0 13	0	0 11	4½	0 12	5	0 16	0	0 16	1
1874.....	0 12	2½	0 12	10½	0 12	3	0 12	4½	0 13	5½	0 13	6
1875.....	0 12	2	0 12	6½	0 11	10½	0 11	10½	0 14	1½	0 14	3
1876.....	0 12	5	0 13	1	0 10	0	0 11	2½	0 14	1	0 14	4½
1877.....	0 12	5	0 13	1	0 11	3½	0 11	10½	0 14	1½	0 14	7
1878.....	0 11	4½	0 12	3½	0 12	9½	0 12	10½	0 13	3½	0 14	0
1879.....	0 11	2	0 12	1½	0 11	2½	0 11	7	0 12	8½	0 13	1½
1880.....	0 9	5	0 11	2½	0 10	5½	0 11	1½	0 11	5	0 12	0
1881.....	0 10	1½	0 12	2½	0 10	2½	0 10	9½	0 10	9½	0 11	8
1882.....	0 10	11	0 13	0	0 12	6	0 13	0½	0 10	10	0 11	5½
1883.....	0 10	4½	0 12	6½	0 10	10½	0 11	4½	0 11	3½	0 12	0
1884.....	0 10	4½	0 12	6½	0 9	11½	0 10	7	0 10	11	0 12	0
1885.....	0 10	11	0 13	2	0 9	10½	0 10	7½	0 10	11½	0 12	1
1886.....	0 11	8	0 13	9½	0 10	2	0 10	11½	0 10	7½	0 11	6½
1887.....	0 11	3½	0 13	1½	0 9	7½	0 10	3	0 12	0	0 10	6½
1888.....	0 9	7½	0 11	10½	0 10	0½	0 11	1	0 11	2	0 11	11
1889.....	0 12	1	0 14	8	0 10	0½	0 11	4	0 11	10½	0 12	3½
1890.....	0 10	9½	0 13	0	0 10	1½	0 10	11	0 11	2½	0 10	8½
1891.....	0 10	9½	0 12	11½	0 9	10½	0 9	10½	0 11	2½	0 10	7½
1892.....	0 10	8	0 12	11	0 9	4	0 10	3	0 9	8½	0 10	11½
1893.....	0 10	2½	0 12	4	0 8	8½	0 9	7½	0 9	2½	0 12	7½
1894.....	0 9	6	0 11	5½	0 8	7	0 9	5½	0 8	7½	0 11	5
1895.....	0 9	10½	0 11	10½	0 8	7½	0 9	6	0 7	10½	0 9	0

* First year, and including cost of stores and outfit. † Opening of new Hospital. ‡ Opening of new wards for women.

TABLE showing Annual Cost of Patients in Hospitals for the Insane during the year 1895.

Institution.	Total number under care.	Average number resident.	Total cost.		Amount of collections.		Total annual cost per Patient, without deducting collections.	Annual cost per Patient, deducting collections.
			£	s. d.	£	s. d.		
Hospital for the Insane, Gladesville...	1,118	821	25,364	3 5	4,225	6 1	30 17 10½	25 14 11½
Do Parramatta...	1,288	1,083	26,942	2 4	2,559	18 6	24 17 5½	22 10 3½
Do Callan Park...	1,151	801	25,118	11 11	5,979	11 1	31 7 2	23 17 10½
Do Newcastle ...	342	307	7,186	3 3	851	6 5	23 8 1½	20 9 5½
Do Rydalmere ...	471	413	10,495	11 5	949	0 1	25 8 4½	23 2 4
Do Kenmore ...	152	108	5,445	2 0	73	3 8	50 8 4	49 14 11
	4,522	3,533	100,551	14 4	14,638	5 10	28 9 2½	24 6 4

RETURN showing the Average Annual Cost of Maintenance per Patient at the Hospitals for the Insane for the year 1895.

Name of Hospital.	Daily average number of patients resident.	Salaries, money allowances, and fees.	Provisions extras, medical comforts, and forage.	Stimulants—Wines, spirits, beer, &c.	Medicines and surgical instruments.	Stores, including clothing, bedding, and materials for manufacture.	Fuel, light, and water.	Incidental and miscellaneous expenses, including library, amusements, &c.	Total expenditure	Collections for maintenance, &c.	Annual cost for maintenance per patient.	Annual cost per patient, deducting collections for maintenance, &c.
Gladesville	821	£ s. d. 13 1 0	£ s. d. 9 17 14	£ s. d. 0 1 3½	£ s. d. 0 3 8½	£ s. d. 4 11 8½	£ s. d. 1 4 7½	£ s. d. 1 18 5	£ s. d. 25,364 3 5	£ s. d. 4,225 6 1	£ s. d. 30 17 10½	£ s. d. 25 14 11½
Parramatta	1,033	£ s. d. 10 6 9½	£ s. d. 7 18 8½	£ s. d. 0 1 9	£ s. d. 0 3 11	£ s. d. 3 12 9½	£ s. d. 1 5 3½	£ s. d. 1 8 3½	£ s. d. 20,042 2 4	£ s. d. 2,559 18 0	£ s. d. 24 17 6½	£ s. d. 22 10 3½
Callan Park	801	£ s. d. 13 13 7½	£ s. d. 10 9 6½	£ s. d. 0 2 2½	£ s. d. 0 4 5½	£ s. d. 4 0 4½	£ s. d. 1 9 8½	£ s. d. 1 7 5½	£ s. d. 25,118 11 11	£ s. d. 5,979 11 1	£ s. d. 31 7 2	£ s. d. 23 17 10½
Newcastle	307	£ s. d. 9 2 11	£ s. d. 6 15 11½	£ s. d. 0 0 1	£ s. d. 0 4 0½	£ s. d. 3 17 9½	£ s. d. 1 10 1½	£ s. d. 1 17 8½	£ s. d. 7,136 3 3	£ s. d. 851 6 5	£ s. d. 23 8 1½	£ s. d. 20 0 5½
Rydalmere	413	£ s. d. 10 9 4½	£ s. d. 6 19 8	£ s. d.	£ s. d. 0 3 9½	£ s. d. 4 13 6½	£ s. d. 1 9 2	£ s. d. 1 7 10	£ s. d. 10,495 11 5	£ s. d. 949 0 1	£ s. d. 25 8 4½	£ s. d. 23 2 4
Kenmore	103	£ s. d. 16 11 5½	£ s. d. 9 6 4	£ s. d. 0 0 5½	£ s. d. 0 10 4	£ s. d. 19 14 4½	£ s. d.	£ s. d. 4 5 4½	£ s. d. 5,445 2 0	£ s. d. 73 3 8	£ s. d. 50 8 4	£ s. d. 49 14 11

RETURN showing the Average Weekly Cost of Maintenance per Patient at the Hospitals for the Insane for the year 1895.

Name of Hospital.	Daily average number of patients resident.	Weekly cost calculated on average number resident.							Total weekly cost for maintenance per patient	Average weekly collections for maintenance per patient.	Weekly cost per patient, deducting collections for maintenance, &c.
		Salaries, money allowances, and fees.	Provisions extras, medical comforts, and forage.	Stimulants—Wines, spirits, beer, &c.	Medicines and surgical instruments.	Stores, including clothing, bedding, and materials for manufacture.	Fuel, light, and water.	Incidental and miscellaneous expenses, including library, amusements, &c.			
Gladesville	821	£ s. d. 0 5 0½	£ s. d. 0 3 9½	£ s. d. 0 0 0½	£ s. d. 0 0 0½	£ s. d. 0 1 9½	£ s. d. 0 0 5½	£ s. d. 0 0 9	£ s. d. 0 11 10½	£ s. d. 0 1 11½	£ s. d. 0 9 10½
Parramatta	1,033	£ s. d. 0 3 11½	£ s. d. 0 3 0½	£ s. d. 0 0 0½	£ s. d. 0 0 0½	£ s. d. 0 1 4½	£ s. d. 0 0 5½	£ s. d. 0 0 6½	£ s. d. 0 9 6½	£ s. d. 0 0 11½	£ s. d. 0 8 7½
Callan Park	801	£ s. d. 0 5 3	£ s. d. 0 4 0½	£ s. d. 0 0 0½	£ s. d. 0 0 1	£ s. d. 0 1 9½	£ s. d. 0 0 0½	£ s. d. 0 0 0½	£ s. d. 0 12 0½	£ s. d. 0 2 10½	£ s. d. 0 9 2½
Newcastle	307	£ s. d. 0 3 6	£ s. d. 0 2 7½	£ s. d.	£ s. d. 0 0 1	£ s. d. 0 1 6	£ s. d. 0 0 7	£ s. d. 0 0 8½	£ s. d. 0 9 0	£ s. d. 0 1 0½	£ s. d. 0 7 10½
Rydalmere	413	£ s. d. 0 4 0½	£ s. d. 0 2 8½	£ s. d.	£ s. d. 0 0 0½	£ s. d. 0 1 10½	£ s. d. 0 0 6½	£ s. d. 0 0 6½	£ s. d. 0 9 9	£ s. d. 0 0 10½	£ s. d. 0 8 10½
Kenmore	103	£ s. d. 0 6 4½	£ s. d. 0 3 6½	£ s. d. 0 0 0½	£ s. d. 0 0 2½	£ s. d. 0 7 7	£ s. d.	£ s. d. 0 1 7½	£ s. d. 0 19 4½	£ s. d. 0 0 3	£ s. d. 0 19 1½

Average weekly cost without deducting collections, 10s. 11½d., or deducting collections, 9s. 4d.

1896.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

ABORIGINES.

(REPORT OF BOARD FOR PROTECTION OF, FOR YEAR 1895.)

Printed under No. 1 Report from Printing Committee, 21 May, 1896.

The Aborigines Protection Board to The Principal Under Secretary.

Sir,

Office of Board for Protection of Aborigines, 105, Phillip-st.,
Sydney, 31 March, 1896.

In accordance with the usual practice, we have the honor to submit, for the Chief Secretary's information, the following report of our operations during the year 1895, together with information regarding the number, location, and present condition of the Aborigines, and a detailed statement of the expenditure of the funds voted by Parliament for their assistance.

We regret to have to record the death, on the 19th August last, of the Honorable Richard Hill, M.L.C. Mr. Hill had been a Member of the Board from the date of its inception, 5th June, 1883, and, giving unfailing attention to his duties, took a deep interest in furthering every object for the welfare of the Aborigines.

Mr. James Richard Hill accepted a seat on the Board to fill the vacancy thus occasioned, his appointment dating from the 20th September last.

The Census Returns of the Aboriginal population of the Colony (*Appendix A*), compiled from information collected by the Police on the 15th October, show a total of 3,660 full-bloods and 3,386 half-castes, or 7,046 in all.

These figures exhibit, as compared with the previous year, a decrease of 96 full-bloods, but an increase of 121 half-castes—a net increase of 25.

Year by year the number of full-bloods continues to decline. The decrease of 96 for 1895, however, is below the average annual rate which took place during the four preceding years—234.

The deaths amongst the full-bloods exceeded the births by 31. There were, however, 25 more births and 13 less deaths than during 1894. The natural increase amongst the half-castes was 104, births showing an increase of 26 and deaths a decrease of 22, as compared with the previous year. These figures would, however, account for a total increase of 73 in the Aboriginal population, instead of an actual increase of only 25. The difference is probably owing to some of the Aborigines on the Border having crossed into Queensland or South Australia.

In last year's return it was pointed out that the total numbers of full-bloods and half-castes within the Colony were assimilating. It will now be seen that there is a difference of 274 only in favour of the full-bloods.

A total sum of £17,050 0s. 11d. was expended by the Government on behalf of the Aborigines during the year. [*See Appendix C.*] This includes an expenditure of £12,345 0s. 5d. by the Board—£8,595 18s. 4d. on Aborigines generally, £951 18s. 3d. for the fares of Aborigines travelling on the railway, and £2,797 3s. 10d. in liquidating claims incurred specially in connection with the Cumeroogunga (Murray), Warangesda (Murrumbidgee), and Brewarrina (Barwon) Aboriginal Stations; £862 14s. 8d. by the Medical Adviser to the Government; £1,046 13s. 8d. by the Minister of Public Instruction; £2,736 14s. 8d. by the Controller-General of Stores; and £58 17s. 6d. by the Principal Under Secretary.

The expenditure by the Board is given in detail. [See Appendix D.] The year has been an unfavourable one for the Aborigines in the interior, the drought having rendered their means of subsistence more than usually precarious. Native game has now become scarce in a great many districts—in some extinct; and by the discontinuance of rabbiting on nearly all the sheep-stations the Aborigines have lost one of their main sources of employment. The demands upon the Board have in consequence been more than usually numerous.

Nine additional reserves, as under, aggregating an area of 1,145 acres, have been set apart for the use of Aborigines during the year:—

Boambolo, Yass District.—Area, 100 acres. An Aboriginal, his wife, and seven children have been placed in occupation of this reserve. The land has been enclosed with a good fence and is being cleared, rations being issued by the Board to the family while the work is going on.

Cuppacumbalong, Queanbeyan District.—Area, 270 acres. This land has been set apart for the use of the Aborigines of the Queanbeyan District, to enable them to carry on cultivation and make homes for themselves.

Forster (Extension).—Area, 12 acres. By this reservation the area at the disposal of the Aborigines has been increased to 22 acres. The land has all been enclosed with a good fence, and seven comfortable huts have been erected upon it. The Aborigines purpose cultivating a portion. A number earn a good living oystering and lobster-catching. The remainder—aged and infirm, and children attending school—are supported by the Board.

Wilberforce.—Area, 164 acres. This land was set apart for the use of Aborigines in lieu of the Reserves at Sackville Reach.

Wellington.—Area, 20 acres. A number of Aborigines are in occupation. They have fenced in the whole of the land. Some comfortable dwellings are also in course of erection.

Walgett.—Area, 320 acres. This Reserve was obtained in place of one adjacent to the township, and on that account in an objectionable location.

Walkallow.—Area, 150 acres. Fifty-five Aborigines are in occupation. Eight comfortable two-roomed slab huts, and about half a mile of six-wire fencing have been erected.

Terry Hie Hie.—Area, 102 acres. This locality has always been a favourite camping-ground for Aborigines. About 50 occupy the Reserve. Twenty-five acres have been fenced, and a number of dwellings erected. The land is used by the Aborigines as a run for their horses. The able-bodied men find employment at neighbouring sheep-stations; the aged and infirm and a number of children are supported by the Board.

La Perouse.—Area, 7 acres. This Reserve, which has a frontage to Botany Bay, is the land upon which a number of Aborigines who earn a living by fishing, &c., have for a number of years been camped.

The Reserves at Sackville Reach (180 acres), Wauchope (18 acres), and Walgett (100 acres) have been revoked.

On the 31st December last there were 105 Reserves in different parts of the Colony, with a total area of 24,978 acres.

On a large number of these Reserves fair progress in the cultivation of the land continues to be made by the Aborigines. During the year several have been enclosed with good substantial fences, the Board supplying the necessary wire, and the Aborigines providing the posts and rails and carrying out the work. In a number of instances comfortable dwellings have also been erected, and other desirable improvements effected, and in this direction the Aborigines receive every encouragement and assistance from the Board.

Schools for the instruction of Aboriginal children are now established at Barrington, Brewarrina, Brungle, Cumerogunga, Forster, Grafton, Mulyan, Rollands Plains, Wallaga Lake, Warangesda, and Wauchope. The school at Cabbage Tree Island (Richmond River) has been temporarily closed owing to the diminished attendance of pupils. The reports received from time to time from officers of the Department of Public Instruction show that satisfactory progress continues to be made by the majority of the children.

The number of children now receiving instruction is 633, 607 at Public Schools and the schools mentioned above, and 26 privately. Every inducement is held out by the Board for the children to regularly attend, chiefly by gifts of suitable clothing and the issue of weekly rations.

The

The Board are gratified to be able to state that steady progress continues to be made at the Home for Aborigines near Grafton. There are now 41 full-bloods and 9 half-castes in regular residence, and visits are frequently paid to the settlement by numbers of Aborigines from different parts of the Clarence District. A great improvement is noticeable as regards industry, sobriety, cleanliness, and conduct generally. The aged and infirm have comfortable homes, and receive every attention from the manager and matron; the able-bodied work cheerfully in the cultivation of the land and effecting general improvements, and expend the greater part of the money so earned in the purchase of clothing and other necessaries. One death and three births occurred during the year, all full-bloods. The health generally has been good. The children regularly attend the school conducted at the Home, and are making very satisfactory progress. The value of the work effected during the year—clearing, tank-sinking, construction of causeway, erection of dwellings, &c., is estimated at £230. Twenty-nine acres are now under cultivation—maize, pumpkins, &c.—and an abundant supply of vegetables has been maintained throughout the year.

The number of Aborigines at the settlement at Brungle, Tumut District, on 31st December last was 90, of whom 41 were full-bloods. Seven births and 6 deaths occurred during the year. Sickness was rather prevalent during the last six months, pulmonary diseases and hydatids being the chief complaints. The average quarterly enrolment of children attending the school was 22, and the District Inspector under the Department of Public Instruction reports that since his previous visit satisfactory progress is to be noted. Cultivation has been carried on with, considering the untoward season, very fair results—wheat, 27 acres; hay, 3 acres; potatoes, 2 acres; and maize, 3½ acres.

In our report for 1894 we had to record that the amount of donations received by the Aborigines Protection Association during that year was the lowest received during any similar period since the formation of the Association. We regret having now to report that the total for 1895—£109 12s 10d.—shows a further decrease of £58 6s. 9d., and is altogether inadequate to meet even the Council's expenses at head-quarters.

Under the regulations prepared by the Board, and approved by the Chief Secretary early in the year (copy attached), good progress has been made at the three Aboriginal Stations at Cumeroogunga, Warangesda, and Brewarrina. The Local Boards appointed at the time have been assiduous in their duties, and to their efforts in a large degree are attributable the present generally improved condition and happy and contented demeanour of the Aboriginal residents.

The amount expended on the three stations by the Treasury during the year, through the Board, was £2,797 3s. 10d.

In conclusion, we desire to record our appreciation of the valuable assistance cheerfully rendered to us by the several District Boards of Advice, and the members of the Police Force generally, in furthering our aims for the welfare of the Aborigines.

We have, &c.,

EDMUND FOSBERY, Chairman.
 PHILIP GIDLEY KING, M.L.C.
 SYDNEY BURDEKIN.
 A. M. HUTCHINSON.
 W. H. SUTTOR, M.L.C.
 THOS. COLLS.
 R. H. D. WHITE, M.L.C.
 J. M. CHANTER, M.L.A.
 J. R. HILL.

APPENDICES.

APPENDIX A.

CENSUS RETURNS, 1895.

Locality.	Full-bloods.							Half-castes.							Grand Total.			
	Men.			Women.			Children.	Total.	Men.			Women.				Children.	Total.	
	Between 20 & 40 years.	Between 40 & 60 years.	Over 60 years.	Between 20 & 40 years.	Between 40 & 60 years.	Over 60 years.			Between 20 & 40 years.	Between 40 & 60 years.	Over 60 years.	Between 20 & 40 years.	Between 40 & 60 years.	Over 60 years.				
Animbo	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Arakoon	5	4	3	5	7	1	9	34	1	...	...	...	...	...	...	9	1	1
Araluen	...	...	...	...	...	1	...	1	...	4	...	...	...	...	...	...	...	18
Armidale	...	...	...	4	...	...	8	20	5	...	...	...	...	...	16	24	44	1
Ashford	6	1	4	1	3	1	4	20	1	1	...	3	1	...	20	26	46	10
Ballina	2	2	1	1	...	...	1	7	...	...	...	1	...	...	2	3	10	3
Balranald	3	5	2	6	...	1	7	24	1	...	...	...	...	1	2	26	26	2
Baradine	...	...	...	...	...	...	...	...	3	3	...	4	...	...	16	26	26	25
Barraba	1	...	...	...	...	...	...	1	3	...	3	1	...	17	24	25	68	
Barrington and Enngonia	13	7	1	12	5	2	12	52	5	...	5	...	...	6	16	68	2	2
Bathurst	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	1
Bega	4	...	...	...	...	...	4	8	1	...	1	...	...	2	4	12	1	2
Bellingen	6	6	3	5	4	1	8	33	2	...	1	1	...	7	11	44	1	4
Berrima	...	2	...	1	...	...	5	8	...	1	2	...	...	4	1	16	1	1
Bingara	...	1	...	1	...	...	...	3	...	2	...	2	...	...	...	3	1	3
Blackville	1	1	...	1	...	...	...	40	4	2	...	4	...	8	18	58	4	2
Boggabilla	14	1	...	11	4	...	10	40	4	2	...	4	...	...	3	58	4	2
Boggabri	...	...	...	...	2	...	...	2	...	...	...	...	...	...	...	...	2	2
Booligal	...	...	...	1	1	...	5	10	2	...	...	3	...	3	8	18	1	1
Bourke and Byrock	3	...	...	1	1	...	...	10	2	...	...	...	...	...	...	...	4	4
Braidwood	...	...	...	1	...	...	...	1	1	...	...	...	...	2	2	3	...	...
Brewarrina	13	14	7	16	16	2	26	94	3	1	...	8	...	20	32	126	...	...
Broadwater	1	...	1	1	1	...	2	6	...	...	...	1	...	3	4	10	...	...
Broken Hill	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Brunge	11	4	4	5	1	1	14	40	7	5	1	8	4	29	54	94	...	...
Brunswick River Heads	3	1	...	3	...	...	2	9	...	...	...	...	...	...	...	9	...	...
Brushgrove	5	1	2	3	1	...	1	13	2	...	2	...	...	3	7	20	...	...
Buckley's Crossing	...	1	...	1	...	...	3	5	...	...	...	...	...	...	...	5	...	...
Bundarra	2	3	3	2	2	...	12	24	2	1	...	3	1	8	15	39	...	...
Bungwall Flat	...	...	...	...	...	...	...	2	2	...	2	1	...	...	...	7	...	...
Byron Bay	1	...	1	...	1	...	...	3	...	...	...	...	...	1	1	4	...	...
Camden	...	...	...	...	...	...	...	2	...	...	...	2	1	7	12	12	...	...
Cannonbar	2	3	6	3	2	3	6	25	3	...	4	...	...	8	15	40	...	...
Canowindra	1	...	...	...	...	...	...	1	...	1	...	1	...	1	3	4	...	...
Casino	29	37	7	34	27	5	70	209	13	...	13	2	...	36	64	273	...	...
Carroll	...	...	...	...	...	...	...	...	4	...	1	2	...	9	16	16	...	...
Cassilis	1	1	...	...	...	...	...	2	...	...	...	...	...	...	...	2	...	...
Cobar	2	3	10	8	7	1	8	39	1	...	2	...	...	6	9	48	...	...
Cobargo	9	7	4	6	3	4	2	35	22	6	4	30	6	2	45	115	150	...
Condobolin	6	4	...	1	1	...	5	17	4	3	...	6	1	10	24	41	...	...
Coolamon	1	...	...	...	...	...	2	3	...	...	1	...	...	1	4	...	...	...
Cooma	...	...	...	...	...	...	1	1	...	1	...	1	...	...	2	3	...	...
Coonabarabran	...	...	...	...	...	...	...	13	2	...	9	3	...	37	64	64	...	...
Coonamble	13	7	3	10	6	1	38	78	3	1	...	3	1	14	22	100	...	...
Copeland	3	1	1	2	...	...	10	17	1	2	...	1	...	13	17	34	...	...
Copmanhurst	3	11	1	3	4	1	13	36	2	...	4	1	...	6	13	49	...	...
Coraki	2	6	1	8	3	...	12	32	3	2	...	3	1	15	24	56	...	...
Corowa	...	4	...	3	...	...	3	10	...	...	...	...	...	2	2	12	...	...
Cowra	5	...	...	2	...	...	4	11	8	2	...	6	1	27	44	55	...	...
Cudgellico	1	2	1	2	...	...	3	9	2	1	...	1	...	10	14	23	...	...
Cudgen	1	1	1	1	2	...	1	7	...	...	2	...	...	6	8	15	...	...
Dalmorton	1	...	1	...	...	...	...	2	...	...	...	...	...	3	4	6	...	...
Darlington Point (including Warangesda)	9	10	1	7	6	1	10	44	11	4	...	16	2	53	86	130	...	...
Dandaloo	4	1	...	3	2	...	8	18	1	1	...	3	...	11	16	34	...	...
Delegate	4	5	1	4	...	...	4	18	...	...	...	...	...	6	7	25	...	...
Deniliquin	1	5	...	1	1	...	...	8	2	...	...	1	...	...	2	10	...	...
Drake	10	12	11	13	10	3	10	69	3	2	1	1	2	1	21	31	100	...
Dubbo	2	6	1	1	...	...	7	17	4	...	5	1	...	11	25	42	...	...
Dungog	...	...	...	...	...	...	...	...	1	...	...	...	...	5	6	6	...	...
Eden	4	3	...	1	3	...	12	23	...	1	...	1	...	3	5	28	...	...
Emu Flat	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	1	...	...
Eualalong	9	2	...	3	3	1	16	34	5	1	...	4	1	26	38	72	...	...
Eugowra	2	1	...	...	...	...	...	3	3	2	...	3	1	13	22	25	...	...
Eulowrie	1	1	...	...	...	...	...	1	1	2	...	1	...	...	4	5	...	...
Euston	1	1	...	...	...	...	...	2	...	...	...	...	...	...	...	2	...	...
Forbes	8	1	4	1	1	...	2	17	7	1	...	6	3	33	50	67	...	...
Forster	4	1	2	2	2	...	4	15	8	2	...	9	2	35	56	71	...	...
Garah	9	2	3	4	2	5	22	47	5	5	1	7	3	28	50	97	...	...
Gilgunna	...	1	...	1	...	2	...	4	...	...	...	...	...	...	...	4	...	...
Gladstone	4	2	...	3	1	...	4	14	4	1	...	1	2	9	17	31	...	...
Glen Innes	...	1	...	1	...	...	...	2	1	1	...	1	...	7	10	12	...	...
Goodooga, Angledool, and Tatalla	15	14	12	19	16	22	46	144	4	...	6	1	...	21	32	176	...	...
Goulburn	...	...	...	...	...	...	...	...	2	...	4	1	...	14	21	21	...	...

APPENDIX A—continued.

Locality	Full-bloods.							Half-castes.							Grand Total.				
	Men.			Women.				Children.	Total.	Men.			Women.				Children.	Total.	
	Between 20 & 40 years.	Between 40 & 60 years.	Over 60 years.	Between 20 & 40 years.	Between 40 & 60 years.	Over 60 years.	Between 20 & 40 years.			Between 40 & 60 years.	Over 60 years.	Between 20 & 40 years.	Between 40 & 60 years.	Over 60 years.		Between 20 & 40 years.			Between 40 & 60 years.
Grafton...	11	2	1	6	3	2	22	47	6	1	...	7	...	...	17	31	78
Grafton South	4	4	4	4	4	...	12	32	1	1	...	2	...	...	2	6	38
Grenfell	1	...	...	...	...	...	...	1	...	1	...	...	...	...	1	3	4
Grong Grong	4	...	...	...	1	...	...	5	6	...	...	1	...	...	5	13	18
Gulgambone	3	3	3	3	2	...	15	29	3	1	...	1	2	...	17	24	53		
Guunedah	1	3	...	...	2	...	2	8	2	...	...	...	...	...	4	12	12
Hargraves	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	7	7
Hartley Vale	...	...	...	...	...	...	...	...	6	1	1	2	1	1	5	16	16
Harwood	4	3	2	2	1	2	5	19	...	...	...	2	...	...	...	2	21
Hay	2	...	...	...	...	...	1	3	...	...	...	...	...	...	...	...	3
Hill End	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	2	2
Hillgrove	5	1	...	1	...	...	1	8	1	...	...	...	1	...	...	1	9
Hillston	9	2	...	4	2	...	24	41	2	...	...	...	...	...	7	9	50
Ivanhoe	2	2	1	2	2	4	8	19	...	...	...	...	...	...	1	1	20
Kempsey	18	9	6	19	13	10	38	113	15	8	3	16	6	3	48	99	212		
Kerramingby	3	4	2	2	4	2	6	23	11	2	...	7	1	...	32	53	76		
Kiama	...	...	...	...	...	...	...	...	7	1	1	8	...	...	22	39	39
Kookabookra	11	6	4	8	3	2	12	46	5	2	...	3	1	...	7	18	64		
La Perouse	4	2	3	1	2	...	1	13	6	1	1	7	4	...	17	36	49		
Lawrence	6	10	1	4	8	...	6	35	1	...	...	1	...	...	2	4	39
Leadville	1	1	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
Lismore	11	8	7	3	2	4	10	45	5	2	...	2	...	...	8	17	62
Liverpool	...	...	...	...	...	...	...	...	3	...	...	3	...	...	3	9	9
Louth	15	3	6	11	3	1	9	48	2	2	...	3	...	...	7	14	62
Macksville	11	5	14	7	7	8	24	76	10	2	1	10	8	...	54	85	161		
Maclean	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	2	2
Maitland, East	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	2	2
Manilla	...	...	...	...	...	...	...	...	4	1	...	3	1	1	26	36	36
Marsdens	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	2	2
Menindie	11	1	1	3	...	1	10	32	1	...	...	...	...	...	2	3	35
Merriwa	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Meroe	8	3	3	5	2	2	4	27	2	...	...	...	...	...	...	2	29
Milparinka	24	15	...	8	12	...	21	80	3	...	...	2	...	...	13	18	98
Milton	3	2	...	3	...	3	3	14	7	1	1	8	2	1	26	46	60		
Moama (including Cameroongunga)	4	2	2	4	1	2	23	38	23	7	...	21	1	1	68	121	159		
Mogil Mogil, Mungindi, and Collarendabri	16	12	6	10	14	4	36	98	6	1	...	5	1	...	26	39	137		
Molong	...	...	...	...	...	...	...	...	...	...	...	3	1	...	4	8	8
Mongarlowe	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	1
Moombi	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Moree	8	5	1	4	2	...	12	32	8	2	...	12	1	1	20	44	76		
Morpeth	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
Moruya	1	4	1	1	3	...	5	15	4	...	...	4	2	...	14	24	39
Mossgiel	20	9	5	19	6	4	16	79	4	...	...	2	...	...	10	16	95
Moulamein	4	13	1	3	6	1	2	30	6	1	...	3	1	...	19	30	60		
Mundooran	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Murrurundi	1	...	...	...	...	...	...	3	4	...	...	1	1	...	1	3	7
Murwillumbah	10	5	...	4	3	...	5	27	1	2	...	3	...	...	8	12	39
Narooma	...	...	...	...	1	...	...	1	2	2	...	2	2	...	7	15	16
Narrabri	3	5	5	4	1	1	3	22	6	4	...	6	3	...	12	31	53		
Narrandera	2	2	1	2	3	...	2	12	2	1	...	5	...	...	12	20	32
Nelligen	...	...	...	...	...	...	...	...	1	...	1	1	...	...	6	9	9
Nimitybelle	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Nowra	2	7	...	1	5	1	5	21	15	1	1	18	3	...	52	90	111		
Nundle	...	...	...	...	...	...	...	1	...	1	...	3	1	...	9	14	15
Nymagee	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1
Nymboida	6	7	...	8	...	...	13	34	3	...	...	1	1	...	2	7	41
Nyngan	2	2	1	...	2	1	...	8	1	1	...	1	1	...	...	2	10
Obley	3	7	...	1	2	...	3	16	1	1	...	4	3	...	12	21	37		
Orange	1	1	...	2	...	...	1	5	1	1	...	1	...	...	1	4	9
Oxley	6	1	...	...	...	...	...	7	1	...	...	...	...	...	8	9	16
Pallamallawa	...	...	...	1	...	...	...	1	2	...	...	1	...	...	2	5	6
Palmer's Island	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Parkes	...	4	...	1	2	...	9	16	5	2	...	6	1	...	21	35	51		
Peak Hill	9	...	2	3	2	...	16	32	...	...	...	3	...	...	2	5	37
Penrith	1	...	...	...	1	1	4	6	...	...	...	...	...	...	...	...	6
Picton	1	...	...	...	1	1	1	5	11	1	...	5	2	1	23	43	48
Pilliga	8	5	2	5	1	1	5	27	10	2	...	7	1	...	12	32	59		
Pooncarie	15	10	1	7	7	...	36	76	1	...	...	1	...	...	3	5	81
Port Macquarie	5	6	1	4	6	1	6	29	12	1	3	7	6	...	32	61	90		
Quambone	5	7	2	4	7	2	15	42	...	...	...	1	...	...	...	1	43
Queanbeyan	...	...	...	1	1	...	...	1	1	1	...	3	...	...	12	17	18
Rylstone	1	...	...	2	...	...	...	3	4	...	1	3	1	...	21	30	33
Sans Souci	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Scone	5	1	...	...	...	...	...	6	2	2	...	...	...	...	...	4	10
Silverton	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Stingleton	6	2	2	5	5	2	8	30	3	2	1	6	2	...	23	37	67		
Stuart Town	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	1
Swansea	...	...	...	...	...	...	...	...	1	1	1	1	...	1	2	7	7
Tambar Springs	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Tamworth	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	2	2
Taree	3	1	1	1	2	...	4	12	7	3	1	8	4	...	15	38	50		
Tareena	5	2	...	3	1	...	3	14	1	...	...	1	...	...	3	17	17

APPENDIX A—continued.

Locality.	Full-bloods.							Half-castes.							Grand Total.		
	Men.			Women.			Children.	Total.	Men.			Women.				Children.	Total.
	Between 20 & 40 years.	Between 40 & 60 years.	Over 60 years.	Between 20 & 40 years.	Between 40 & 60 years.	Over 60 years.			Between 20 & 40 years.	Between 40 & 60 years.	Over 60 years.	Between 20 & 40 years.	Between 40 & 60 years.	Over 60 years.			
Tea Gardens	1	2	..	..	..	..	1	4	1	1	..	8	..	..	18	28	32
Tenterfield	..	1	..	..	1	..	..	2	..	..	..	..	..	..	..	..	2
Tingha	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
Tibooburra	30	7	1	26	..	..	21	85	..	..	..	3	..	..	15	18	103
Tinonee	..	1	..	..	..	..	2	3	..	..	..	1	..	..	1	2	5
Torrawangee	8	6	1	10	8	3	11	47	5	..	..	2	..	..	1	8	55
Traugie	12	4	1	6	..	..	14	37	5	..	..	2	..	..	2	9	46
Trunkey	..	..	..	..	..	..	..	..	2	..	..	2	..	..	5	9	9
Tuena	1	..	..	..	..	..	..	1	1	..	..	..	..	..	1	2	3
Tumbarumba	..	..	..	..	..	..	..	..	2	2	..	1	..	..	..	5	5
Tumbulgum	..	1	1	1	..	..	1	4	..	..	..	..	..	..	1	1	5
Uralla	3	2	2	3	2	2	16	30	3	5	..	2	2	..	20	32	62
Walbundrie	..	..	..	1	..	..	1	2	..	..	..	..	..	..	..	..	2
Walcha	8	7	..	7	3	..	21	46	8	4	..	6	4	..	26	48	94
Walgett, Grawin, and Carinda	10	14	4	17	9	2	35	91	8	4	..	9	1	..	49	71	162
Wanaaring	21	10	5	14	7	2	9	68	2	..	..	..	..	..	5	7	75
Wardell	8	1	1	7	2	1	6	25	4	2	..	5	..	..	27	38	63
Warialda	2	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	2
Warren	3	1	..	1	1	..	2	8	..	..	..	1	..	..	4	5	13
Wee Waa	5	2	2	6	2	..	12	29	2	..	..	1	1	..	7	11	40
Welaregang	1	..	..	..	..	..	1	2	..	..	..	..	..	..	..	..	2
Wellington	4	5	..	1	1	..	3	14	5	4	..	4	3	..	20	36	50
Werris Creek	..	..	..	..	1	..	..	1	6	4	1	8	4	..	28	51	52
White Cliffs	6	1	..	3	..	..	1	11	..	..	..	..	..	..	1	1	12
Wilcannia	4	2	3	7	..	..	2	18	..	..	..	..	..	..	3	3	21
Wilson's Downfall	1	6	2	1	4	..	6	20	1	..	..	1	..	..	4	6	26
Windsor	1	2	1	1	1	..	2	8	23	4	3	11	2	..	48	91	99
Wingham	3	2	..	3	..	1	3	12	3	1	..	3	1	..	19	27	39
Wollar	..	3	..	..	2	..	3	8	2	..	..	1	..	..	12	15	23
Wollongong	1	1	..	1	..	..	..	3	8	2	..	6	2	..	16	34	37
Woodburn	1	1	..	..	..	..	..	2	..	..	..	1	..	..	..	1	3
Woodenbong	5	4	3	5	4	3	9	33	3	..	..	2	1	..	1	7	40
Woogoolga	6	3	1	6	3	..	5	24	2	..	..	2	..	..	2	6	30
Yass	4	..	1	1	1	..	3	9	11	7	..	8	6	..	61	93	102
Yetman	2	2	1	1	..	..	3	9	..	..	..	..	..	..	..	..	9
Young	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	1
Total	751	510	225	548	366	138	1,122	3,660	555	181	29	537	154	15	1,915	3,386	7,046

APPENDIX B.

CENSUS RETURNS, 1894 AND 1895.

Comparison.

	Full-bloods.					Half-castes.					Grand Total.
	Adults.			Children.	Total.	Adults.			Children.	Total.	
	Males.	Females.	Total.			Males.	Females.	Total.			
By return, 1894	1,547	1,101	2,648	1,108	3,756	772	702	1,474	1,791	3,265	7,021
Do 1895	1,486	1,052	2,538	1,122	3,660	765	706	1,471	1,915	3,386	7,046
Decrease	61	49	110	..	96	7	..	3	..	..	..
Increase	..	..	..	14	..	..	4	..	124	121	25

BIRTHS and DEATHS, 1895.

Full-bloods.		Half-castes.	
Births reported	110	Births reported	158
Deaths reported	141	Deaths reported	54
Decrease by Deaths over Births	31	Increase by Births over Deaths	104

APPENDIX C.

EXPENDITURE by the Government on behalf of the Aborigines, 1895.

Department.	Particulars.	Amount expended						
		£	s.	d.	£	s.	d.	
Aborigines Protection Board.....	Rations, clothing, boats and gear, farming implements, seed, erection of dwellings, fencing-wire, fishing nets and tackle, medical comforts, &c., &c. (for Aborigines generally).....	7,996	15	5				
	Expenses in connection with the Home for Aborigines, Crafton—Salary of Manager, wages of Aborigines, rations, clothing, medical comforts, building material, stock, tools, and sundries	499	2	11				
	Conveyance of Aborigines on the railway lines of the Colony	951	18	3				
	Salary of Secretary to Board	100	0	0				
	Claims incurred in connection with the Cumeroogunga, Warangesda, and Brewarrina Aboriginal Stations—Salaries, rations, clothing, medicine, building material, fencing, stock, seed, freight, labour, &c.	2,797	3	10				
Chief Secretary.....	Burial expenses—Aborigines				12,345	0	5	
Medical Adviser to the Government.....	Medical attendance and medicine					58	17	6
Government Stores	Blankets, clothing, stationery, &c.				862	14	8	
Public Instruction	Repairs to buildings, salaries of teachers, school-books, fuel and cleaning				2,736	14	8	
	Total.....				£17,050	0	11	

APPENDIX D.

EXPENDITURE by the Board on Aborigines generally, 1895.

Locality.	Average monthly number receiving aid.		Period.	Nature of aid.	Amount expended during the year.
	Adults.	Children.			
Angledool	16	9	12 months	Rations	£ 64 7 7
Araluen	1			Clothing	0 19 10
Ballina	1		12 months	Rations	5 0 9
Balranald	14	2	12 "	"	72 3 5
Barrington.....	7	18	12 "	Rations, clothing, tents, and additions to school building.	131 1 10
Bellingen and Fernmount	23	6	12 "	Rations, clothing, and medical comforts	69 8 9
Boggabilla	10	11	12 "	Rations and clothing	84 17 5
Bonshaw.....	2	2	12 "	Rations	25 17 4
Bonligal	1		9 "	Rations and clothing	3 12 7
Bowraville	22		12 "	Rations, clothing, and medical comforts	82 3 3
Breeza.....	2	5	12 "	Rations	23 1 5
Broadwater	3	2	12 "	"	17 0 9
Brungle	58	35	12 "	Rations, clothing, medical comforts, building material, fencing wire, farming implements and tools, seed, harness, smithing, wages to Aborigines, and allowances to Superintendent and teacher.	558 14 4
Brushgrove	1		12 "	Rations	5 8 6
Buckinuy and Carinda ..	5	2	12 "	"	36 13 5
Bunalbo	2		9 "	"	9 16 11
Bungawalbyn	4		9 "	"	15 15 7
Burraborang	8	19	12 "	"	68 18 6
Burrier	1		12 "	"	10 0 0
Brushfield	5	10	12 "	"	42 11 6
Byron Bay	1		6 "	"	1 15 7
Cabbage Tree Island...	4	1	12 "	"	19 15 3
Camira	3		12 "	"	20 8 5
Cobar	1	2	12 "	"	5 13 8
Colane	17	10	12 "	"	141 2 2
Collarendabri	2	1	12 "	"	10 10 9
Conoble	3		3 "	Rations and clothing	6 9 9
Coolangatta	2	18	12 "	"	49 19 0
Coonamble.....	4	3	12 "	Rations	51 18 7
Copmanhurst.....	2		12 "	"	7 4 8
Coraki	1		12 "	"	4 10 11
Cowra	3	18	12 "	Rations, and allowance to teacher	72 19 10
Crudine	2	5	12 "	Rations	23 14 6
Cudgen	1		12 "	"	5 16 10
Cuttabri	8	4	6 "	Rations and clothing	34 3 0
Dandaloo	3	3	9 "	Rations	7 1 4
Delegate.....	18	7	12 "	"	84 11 0
Drake	3	1	12 "	"	16 7 0
Dubbo.....	8	5	12 "	Rations and clothing	46 13 4
Dunglear	10	23	12 "	Rations	123 8 8
Dyraaba	3		12 "	"	14 17 5
Eden	6	9	12 "	Rations and paint for boat	41 16 3
Euabalong	15	16	12 "	Rations	78 7 6
Eugowra.....	6	12	12 "	"	50 1 1
Forbes	22	15	12 "	"	127 15 2
Forster	10	10	12 "	Rations, clothing, fencing wire, seed, and tools.....	69 9 5
Gerrington.....	6	9	12 "	Rations, clothing, building material, and paint for boat.	36 19 0
Gilgunnia	2		12 "	Rations	21 13 5
Glen Innes.....	2	6	12 "	"	21 14 11

APPENDIX D—continued.

Locality.	Average monthly number receiving aid.		Period.	Nature of aid.	Amount expended during the year.
	Adults.	Children.			
Glenorchy	4	3	12 months...	Rations	£ s. d. 43 11 5
Glenugie	3	.....	12 "	"	12 14 3
Goodooga	19	6	12 "	"	114 1 10
Goonal	4	.....	12 "	Rations and clothing	35 11 5
Grafton	62	27	12 "	Rations, clothing, medical comforts, building material, cattle, tools, sundries, Aborigines' wages, and manager's salary.	499 2 11
Grafton South, and Orara	3	.....	12 "	Rations	15 15 1
Greenwell Point	5	7	12 "	Rations, clothing, building material, paint and oars for boat, and fishing tackle.	61 13 1
Gulargambone	11	11	12 "	Rations	113 4 1
Gunnedah	3	.....	12 "	Rations and clothing	21 3 7
Harwood	2	.....	12 "	Rations	8 1 1
Hay	3	2	1 week	"	1 0 0
Hillston	7	.....	12 months	Rations and clothing	22 10 10
Hunter Water Hole	12	15	6 "	Rations	40 3 6
Illawarra Lake	4	6	12 "	Rations, erection of two huts, boat and gear	92 1 0
Ingalba	8	7	12 "	Rations	37 9 9
Jervis Bay	3	8	12 "	Rations, clothing, and paint for boat	36 7 10
Kajuligah	2	.....	12 "	Rations and clothing	15 18 2
Keewong	4	.....	12 "	Rations	32 13 10
Kunopia	16	8	12 "	Rations and clothing	221 2 4
Kyogle	4	.....	12 "	Rations	32 1 5
La Perouse	14	11	12 "	Rations, medical comforts, and boat	162 5 11
Lawrence	2	.....	12 "	Rations and boat	15 0 6
Lionsville	3	.....	12 "	Rations	18 17 2
Lismore	2	1	12 "	"	12 12 11
Macksville and Nambucca Heads	39	13	12 "	Rations, clothing, medical comforts	114 16 10
Macleay River	68	62	12 "	Rations, clothing, medical comforts, tools, farming implements, and repairs to boat.	339 4 4
Mallara	2	5	12 "	Rations	23 14 11
Marfield	3	6	12 "	"	32 15 5
Maryland	2	.....	12 "	"	12 8 8
Megalong	6	4	12 "	Rations, clothing, and medical comforts	54 7 1
Millera	1	.....	12 "	Rations	6 15 7
Milparinka	24	.....	.....	Clothing	18 0 0
Mogil Mogil	9	12	12 months	Rations	111 2 1
Moolah	3	1	12 "	Rations and clothing	25 2 8
Moree	4	8	12 "	Rations	42 13 9
Mungindi	13	13	12 "	Rations and clothing	145 6 6
Murwillumbah	5	.....	12 "	Rations	20 4 6
Narooma	1	.....	.....	Clothing	0 15 0
Narrabri	5	5	12 months	Rations and erection of four huts	113 8 10
Narrandera and Grong Grong	7	4	12 "	Rations, tools, farming implements, dray, and harness.	47 1 5
Neltigen	1	4	12 "	Rations, clothing, and seed	15 6 2
Nullamanna	1	5	.....	Clothing	1 17 11
Nymboida	5	2	12 months	Rations	31 2 7
Nyngan	4	.....	12 "	"	15 3 8
Oban	16	8	12 "	Rations, fishing tackle, and seed	122 6 8
Parkes	9	9	12 "	Rations and clothing	68 10 2
Peak Hill	4	4	3 "	Rations	3 11 10
Penrith	1	.....	12 "	Rations and clothing	2 19 7
Pilliga	20	12	12 "	Rations	120 3 3
Poolamacca	12	.....	12 "	Rations and clothing	48 7 0
Popiltah	12	15	3 "	"	41 7 1
Port Macquarie	19	24	12 "	Rations, clothing, tools, and seed	122 10 4
Port Stephens	7	4	12 "	Rations, clothing, boat and gear, seed, building material.	82 10 7
Quambone	19	12	12 "	Rations	92 18 3
Queanbeyan	6	9	12 "	Rations, clothing, and sundries	80 10 7
Rivertree	2	.....	12 "	Rations	13 6 8
Rylstone	1	9	12 "	"	24 15 2
Singleton	29	29	12 "	Rations, clothing, medical comforts, tents, seed, tools, and sundries.	246 5 3
Stuart Town	1	.....	12 "	Rations	5 3 10
Sturt's Meadows	4	.....	6 "	Rations and clothing	6 13 2
Swansea	1	1	12 "	"	14 4 5
Tabulam	6	.....	12 "	Rations	25 6 1
Taree	12	17	12 "	Rations, medical comforts, boat, clothing, and roofing iron.	106 13 11
Tatalla	11	6	12 "	Rations	53 2 10
Tenterfield	2	.....	.....	Clothing	2 5 3
Terembone	15	10	12 months	Rations, and erection of five huts	238 18 4
Terry-hic-hic	18	15	12 "	Rations and clothing	165 4 2
Tooloon	3	6	12 "	Rations	62 3 10
Trangie	17	11	12 "	"	87 4 6
Tumbulgum	1	1	12 "	"	6 9 7
Turlingah	14	13	12 "	Rations and clothing	82 5 6
Ulladulla	8	17	12 "	Rations, clothing, medical comforts, repairs to huts and boats, fishing tackle, and boat gear.	107 16 6
Unungar	6	1	12 "	Rations	44 17 5
Uralla	3	11	12 "	"	30 17 5
Walcha	2	.....	12 "	"	7 6 10
Walgett	4	7	12 "	"	32 5 7
Wallaga Lake	62	25	12 "	Rations, clothing, and allowance to Superintendent	319 2 5
Wanaaring	3	.....	12 "	Rations	12 13 4

APPENDIX D—continued.

Locality.	Average monthly number receiving aid.		Period.	Nature of aid.	Amount expended during the year.
	Adults.	Children.			
Wee Waa	4	5	12 months...	Rations and erection of hut	£ s. d. 34 4 5
Weilmoringle	2	.....	12 "	Rations	14 8 4
Wellington.....	11	12	12 "	Rations, clothing, and building material.....	150 9 3
Wilcannia	1	2	3 "	Rations	2 14 9
Windsor.....	39	58	12 "	Rations and paint for boat	112 17 10
Wingham	8	8	12 "	Rations	31 16 11
Wollar	7	6	12 "	"	46 11 4
Wollomombi.....	2	.....	12 "	"	9 19 4
Woogoolga.....	3	1	12 "	"	76 9 0
Wyangarie.....	3	2	12 "	"	33 1 0
Wyrallah	9	.....	12 "	"	52 19 2
Yass, Pudman and Blakney Creeks.	18	45	12 "	Rations, clothing, seed, and tools.....	135 2 6
Incidental Expenses...	.....	.....	.....	.....	13 3 3
Railway Fares (Aborigines).	.....	.....	.....	.....	951 18 3
Salary of Secretary ...	.....	.....	.....	.....	100 0 0
Total .....	.....	.....	.....	.....	£9,547 16 7

APPENDIX E.

AMOUNTS paid for Medical Attendance on Aborigines, 1895.

Locality.	Amount.	Locality.	Amount.
Armidale	£ s. d. 3 10 0	Brought forward.....	£ s. d. 502 8 0
Ballina	0 10 0	Murwillumbah	3 3 0
Barrington.....	44 15 0	Narrabri	20 16 0
Bingara.....	1 0 0	Narrandera	16 4 0
Broadwater.....	0 10 0	Nowra.....	6 10 0
Brungle	57 18 0	Nyngan	3 10 0
Casino	12 0 0	Parkes	4 0 0
Cowra	44 3 0	Port Macquarie.....	16 12 0
Cumeroogunga	53 3 0	Queanbeyan	8 7 0
Drake	1 4 6	Singleton	45 14 0
Fernmount	14 12 0	Taree	43 8 0
Forbes	3 3 0	Torrawangee.....	7 16 0
Goulburn	42 11 0	Ulladulla	31 3 0
Grafton.....	59 0 0	Uralia.....	9 0 0
Hillgrove.....	1 0 0	Walcha	7 6 0
Katoomba	14 1 0	Wallaga Lake	23 7 2
Kempsey	50 0 0	Wardell	0 10 0
Kiama	40 0 0	Wee Waa	2 0 0
La Perouse	50 0 0	Wellington	21 13 0
Macksville	1 1 6	Wingham	25 0 0
Macleay	1 5 0	Yass	50 17 6
Moruya.....	7 1 0	Young.....	13 10 0
Carried forward	£502 8 0	Total.....	£862 14 8

APPENDIX F.

List of Articles supplied Aborigines from the Government Stores, 1895.

Locality.	No. receiving aid.		Nature of aid.	Locality.	No. receiving aid.		Nature of aid.
	Adults.	Children.			Adults.	Children.	
Ashford	6	9	Clothing.	Harwood	7	.....	Clothing.
Ballina	4	.....	"	Hillgrove	2	.....	"
Blicks River	6	8	"	Kookabookra	14	3	"
Brewarrina .....	.....	.....	Stationery for Local Board.	Lawrence	16	.....	"
Broadwater	3	1	Clothing.	Lismore	11	.....	"
Brungle .....	.....	.....	Medicine.	Murwillumbah	7	2	"
Bundarra	5	10	Clothing.	Sydney.....	.....	.....	Stationery for office.
Byron Bay.....	1	.....	"	Tumbulgum.....	3	2	Clothing.
Casino	11	13	"	Walcha.....	9	26	"
Chatsworth	1	.....	"	Wallaga Lake.....	.....	.....	Stationery for Superintendent.
Copmanhurst.....	12	5	"	Warangesda .....	.....	.....	Stationery for Local Board.
Coraki.....	4	.....	"	Wardell	6	2	Clothing.
Cudgen	1	.....	"	Wilson's Downfall	9	4	"
Cumeroogunga .....	.....	.....	Stationery for Local Board.	Woodenbong	11	1	"
Drake	19	.....	Clothing.	Woogoolga	5	.....	"
Glen Innes.....	2	6	"	Throughout the Colony .....	.....	.....	Blankets.
Grafton	11	17	Clothing and medicine.				
Grafton, South	18	.....	Clothing.				

N.B.—The cost of these articles and their transit (£2,736 14s. 8d. in all) was defrayed from the vote for Government Stores.

APPENDIX G.

STATEMENT of Expenditure on account of Aborigines during the year 1895 by the Department of Public Instruction.

Name of School.	Salaries.	Books and apparatus.	Forage, travelling expenses, fuel, and cleaning.	Buildings, repairs, rent, furniture.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Barrington	45 10 0		4 0 0		49 10 0
Brewarrina	91 0 0				91 0 0
Brungle	80 11 8	0 16 4	3 3 3		84 11 3
Cumeroogunga	210 18 10	4 15 8	13 18 3	43 5 0	272 17 9
Forster	20 9 0		2 15 10		23 5 7
Grafton	91 0 0	1 2 7			92 2 7
Mulyan	88 3 4	0 8 11	0 10 0	0 3 6	89 5 9
Rolland's Plains	45 10 0		2 1 8		47 11 8
Wallaga Lake	83 8 4		1 5 10		84 14 2
Warangesda	135 8 4	2 0 8	12 1 6	13 15 0	163 5 6
Wauchope	45 10 0	0 12 9	2 1 8	0 5 0	48 9 5
Totals	£ 937 10 3	9 16 11	41 18 0	57 8 6	1,046 13 8

APPENDIX H.

CENSUS Returns, Cumeroogunga, Warangesda, and Brewarrina Aboriginal Stations, 1895.

Stations.	Population, 31st December, 1895.							Daily average population throughout the year.						
	Full-bloods.			Half-castes.			Grand Total.	Full-bloods.			Half-castes.			Grand Total.
	Adults.	Children.	Total.	Adults.	Children.	Total.		Adults.	Children.	Total.	Adults.	Children.	Total.	
Cumeroogunga	29	19	48	58	65	123	171	14	23	37	38	59	97	134
Warangesda	31	6	37	22	35	57	94	34	6	40	34	38	72	112
Brewarrina	28	9	37	4	19	23	60	25	10	35	5	17	22	57
Total	88	34	122	84	119	203	325	73	39	112	77	114	191	303

APPENDIX I.

Reports of Local Boards.

Sir,

Local A.P. Board, Grafton, 10 February, 1896.

We have the honor to report that during the past year much valuable work has been done at the Home, and that the average population has been fairly well sustained.

In the way of permanent improvements, some 10 acres have been cleared, broken up, and planted. Thirty-two acres have been partially cleared, some stumping done, also ploughing. A tank has been excavated and two causeways besides other road work. Four houses have also been erected, and we estimate the total value of the improvements at over £200.

Some hay has been sold which realised (net) some £12 12s., which funds are being used for sundry expenses accounts in connection with farm implements, &c.

The stock at the Home suffered in condition with the severe winter and dry spring, but are now doing well with the good season, and we anticipate soon to make a considerable reduction in our accounts for butcher's meat.

The Board have approved of the Manager keeping the Aborigines occupied with gardening to a certain extent, so as not to compete with gardeners outside, but sufficient to supply the people, keep the children occupied, and any surplus to be sold to meet incidentals.

The health of the people has been very good, as will be seen by the Manager's report, and it is generally admitted that the living of our Aborigines has greatly improved the last two years.

The school has been well attended, and the children are progressing very well.

In concluding our report we have great pleasure in saying that both the Manager and Matron have worked industriously to make the Home a success. The work has been creditably performed by each, which must eventually be of great benefit to the inhabitants.

Yours, &c.,

THOMAS PARKER, Chairman.

JAS. C. WILCOX, Member.

The Chairman of A. P. Board.

Manager's Report on the Home for Aborigines, Clarence River, for the year ended 31st December, 1895.

There are 49 Aborigines (full bloods—10 men, 11 women, and 19 children; half castes—5 men, 2 women, and 2 children) who consider that the Home is their regular dwelling place, and have houses, besides a number of people who frequently visit the Home and come here when they can get no work on the farms.

Permanent improvements effected during the year:—10 acres new forest land cleared of all but largest trees, stumped, ploughed, and planted with maize; 4 acres partially cleared and ploughed; timber burnt off 8 acres and ground ploughed; 20 acres felled and partly burnt off; other clearing and burning in paddock; tank excavated; two large causeways, and sundry road work; four houses erected.

Cultivation.—About 3 acres of winter potatoes were planted in the beginning of the year, the produce was issued to the Home people. Seven acres were ploughed for oats, the weather was too dry to plant them, therefore though the ground is poor it was planted with maize, and is now bearing enough to pay for the labour. Four acres of maize were planted in September on good land, 3 acres on medium land, and 8 acres on good land have since been planted, making a total of 22 acres under maize. The crop now shows from inferior to excellent, according to the quality of the land. One acre is planted with pumpkins, ¼ acre with sweet potatoes, 1½ acres is under cucumbers, watermelons, and tomatoes, 1 acre is under feed stuff for stock, 3 acres are also under a catch crop of pic melons, making a total of 29 acres under crop. With moderately favourable weather, the net cash return for the season's work should not be less than £100.

Vegetable Garden.—The first crop was spoilt by the swamp backing in on it. The second gave the people as much cauliflower, cabbage, and some other vegetables as they chose to cut, and 2 tons of sweet potatoes. The Home people have now a fair supply of vegetables and tomatoes.

Stock.—The three Home horses are in good condition. The cattle have grown well, and increased in value. In a few weeks slaughtering for Home use may be recommended, and continued the greater part of the year. Four calves were dropped during the season, and are doing well.

Health of Aborigines.—One death occurred from consumption, one child was treated for inflammation of the lungs, all the children who had not previously had whooping-cough had it and recovered. General health good.

Deaths.—One; full-blood; female, aged 18 years.

Births.—One boy, 2 girls; full-blood.

Conduct

Conduct of Aborigines.—During the year, one man came home under the influence of liquor and commenced a fight with his wife. This was immediately stopped, and although there have been 186 Aborigines here at one time, this is the only case of drunkenness or fighting at the Home during the twelve months. For morality, they could set a pattern to some of the white inhabitants of the district.

The men have worked cheerfully, and considering their race and that the greater number of aborigines that are together the less they will do in proportion, they have done very well. At least three-fourths of their wages have been carefully spent in clothes and necessaries, and very little, indeed, of the money has gone for liquor. More than 182 articles of clothing have been made by the women from material purchased from Home wages.

School.—The children have attended regularly. They have made fair progress, and the enrolment has increased.

General Remarks.—The land and roads have been greatly improved; the preliminary work is so far forward that an annual and increasing remunerative return should be produced. The Home people have improved in industry, sobriety, and cleanliness, and the Home has the confidence of the Aborigines of the district as the best place for Aborigines.

F. C. CURREY,
Manager.

Sir,

Aborigines Protectorate, Local Board, Warangesda, 25 January, 1896.

In compliance with your request, I hereby furnish you with a brief report upon what has been done at Warangesda during the past year.

A Local Board was appointed in the early part of the year, and it is felt on all sides that its existence has been productive of much good.

Owing to the long continued drought the wheat crop proved a failure, but between 30 and 40 tons of excellent hay have been gathered and stacked.

Fifty acres of agricultural land have been cleared and grubbed, which the Local Board desire to see put under cultivation. In addition to this, a considerable area has been cleared of suckers.

When the Local Board took office they found much dissatisfaction existing among the residents owing to the irregular manner in which rations arrived at the station, but on strong representations being made to the Board this difficulty was entirely removed, and the people are happier and more contented now than ever they have been.

Changes took place in the staff of officers during the year. Mrs. Swift, Matron of the dormitory, died from consumption, and Miss Parsons was appointed to succeed her. Miss Parsons has proved herself eminently qualified for the duties. Mr. Pridham succeeded Mr. Harris as Manager, and under his vigorous and kindly rule everything is going on in a thoroughly satisfactory manner. Mrs. Pridham is doing much useful work.

The conduct of the residents has been fairly satisfactory, and their health has been good.

I am, &c.,

G. R. F. NOBBS,
Hon. Secretary.

The Secretary A.P. Board, Sydney.

Report, Cumeroogunga Aboriginal Station, 1895..

Aborigines Protectorate, Local Board, Cumeroogunga, 5 February, 1896.

The Village.—Neat and tidy whenever the Local Board visited the station.

Houses.—Kept fairly clean.

Dormitory.—Always in order.

Store.—Everything systematically arranged.

Water Supply.—Large tank has been erected to supply village with water.

Stock.—In poor condition, owing to the scarcity of feed.

Farm Blocks.—Crops, owing to the dry season, were very small. The men, however, got a small return, which we regret some of them did not put to a proper use.

Land.—The main portion of the land is being cleared, which, when finished, will be a great improvement.

General Conduct.—Fairly improved. A few, however, have to be punished for either drink or immorality.

Change of Management.—So far, very satisfactory.

C. F. DAVIS,
Hon. Secretary.

APPENDIX J.

Regulations for the Management of Aboriginal Stations at Cumeroogunga, Warangesda, and Brewarrina.

Office of Board for Protection of Aborigines, 105, Phillip-street, Sydney, 1st February, 1895.

The following Regulations for the management of the Aboriginal Stations at Cumeroogunga, Warangesda, and Brewarrina, have been made by the Board for the Protection of Aborigines, and approved by the Colonial Secretary.

A. BERCKELMAN,
Secretary.

The Board for the Protection of Aborigines.

This Board is appointed by the Government to administer the funds appropriated by Parliament for the Aborigines, and is hereinafter called "The Board."

The Aborigines Protection Association.

This Association is supported by voluntary contributions, and is represented by and hereinafter called "The Council." The Board will avail itself of the assistance of the Council in the management of the Aboriginal Stations at Cumeroogunga, Warangesda, and Brewarrina, and in the appropriation of the funds provided by Parliament for the support of the Aborigines located thereon, with the voluntary assistance of Local Boards.

Local Boards.

Local Boards to consist of not more than five members, of whom three shall form a quorum, shall be appointed by the Board for each station. The superintendent of Police in whose district the station is situated, shall be *ex officio* a member.

Such Local Boards respectively shall:—

Inspect the stations not less often than once a month, and furnish the Board with a brief report on the same, together with desirable suggestions.

Inquire into all complaints affecting the management of the stations.

Advise with the managers of the stations as to discipline, work to be carried out, and generally as to the management.

To forward to the Board any reports or suggestions brought under notice by the Manager, with recommendations thereon.

To countersign all requisitions for stores, or applications for expenditure, other than such as is provided for under the heading "Articles for free distribution to Aborigines," with explanations.

Manager's and Overseer's Appointment and Duties.

The Manager and Overseer shall be nominated by the Council, but no appointment shall be made until the approval of the Board has been obtained.

The duties of the Manager shall be:—

To have the general management and control of all persons on the station, buildings, stock, and other property, and to devote all his energies to the moral and social welfare of the Aborigines resident on the station.

To report, in a prescribed form, at the end of each month, to the Council, for the information of the Board, as to the general condition of the station, i.e., the number of Aborigines located thereon, and the daily average for the month, distinguishing in all cases the sexes, and the full-bloods from the half-castes; the number of children attending the school; the nature and extent of the work done during the month, and what work it is proposed to go on with; the number of births and deaths during the month; information as to the general health of the Aborigines; and any other matters of interest.

To discourage any further introduction of half-castes, which should be allowed only on the recommendation of the Local Board.

To keep a diary of all occurrences at the station, together with the usual statistics, and submit the same, when required, to the Local Board for inspection, and to Members of the Board or Council on visit.

To

- To exercise supervision over the Aborigines at the station, to restrain them from leaving the station and visiting public-houses, and to endeavour to see that they do not squander their earnings.
- To be accountable for all rations, clothing, medical comforts, &c., and their distribution as authorised.
- To keep daily accounts of all moneys and supplies received and disposed of, and to furnish to the Council monthly abstracts of the same, for the Board's and Council's information.
- To forward all moneys received from the sale of wool, or produce, &c., to the Council at the end of each month, accompanied by a statement showing the various items.
- To consult the Local Board as to the supply of stores and materials, and on any matters affecting discipline at the stations, and to seek their advice on matters generally.
- To submit requisitions for supplies of rations, clothing, &c., monthly through the Local Board.
- To submit to the Council, with the endorsement of the Local Board, all applications by Aborigines at the stations who desire to occupy blocks of land on the Aboriginal Stations, to be cultivated by them to earn a livelihood thereon for themselves and their families; and to report fully as to the locality and suitability of the land applied for, and the character of the applicant. Such applications to be submitted to the Board before final decision by the Council.

The Manager and Overseer must assist in and supervise the erection of and repairs to buildings, fencing, &c., and the cultivation of the land, and do their best to make the Aborigines as comfortable and contented as possible, and to take an interest in their work and recreations.

The Manager must understand that he will be held personally liable for any expenditure incurred without authority.

Application for leave by the Manager or Overseer must be submitted to the Council through the Local Board, the Board to be promptly informed of any such leave granted.

All correspondence must be promptly attended to and recorded for inspection.

As it is impossible to form rules to meet every contingency that may arise, the Manager may use his own judgment in any case of emergency or not herein provided for, but the management must be firm and systematic, regularity of hours being strictly observed. The Local Board should be consulted when practicable.

Matron's Duties.

The Matron shall have special oversight of all the women, with special charge of girls and young children; shall daily visit the dwellings of the married and unmarried women, and give instructions in cooking, washing, sewing, and other domestic duties, and shall be responsible to the Manager for the cleanliness of the women and children, together with the buildings they occupy.

Officers' Rations.

Rations, according to the under-mentioned scale, will in future be issued to the Managers and Overseers (where not Aborigines) of the stations:—Full weekly ration for the Manager and his wife: Flour, 16 lb.; tea, $\frac{1}{2}$ lb.; sugar, 4 lb.; meat, 14 lb.; potatoes, 14 lb.; butter, 1 lb., if procurable.

Articles for Free Distribution to Aborigines.

Rations and clothing for free distribution to the Aborigines may be purchased by the Council without any special authority from the Board, but must be confined to the under-mentioned articles:—

Rations—Flour, tea, sugar, tobacco, salt, soap, oatmeal, and rice.

Clothing—Moleskin trousers, crimean shirts, knicker suits, wincey, flannel, and calico.

A supply of medicines, and such *medical comforts* as rice, sago, arrowroot, oatmeal, and maizena, shall be kept in stock and issued to any Aborigines on the station who may be sick or otherwise in need of the same, without any payment being demanded.

All aged, infirm, or sick Aborigines on the stations, as well as any children depending on them, shall be provided with rations at the expense of the Government, a full weekly ration to be:—Flour, 8 lb.; sugar, 2 lb.; tea, $\frac{1}{4}$ lb.; meat, 7 lb.; tobacco, $\frac{1}{2}$ lb. Salt and soap to be also issued as required. Adults at discretion of Manager to receive up to full rations, children under 10 and over 2 years old half rations.

Rations may also be issued in cases of emergency or distress, where able-bodied men or women are destitute and unable to obtain employment, care being taken to see that the regulation is not abused. Encouragement should be given to the men to go out and obtain employment from time to time on station or general country work.

All children, especially those attending school, should be cleanly and decently clad, and attendance at school encouraged and judiciously enforced.

Authority for the purchase of ration sheep must be obtained from the Board. The application should be forwarded through the Local Board, and should give full particulars as to number of sheep required, price, by whom offered for sale, &c. An account must be kept of the use made of them, or how disposed of.

No articles except rations, clothing, medical comforts, and medicine, must be purchased without first obtaining the approval of the Board.

Sale Store Account.

All goods, according to an approved list, required for sale from the stores on the stations to be purchased by the Council from its own funds, and an entirely separate account, to be called "Sale Store Account," to be kept.

All charges for the freight of such goods to be paid by the Council, and not by the Government as heretofore.

All such goods to be kept in a separate part of the store, away from the articles purchased by the Government for free distribution to the Aborigines.

All proceeds of sale of such articles to be forwarded by the Managers of the stations to the Council at the end of each month. The re-expenditure of the amount on articles for sale to be left in the hands of the Council, who will deal with all requisitions for such goods, but at the end of each quarter a debtor and creditor statement must be furnished the Board by the Council.

Proceeds of Sale of Stock and of Wool and other Produce.

All money received from the sale of sheep, cattle, and other stock, from the sale of wool, sheepskins, and agricultural produce, or for agistment, must be placed to a separate account in an authorised Bank to the credit of the Council. This account is only to be operated upon with the approval of the Board.

Quarterly debtor and creditor statements, under the heading "Stock and Produce Account," must be furnished the Board by the Council.

Donations to Association.

A quarterly detailed debtor and creditor statement, showing the donations received and the expenditure thereof, in payment of salaries, commission, office expenses, &c., to be furnished the Board by the Council.

APPENDIX K.

BOARD for Protection of Aborigines, 31st December, 1895.

		<i>Date of Appointment.</i>
Chairman.....	Edmund Fosbery, Inspector-General of Police.....	5 June, 1883.
Members.....	Hon. Philip Gidley King, M.L.C.....	
	Sydney Burdekin	27 May, 1887.
	A. M. Hutchinson	26 August, 1887.
	C. O'Malley Clarke	24 April, 1889.
	Hon. W. H. Suttor, M.L.C.	25 July, 1890.
	Thomas Colls	11 November, 1891.
	Hon. R. H. D. White, M.L.C.	16 February, 1894.
	J. M. Chanter, M.L.A.	31 August, 1894.
	James R. Hill	20 September, 1895.
Secretary	A. Breckelman	30 April, 1888.

1896.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

STATE CHILDREN RELIEF ACT.

(PETITION FROM A. M. TAIT, MODERATOR OF THE GENERAL ASSEMBLY OF THE PRESBYTERIAN CHURCH OF NEW SOUTH WALES, PRAYING THE HOUSE TO SO AMEND THE STATE CHILDREN RELIEF ACT AS TO ENABLE BOARDED-OUT CHILDREN TO BE PLACED IN CHARGE OF THEIR OWN MOTHERS.)

Received by the Legislative Assembly, 21 July, 1896.

To the Honorable the Legislative Assembly in Parliament assembled.

The humble Petition of the undersigned,—

RESPECTFULLY SHOWETH:—

That your Petitioners regard it as a serious defect in the otherwise excellent State Children's Relief Act that no action has been taken under the provisions of the Act for boarding-out fatherless children to their own widowed mothers where it is clearly shown they are worthy and capable, but unable to pay for their maintenance.

To deprive such mothers who are left destitute of the care of their own children and hand them over to strangers is, in the opinion of your Petitioners, unnatural and cruel, inasmuch as it must be apparent that as a rule no one is so competent and fit for the charge of children as their own mothers.

We therefore pray your Honorable House to so amend the present Act as to enable the administrators of this Act to place children, when they think it desirable, in charge of their own mothers.

And your Petitioners, as in duty bound, will ever pray.

A. M. TAIT,

Moderator of the General Assembly of the Presbyterian Church of New South Wales.

Similar Petitions were received:—

- On 21 July, from William G. Taylor, President, Wesleyan Conference.
- „ from His Eminence, Cardinal Moran, Archbishop of Sydney.
- „ from the Office Bearers of the Benevolent Society.
- „ from the President and Honorary Secretary, Baptist Union of New South Wales.
- On 22 July, from W. J. L. Closs, Chairman, Congregational Union of New South Wales.

1896.

—
 LEGISLATIVE ASSEMBLY.
 NEW SOUTH WALES.

ANNUAL REPORT

OF THE

DEPARTMENT OF MINES AND AGRICULTURE,

NEW SOUTH WALES,

FOR THE YEAR

1895.

Printed in accordance with Resolutions of both Houses of Parliament.

Printed under No. 1 Report from Printing Committee, 21 May, 1896.

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 1896.

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ANNUAL REPORT.

To The Honorable Sydney Smith, Esq., M.P., Minister for Mines and Agriculture,
&c., &c.

Sir,

I do myself the honor to submit the following report upon the working of that division of the Department under your control, which deals with mining interests, also the progress of mining and the results obtained during the year 1895.

The following statement conveys some idea of the clerical work of the Department during the year :—

STATEMENT of the Number of Papers registered and Letters despatched by the several Branches of the Department of Mines and Agriculture.

	Papers Registered.		Letters Written.	
	1894.	1895.	1894.	1895.
Mines proper.....	21,297	*62,799	13,112	†32,647
Lease Branch, applications and plans registered.....	1,157	2,963	.....	.....
Account Branch.....	12,335	14,113	.....	.....
Agriculture.....	14,017	.....	6,030	.....
Stock Branch.....	9,745	10,982	5,284	4,548
Public Watering Places.....	12,389	.....	6,539	.....
Inspection of Mines.....	{ 4,356 } { 8,146 }	†4,551	{ 2,432 } { 7,255 }	†3,311
Diamond Drills.....	599	440	280	210
Geological Branch.....	1,982	2,059	3,182	3,947
	86,023	97,907	44,114	44,663

* Including Agriculture, Forestry, and Public Watering Places papers.
letters. † Including forms and recommendations to fossickers for passes.

† Including Agriculture, Forestry, and Public Watering Places

The Mining on Private Lands Act came into operation on the 18th June, 1894, and since that date its provisions have been fairly well taken advantage of, although it cannot be stated that any very important discovery has been made on any of the private lands thrown open by this Act.

The number of applications for Special Leases received under section 25 was 138, comprising an area of 2,335 acres 0 rood 34 perches. Of that number 16, embracing an area of 229 acres, were refused.

The number of ordinary Leases applied for during the year was 205, comprising an area of 2,479 acres 3 roods 24 perches; but 55 of these, comprising an area of 574 acres 2 roods, were refused. A very large area of private land is occupied by the miners under authorities to search granted by the Wardens, under agreement with the owners (section 33) or under Prospecting Licenses, but it is difficult to arrive at the extent of the area so occupied.

The only minerals brought under the Mining on Private Lands Act are gold, silver, lead, tin, and antimony, and the areas comprised in the applications to lease for the purpose of mining for these minerals are as follow :—

Gold.			Silver.	Lead.	Tin.	Silver and Lead.						
a.	r.	p.	acres.	acres.	a.	r.	p.	acres.				
3,671	3	18	...	50	...	62	...	237	1	0	...	20

The above does not include an aggregate area of 684 acres which has been applied for as water races, dams, machine sites, &c., &c.

This Act has had the effect of stopping the issue of Permits to search on private land for the above-named minerals, viz., gold, silver, lead, tin, and antimony, and of cancelling all the Permits issued before the Act came into force.

Another effect is the loss of royalties payable under Permits granted under section 7 of the Crown Lands Act of 1884.

With regard to the acquisition of Crown lands for mining purposes:—

The number of applications made to lease Crown lands for mining purposes during the year was 1,429, or 672 more than the number for 1894. Of the 1,429 applications so made 1,246 were for auriferous land comprising an area of 7,655 acres 0 rood 26 perches; and 183 were for mineral land, embracing an area of 12,226 acres 0 rood 25 perches.

The number of applications dealt with during the year was 906, which also shows an increase of 140 as compared with 1894.

No effort is spared to deal speedily with these applications, while great care has to be exercised to guard against the creation of conflicting titles.

Of the 906 applications dealt with during the year, 779 were for gold-mining leases, comprising an area of over 4,822 acres, and 127 were for mineral leases, embracing an area of 8,213 acres.

The area of auriferous land applied for in 1895 was more by 4,731 acres than in 1894, and the mineral land 2,608 acres 2 roods 18 perches more during the same period.

SCHEDULE I.

TABLE showing the Land applied for to be leased during 1895 and the Minerals to be mined:—

Minerals.			Minerals.		
	a.	r. p.		a.	r. p.
Gold.....	7,655	0 26	Cinnabar.....	40	0 0
Silver.....	1,474	0 30	Jasper.....	12	0 0
Silver and lead.....	1,091	3 30	Ironstone.....	20	0 0
Silver, lead, and ironstone.....	608	0 0	Manganese.....	45	0 33
Silver, lead, and limestone.....	40	0 0	Limestone.....	20	0 0
Silver and ironstone.....	40	0 0	Graphite.....	80	0 0
Silver, lead, copper, and iron.....	261	2 5	Turquoise.....	10	0 0
Silver, lead, zinc, and copper.....	80	0 0	Opal.....	44	0 0
Silver, lead, and copper.....	140	0 0	Platinum.....	40	0 0
Silver and bismuth.....	63	0 0	Diamonds.....	260	0 0
Tin.....	245	2 0	Diamonds and tin.....	169	0 0
Tin and wolfram.....	179	0 0	Pigments.....	90	0 0
Tin, silver, and lead.....	80	0 0	Coal.....	2,288	0 0
Copper and iron.....	40	0 0	Coal and Shale.....	4,118	3 7
Copper and silver.....	80	0 0	Shale.....	320	0 0
Copper.....	80	0 0			
Antimony.....	120	0 0			
Chrome iron.....	40	0 0			
			Total area.....	19,911	1 11

As shown by the foregoing table, the aggregate area applied for is 7,339 acres 2 roods 18 perches more than that applied for in 1894.

The increase occurs principally in gold, silver, and silver and lead, silver lead and ironstone, coal, and antimony, but a considerable decrease occurs in coal and shale, and tin.

AREA held under application to lease on 31st December, 1895.

	a.	r. p.		a.	r. p.
Gold.....	4,505	0 0	Shale.....	320	0 0
Coal.....	250	0 0	Graphite.....	80	0 0
Coal and shale.....	4,323	0 0	Bismuth.....	20	0 0
Antimony.....	40	0 0	Pigments.....	80	0 0
Tin.....	141	0 0	Cinnabar.....	40	0 0
Tin and diamonds.....	80	0 0	Ironstone.....	40	0 0
Silver.....	984	0 30	Copper.....	120	0 0
Silver and galena.....	40	0 0	Diamonds.....	360	0 0
Silver and copper.....	88	0 0	Platinum.....	40	0 0
Silver and lead.....	771	2 0	Tin, silver, and lead.....	80	0 0
Silver and bismuth.....	63	0 0	Silver, lead, and ironstone.....	428	0 0
Silver, bismuth, and cerium.....	69	2 0	Silver, lead, zinc, and copper.....	80	0 0
Silver, copper, and manganese.....	40	0 0	Opal.....	4	0 0
Silver, copper, and lead.....	140	0 0			
Silver lead, copper, and iron.....	263	0 35			
Manganese.....	45	0 35			
				13,535	2 20

The area of Crown lands held under application to lease on the 31st December, 1895, shows a marked increase, the area being 13,535 acres 2 roods 20 perches, as against 5,764 acres 1 rood 0 perches so held the previous year. The principal increase is in coal and shale, gold and silver.

THE

The following table shows the area of Crown lands held under lease and the area to be mined :—

Minerals.	Mining Act, 1874.			Mining Act Further Amendment Act, 1894.			Crown Lands Occupation Act, 1861.			Mining on Private Lands Act, 1891.			Total.		
	a.	r.	p.	a.	r.	p.	a.	r.	p.	a.	r.	p.	a.	r.	p.
Alum and alumstone	480	0	0										480	0	0
Alumstone and alunite	40	0	0										40	0	0
Alunite	2	0	0										2	0	0
Antimony	156	1	29½										156	1	29½
Bismuth	40	0	0										40	0	0
Bismuth and silver	40	0	0										40	0	0
Bismuth and tin	80	0	0										80	0	0
Chrome	40	0	0										40	0	0
Coal	2,009	3	36	31,492	1	14½	2,324	0	0				35,826	1	10½
Coal and shale	368	2	29	7,836	0	0½							8,204	2	29½
Copper	280	0	0										280	0	0
Cinnabar	80	0	0										80	0	0
Diamonds	457	1	16										457	1	16
Diamonds and tin	20	0	0										20	0	0
Emeralds	40	0	0										40	0	0
Infusorial earth	30	0	0										30	0	0
Ironstone	33	3	0										33	3	0
Ironstone and limestone	120	0	0										120	0	0
Kaolin	20	0	0										20	0	0
Lead and limestone	20	0	0										20	0	0
Limestone	180	0	12										180	0	12
Marble	215	0	7										215	0	7
Mineral pigments	20	0	0										20	0	0
Opal	877	0	26½										877	0	26½
Platinum	80	0	0										80	0	0
Plumbago	40	0	0										40	0	0
Silver	1,251	2	8										1,251	2	8
Silver and copper	40	0	25										40	0	25
Silver and ironstone	40	0	0										40	0	0
Silver and lead	1,074	2	12	40	0	0							2,014	2	12
Silver, lead, and antimony	20	0	0										20	0	0
Silver, lead, and copper	500	2	10										800	2	10
Silver, lead, copper, and ironstone	248	1	7										248	1	7
Silver, lead, and ironstone	100	0	0										100	0	0
Silver, lead, ironstone, and marble	480	0	0										480	0	0
Silver, lead, and limestone	906	1	12										906	1	12
Silver, lead, and tin	240	0	0										240	0	0
Silver and limestone	148	3	13										148	3	13
Silver, platinum, iridium, and tin	100	0	0										100	0	0
Silver, platinum, and wolfram	80	0	0										80	0	0
Sulphate of alumina and potash	55	3	17										55	3	17
Tin	1,338	2	25	141	2	16							1,480	1	1
Tin and precious stones	40	0	0										40	0	0
Tin and wolfram	394	1	17										394	1	17
Tungsten	40	0	0										40	0	0
Not specified	20	0	0				37	1	33				57	1	33
Gold	5,815	1	8½	552	0	30½				64	0	5	6,431	2	31½
Total	19,904	3	30½	40,062	0	21½	2,361	1	33	64	0	5	62,392	2	91½

There is a slight decrease in the foregoing table due to cancellations made during the year for non-observance of the labour conditions, but principally for non-payment of rent due. From the following figures it will be seen that the leases so dealt with embrace an area of over 13,080 acres :—

Mineral Leases—		a.	r.	p.	a.	r.	p.
For non-work	40	1,167	1	23			
For non-payment of rent	127	8,904	3	12			
Surrendered	1	40	1	27			
	168	10,112	2	22			
Gold Leases—		a.	r.	p.			
For non-work	133	848	0	31½			
For non-payment of rent	308	2,078	0	39			
Surrendered	4	41	3	16			
	445	2,968	1	9½			
	613	13,080	3	31½			

The number of applications received for permits, or authorities, under sections 27 and 23 of the Mining Act, 1874, to mine on or under reserves during last year was 270—an increase of 10 on the number received during 1894. The number of applications dealt with was 182—an increase of 42 on the number so dealt with in 1894.

As will be seen from the following table the area of the land embraced by the permits and authorities granted in 1895 is less by 16,456 acres 0 roods 3 perches than the area so granted during the previous year. The principal decrease is in coal and shale, which was less by 15,634 acres, and in coal, which

which decreased by 7,108 acres. The large decrease under the headings of "Coal and Shale" and "Coal," as compared with the previous year, may be accounted for by the fact that a very large area of land was taken up on the striking of a payable seam of coal at Cremorne, near Sydney, by the Government diamond drill.

Table showing area of reserved land comprised in permits and authorities granted during 1895 and the minerals to be mined thereunder:—

	a.	r.	p.
Coal	2,749	3	36
Coal and shale.....	5,986	2	0
Shale.....	5,920	0	0
Tin.....	60	3	19
Chrome.....	164	2	0
Antimony.....	39	0	0
Gold.....	117	0	33
Gold, silver, and copper.....	1	3	0
	<hr/>		
	15,039	3	8

Table showing area of reserved lands comprised in authorities sections (27 and 28), issued prior to 1895 in force:—

	a.	r.	p.
Coal	17,792	1	31
Coal and shale	1,317	2	8
Shale	659	2	32
Limestone	10	0	0
Tin	199	0	16
Copper	53	2	18
Antimony	7	1	15
Gold	63	2	31
Silver and lead	3	0	0
Copper and cobalt	4	0	28
	<hr/>		
	20,103	2	19

Table showing areas comprised in authorities sections (27 and 28), which were in force on 31 December, 1895:—

	a.	r.	p.
Coal	18,449	0	1
Coal and shale	6,034	1	33
Shale	4,659	2	32
Limestone	10	0	0
Tin	192	0	16
Chrome	80	0	0
Copper	58	2	18
Antimony	7	1	15
Gold	65	2	31
Gold, silver and copper	1	3	0
Silver and lead	3	0	0
Copper and cobalt	4	0	28
	<hr/>		
	29,585	3	17

The number of applications for authorities under the Mining Act of 1889 to dig and search for gold and other minerals was 360, which is 328 less than the number received the previous year. The number dealt with was only 169 as compared with 713, the number dealt with in 1894—a decrease of 544. The number of authorities in force at the end of the year was 195—a decrease of 116 on the previous year. The number of applications for permits under section 7 of the Crown Lands Act of 1884, to win and remove minerals reserved in the Crown grants of private lands was only 15 as compared with 160 the previous year. Of these 15 applications, 10 were granted and 5 refused. The number in force at the 31st December was 195.

The foregoing table, &c., embraces all lands held for mining purposes, other than alienated lands which do not come under the provisions of the Mining on Private Lands Act, and freehold and Crown lands held in virtue of miners' rights and mineral licenses. The area comprised in these exceptions is considerable. The royalty received during 1895 was, from alienated land £402 8s. 2d., and from Crown lands £13,818 7s. 4d. Under the Mining on Private Lands Act, 1894, the Crown receives no royalty from gold, silver, tin, and antimony, won from private lands.

The return showing the gold and mineral leases and permits under sections 27 and 28 of the Mining Act is still being published half-yearly instead of quarterly, as in former years, and no complaints have been received so far with regard to the alteration. This return gives information which should be of great value to the mining community generally, and more especially to the working miners.

PROSPECTING BOARD.

The Prospecting Board during the year 1895 visited the following places, amongst others, for the purpose of inspecting and inquiring into applications received for assistance from the Vote:—

Adaminaby	Byrock	Grenfell	Nundle
Adelong	Byron Bay	Gulgong	Oberon
Albury	Cadia	Gundagai	O'Connell
Alectown	Onloola	Harden	Pambula
Araduen	Canadian Lead	Hargraves	Parkes
Armidale	Canowindra	Hazelgrove	Peak Hill
Back Creek	Captain's Flat	Hill End	Rockley
Bald Nob	Carcoar	Hillgrove	Rylstone
Ballina	Cargo	Hillston	Sebastopol
Barmedman	Carino	Home Rule	Sofala
Barraba	Clear Creek	Inverell	Stockiabungul
Bateman's Bay	Cobar	Jenabacumbene	Tamworth
Batlow	Cobargo	Jindabyne	Tarana
Bear Hill	Cobbora	Junee	Tareutta
Bega	Colinton	Kerr's Creek	Tenterfield
Bell's Creek	Condobolin	Linckilns	Tin
Bermagui	Coolac	Lionsville	Tingha
Bethungra	Coolongolook	Lismore,	Trundle
Bingara	Cooma	Lucknow	Trunkey Creek
Blayney	Copeland	Macksville	Tuena
Bombala	Corowa	Marulan	Tumut
Boonaroo-Boonoo	Cowra	Michelago	Uralla
Boro	Crookwell	Milparinka	Wagga Wagga
Bowling-alley Point	Cudal	Mogo	Walbundrie
Bowring	Cudgegong	Molong	Walcha
Bowraville	Dalmorton	Moruya	Wangat
Box Ridge	Davisville	Moessiel	Welcome Reef
Braidwood	Deepwater	Mount Hope	Wattle Flat
Bredbo	Delegate	Mount M Donald	White Cliffs
Brimbramalls	Drake	Murrumbateman	Windeyer
Brown's Creek	Dungog	Murrurundi	Woolgoolga
Bulli	Eden	Muttama	Wyalong
Bundarra	Emmaville	Nadgingomar	Wyndham
Bungendore	Euabalong	Nana Creek	Yass
Bungonia	Forbes	Nelligen	Young
Burruga	Forest Reef	Nerriga	
Burrowa	Gulgui	Newbridge	
Byng	Glen Innes	Nine-mile	

There was a large increase in the number of applications received for aid, the number being 1,843, as compared with 1,068 received during 1894. The following table will show how they were disposed of:—

	1894.	1895.
Aid granted in	397 cases	620 cases.
Aid refused in	584 „	818 „
Applications abandoned..	27 „	42 „
Applications not dealt with	60 „	363 „
Total.....	1,068 „	1,843 „

The following extracts are taken from reports by Wardens and other officers instructed to measure up the work of parties in receipt of aid from the 1895-6 Prospecting Vote:—

1. W. Wakelin and Party were aided to drive from their 40-foot shaft on Tucker's Hill, near Hargraves, and were successful in striking a vein about 2 feet wide, the first crushing of 5 tons from which yielded 31 oz. 2 dwt. of retorted gold. The party has now taken up a 3-acre lease.

2. Rathbone, Delore, and Colson were aided to continue their shaft on the Queen of Bulby Claim, near Coolongolook. After working without success for some time, they at last succeeded in striking the reef 3 feet thick, the stone showing splendid specimens of gold. The claim has been taken up by a syndicate, with a view of carrying on extensive operations, and a large area in the vicinity of the claim has been pegged out.

3. Adam Stenberg and Charles Remfleish were aided to prospect for alluvial gold by sinking a series of shafts on Ford's Creek Station, 12 miles from Cobbora. After doing a considerable amount of work, payable gold was ultimately discovered at a depth of 10 feet, the wash being 2 feet thick, ten loads of which yielded 4 oz. 2 dwt. of coarse, heavy gold. A large number of men are prospecting between the new find and the Cobbora Diggings, a distance of about 6 miles.

4. Walter Booth and Party were aided to continue shaft on Mount Morgan, *via* Coolac, to a total depth of 75 feet. At the 45-foot level the party struck some very good stone, which widened out to 2 feet at the 57-foot level. Eighty bags, containing 4 tons 15 cwt., were sent to the Clyde Works, Sydney, for treatment, which returned 14 oz. 11 dwt. free gold. The last report from this mine states that the reef is much wider at the 80-foot level, and the returns are expected to be much better than the above.

5. C. Butler and Party, of the Dust-hole Claim, near the Junee Reefs, reported on the 16th May that the reef struck in the 70-foot shaft (as stated in last year's report) had widened out considerably at the 95-foot level, and that a parcel of 4 tons sent to Sebastopol for treatment had yielded 16 oz. of gold. Several parties have started sinking with a view of striking this reef, with every prospect of success.

6. R. Stoncham and Party received aid to prospect for alluvial gold to the north-west of Milparinka. Struck wash at 130 feet, resting on a slate bottom. The party have a good show of wash-dirt, which yields about half a dwt. of gold to the dish. The party are starting to drive to the dip, when the prospects are likely to improve.

7. Field and Boehme were aided to drive from the bottom of their shaft on the Trickett's line of reef at Stuart Town, have been successful in striking some very good payable stone. This is looked upon as a valuable property and is now under offer for a considerable sum.

8. The Angus Gold-mining Co., were aided to further test the Lucky Hit Mine, near Tuena, and were successful in striking some very rich stone.

9. W. H. Campbell, Whalen's Hill, Wattle Flat, received aid in April, 1894, to continue his 35 feet shaft a further depth of 100 feet. When that level was reached the indications were so promising that the Board in May, 1895, recommended that further assistance be granted to continue the shaft. At 225 feet the reef was struck carrying very good gold and yielding specimens here and there. From the 200-foot level to bottom the reef averages from 1 to 3 feet in thickness, consisting of ferruginous quartz highly mineralised.

10. Henry McCudden, Bateman's Hill, 5 miles east from Wattle Flat, was aided to sink a shaft on the reef to a depth of 100 feet. At 50 feet the vein widened out to 7 inches, and when the 100 feet level was reached it was 2 feet thick showing good gold. A rich shoot of gold was struck at the 72 feet level, and several crushings taken out have averaged 2 oz. of gold per ton.

11. Hill, Scott, and Party, prospecting on the Sawyer's line of reef, 3 miles north of Hargraves, were aided to continue driving from the 230 feet cross-cut. When the drive had reached 220 feet, the officer at Hargraves reported on it as follows:—"The reef is now looking well and the party are erecting a 5-stamper battery, and they hope to make it a profitable investment. There is a splendid body of quartz showing colours, with the reef getting wider and it is now over 2 feet. There is no doubt but the reef is a permanent one, and likely to be worked with profit for a great many years to come.

12. Charles Harrigan was aided to test a run of alluvial ground situated near Scrub Yards, struck bottom at 98 feet. The wash was 9 inches thick and yielded 2 dwts. per load. The party propose continuing this shaft as there is a doubt whether they have yet reached the true bottom.

13. Martin Hennessy received aid to continue prospecting operations 9 miles south-east of the Overflow Homestead, and 35 miles easterly of Nymagee. Struck a very large lode which assayed—1 oz. of gold per ton; 5 oz. of silver per ton; lead, 8 per cent; and copper, 3 per cent. The extent of the deposit has not yet been proved, but it must be considerable, as four shafts have been sunk on it over a mile of ground, and it can be traced on the surface for miles. A large area of land has been pegged out along the line of the lode, and prospecting work is being carried on vigorously.

14. Messrs. Rafferty, Kilday, and Party were aided to continue their shaft on the Zulu Reef at Tiltbuster, 7 miles northerly from Armidale. At 54 feet the reef was struck, and on a trial crushing of 7 tons 17 cwt. being taken from that level and treated yielded 9 oz. 17 dwt. of smelted gold. The reef averages 9 inches wide, and is not troubled with water at that level.

15. Harry Thomas and Party, of the Pioneer Claim, Mount Carrington, near Drake, have been continuing their shaft under aid from the Prospecting Vote. At 130 feet some very rich stone was struck in the shaft, the reef being over 1 foot wide, and promising well. Some of the specimens from this find were richer than any yet seen on the field.

Taken as a whole, the discoveries under the Vote during the year are satisfactory. Many of the finds are made by poor parties of working miners who have great difficulty in securing the capital necessary for development. It often happens also that large areas of the adjoining land are taken up by speculators and others who have no intention of testing the land themselves, but hold in the hope of disposing of their title at a profit should indications in the prospectors' claim warrant such. This practice often prevents the value of a find being proved at once, as it should be, and locks up the land to legitimate miners who would go to work at once. On the Board's recommendation the Minister approved of one of the largest Government diamond drills being sent to the Forest Reefs district to prove the deep alluvial leads in that locality. Should the operations prove successful a great impetus will be given to deep alluvial mining in this promising district.

Several parcels of ore have been brought down to Sydney by the Board during the year for treatment, as they considered that in some cases it was better to ascertain the value and character of a deposit before spending money in testing it at a depth.

The ore was treated under the supervision of Mr. James Taylor, the Government Metallurgist, who readily rendered the Board all the service possible.

THE "FOSSICKING" BOARD.

This Board was formed to assist the Government Labour Bureau with advice in drafting the unemployed of Sydney to suitable localities within the Colony where it was considered they had a chance of earning a living by fossicking on the old gold-fields. The men were supplied with a railway ticket to the station nearest their destination, and a miner's right, on credit; and it is fair to state that a fair percentage of the men have seen their way to refund the cost of such to the Government. It is also an indication that the men appreciate the assistance rendered, and the fact that many of them removed their families to the gold-fields would seem to show that they have improved their positions by proceeding there. The number of men recommended for passes in 1894 was 9,572, and from 1st January to 30th June, 1895, 4,081.

The decided increase in the yield of gold within this Colony during the past four years is no doubt partly due to the work of this large body of men throughout the Colony, who, from all reports received, were able to at least earn rations, and some of the more industrious, good wages. The following table will show the quantity and value of gold won in New South Wales:—

	oz	Value
1892	156,870	£569,178
1893	179,238	651,286
1894	324,787	1,156,717
1895	360,165	1,315,920

Many of the men whom circumstances compelled to apply for a miner's right on credit were able to renew their rights at the beginning of 1895 at their own cost.

The

GEOLOGICAL SURVEY.

The Government Geologist's time has been divided between practical work in the field and the supervision in the office of the general work of the Branch under his control. In February he was engaged in an inspection of the then recently-discovered Bulgandra reefs, near Culcairn, and he subsequently reported thereon. He made two visits to the Garangula gold-field, and furnished reports in connection with the proposed resumption of the land by the Government.

In conjunction with Professor David, he made a geological survey of the Talbragar fish-beds, the results of which were subsequently published as an introduction to Mr. A. S. Woodward's memoir on "The Fossil Fishes of the Talbragar Beds." This work is of special importance as establishing the occurrence of rocks of Jurassic age in New South Wales.

In May, Mr. Pittman made an inspection of the Appletree Flat gold-field, and furnished a report dealing with the reduction of the gold-field reserve.

In September he was engaged on a geological examination of the country to the east of the road from Narrabri to Moree. The information gained during this examination was of considerable importance in connection with the question of artesian water. A report was furnished showing that the Moree and Coonamble bores (which yielded excellent supplies of artesian water) were not, as had previously been supposed, in the Lower Cretaceous rocks, but in sandstones and shales of the same age as the Clarence River Coal Measures and the Ipswich Coal Measures of Queensland. Mr. Pittman points out that in view of this discovery it is evident that the area of our artesian water-bearing country is much larger than was previously supposed, as these Triassic (Ipswich) coal measures extend a considerable distance to the eastward of the eastern boundary of the Lower Cretaceous basin, as hitherto shown on the geological map of the Colony.

In October, Mr. Pittman reported on the probability of obtaining artesian water on the Clarence River, and he subsequently visited Queensland for the purpose of studying the Ipswich coal measures and the Blythesdale braystones in the type districts. He was then engaged until nearly the end of the year in examining the country north and north-west of Inverell, and in mapping the eastern boundary of the newly-discovered artesian basin.

He also, while in that district, made a geological examination of the Ashford coal-field, and reports that although the field is narrow and the seam is inclined at a high angle, in view of the great thickness of the seam (about 27 feet) and the excellent character of the coal for steam or smelting purposes, the deposit will be a valuable one in the future. The Government Geologist also examined and reported upon a recently-discovered deposit of diamondiferous drift, near Boggy Camp, about 17 miles south-west of Inverell. The diamonds in the Prospectors' claim appear to be numerous, though in size and quality they do not differ, to any appreciable extent, from those found at Bingara.

During the year the Geological Surveyors' time was, to a considerable extent, devoted to Prospecting Vote work, nevertheless some important reports were submitted. The following were furnished by Mr. J. E. Carne:—

1. Further report on the chrome deposits of Gundagai and Tumut Districts.
2. Report on Toolong and Bogong Gold-fields.
3. Report on the Bywong Gold-field.
4. Report on auriferous deposit at Batlow, near Adelong.
5. Report on Big Hill reefs, near Bateman's Bay.
6. Report on a deposit of cinnabar near Lionsville.
7. Report on the Coramba and Bucca Creek reefs.
8. Report on the auriferous beach sands of the Esk River and Jerusalem Creek, Clarence and Richmond District.

Mr. Geo. A. Stonier resigned his position on the 31st October.

Mr. J. B. Jacquet furnished reports upon:—

1. The geology of the country around Melrose.
2. The Drysdale and Mount Billagoes Gold-field.
3. The auriferous drifts of the Talbragar River.
4. The chrome deposits at Berthong.
5. The Mullengandra Gold-field.
6. An auriferous reef near Woodstock.
7. The platinum deposits at Fifield.
8. An auriferous deposit at Specimen Hill, near Cowra.

Collections of minerals and fossils have been supplied to eighteen different institutions during the year, and no less than 4,816 samples have been assayed or analysed.

MINING SURVEYORS, &c.

The number of mining surveys made during last year was 1,163; of these 660 were gold leases on Crown lands, 46 mineral leases, 181 mining tenements, 38 mining permits, and 238 gold leases on private property; 900 were made by the salaried and 263 by non-salaried surveyors. This a great advance on the returns for 1894, when the total number of surveys was 704, of which 458 were performed by salaried and the balance by non-salaried surveyors. This result is owing partly to the fact that one of the surveyors who was disabled during the whole of 1894 was again on duty in 1895, and partly to the fact that the surveyor to whom the colliery surveys are entrusted was during the past year able to give more of his time to the ordinary survey work.

CHARTING.

The total number of gold and mineral applications dealt with during the year was 855 against 663 during 1894; the number of 27th and 28th section applications dealt with was 189 against 115 during the previous year. The number of applications in hand at the end of the year for leases and authorities was 178 and 40 respectively.

Work of all descriptions has been coming into the branch very freely for some time past, and especially in connection with the Mining on Private Lands Act. The applications under this Act cannot be dealt with so expeditiously as those under the Principal Act owing to the delays caused by the investigation of titles, the determination of very old boundaries, and the settlement of numerous points upon which decisions by the Crown Law Office are necessary.

Amongst the miscellaneous work the notation of plans is very important and responsible, as it is our strongest safeguard against issuing a lease of land which is not available; 5,417 plans were noted during the year, and 21 maps examined and put into office use.

The mining maps have been kept charted up to date as rapidly as possible; during 1895 416 copies of mining maps were charted up to date and forwarded to Wardens, 68 to District Surveyors, and 59 to Mining Surveyors.

COMPILATIONS.

During the year 20 locality maps, embracing 78 parishes or parts of parishes, were completed, 21 put into office use, and at the end of the year 7 remained on hand in various stages; 46 proofs of parish and town maps, showing mining measurements, were received from the Department of Lands, 48 were revised and returned, and 32 were adopted as mining maps and put into office use.

In addition to the above, good progress has been made with the series of maps of the Mining Districts of New South Wales. Two sheets were published embracing parts of the Hunter and Macleay, Peel and Uralla, Tumut and Adelong, and Southern Mining Districts, covering an area of about 24,864 square miles; 4 other sheets are in various stages.

The following is a list of new maps or new editions of maps published during the year, and also a complete list of mining maps in use.

LIST of new Maps and new Editions of Maps published during 1895:—

Parish or part of.	County.	Parish or part of.	County.
Bulgandramine, Gundong	Narromine.	Kempfield, Copperhanian	Georgiana.
Bingera, Derra, Derra, Banghect, Tange	Murchison.	Mulgunnia	do
Boranet, Kuowla, Wawgan	Gloucester.	Mitchell, Seeley, Sara	Clarke, Gresham.
Budlawang, Mongarlow	St. Vincent.	Moquilamba, Tindayrey	Robinson.
Boonoo Boonoo, Colongon, Barney Downs	Buller, Clive.	Parkes	Ashburnham.
Bandawarra	Bland.	Sebastopol, Trigalong, Walladilly	Clarendon, Bland.
Dinoga, Hall, Guron, Macintyre	Murchison.	Waterbeach, Millah Murrah	Roxburgh.
Eskdale, Jesse	Roxburgh.	Wyalong, Mugga, Narragudgil	Gipps, Bland.
		Young	Monteagle.

Map of the country in the vicinity of Gilgunnia, embracing 23 parishes.
 Map of the country east of Wyalong, embracing 25 parishes.
 Map of the country in the vicinity of Billy's Lookout, embracing 25 parishes.
 Map of the Mining Districts of New South Wales (sheet 1), embracing part of the Southern Mining District, and part of the Tumut and Adelong Mining District.
 Map of the Mining Districts of New South Wales (sheet 5), embracing part of the Peel and Uralla Mining District, and part of the Hunter and Macleay Mining District.

COMPLETE

COMPLETE List of Mining Maps in use.

Parish or part of.	County.	Parish or part of.	County.
Abercrombie	Beresford.	Buangla	St. Vincent.
Adelong	Wynyard.	Budawang	do
Aellalong	Northumberland.	Buddigower	Bourke.
Ainsley	Parry.	Bulgandramine	Narromine.
Airly	Roxburgh.	Bullongong	Murray.
Albert	Yancowinna.	Bumbaldry	Monteagle.
Alberta	Farnell.	Bundar	Gough.
Albury	Goulburn.	Bundawarra	Bland.
Alma	Yancowinna.	Bundure	Blaxland.
Do (town of)	do	Burke	Camden.
Alnwick	Northumberland.	Burra	Kennedy.
Anderson	Gough.	Do	Selwyn.
Annandale	Clive.	Burrabijong	Bland.
Anson	Bathurst.	Burrandong	Wellington.
Antimony	Buller.	Burridgee	Georgiana.
Araluen	St. Vincent.	Burrill	Kennedy.
Arkel	Bathurst.	Byjerkemo	Farnell.
Arvid	Gough.	Byng	Bathurst.
Aston	Hardinge.	Byngnano	Mootwingee.
Awaba	Northumberland.	Bywong	Murray.
Back Creek	Bland.	Cadalgulee	Gipps.
Badjerrigarn	Farnell.	Cadgee	Dampier.
Bagawa	Fitzroy.	Calafat	Wynyard.
Bald Nob	Gough.	Callanyn	Buller.
Ballallaba	Murray.	Caloola	Mootwingee.
Ballandean	Clive.	Canowindra	Bathurst.
Ballina	Rous.	Carabagal	Gipps.
Bandamora	Roxburgh.	do	Bland.
Bangheet	Murchison.	Carawandool	Gipps.
Barbingal	Bland.	Carlisle	Mouramba.
Baring	Westmoreland.	Carroll	Wellington.
Barmedman	Bland.	Cargo	Ashburnham.
Barney Downs	Clive.	Castleton	Roxburgh.
Baroorangee	Young.	Catarnet	Buller.
Bates	Clive.	Catcart	Yancowinna.
Belimebung	Bland.	Cavendish	Clive.
Bena	Gipps.	Cessnock	Northumberland.
Bon Bullen	Roxburgh.	Chalmers	Durham.
Beneree	Bathurst.	Chugwell	Hardinge.
Berendebba	Bland.	Churchill	Drake.
Bermagabee	Dampier.	Clare	Hardinge.
Berrigan	Bland.	Claronce	Buller.
Berrima	Camden.	Clear Ridge	Gipps.
Bherwerro	St. Vincent.	Clermiston	Bourke.
Bimbeen	Gipps.	Clifford	Beresford.
Bimbella	Bland.	Clinton	Bathurst.
Bindera	Gloucester.	Clive	Gough.
Bingara	Murchison.	Coally	Evelyn.
Bingham	Georgiana.	Cobar	Robinson.
Binghi	Clive.	Cobran	Blaxland.
Blackheath	Cook.	Cole	Bathurst.
Blackman	Georgiana.	Coleridge	do
Blain	Clive.	Collett	Ashburnham.
Blair Hill	Gough.	Colongon	Buller.
Blake	Bathurst.	Comlaroi	Fitzroy.
Blaxland	Mouramba.	Condoulin	Cunningham.
Bligh	Farnell.	Cooba	Cook.
Blow Clear	Gipps.	Coolamin	Wellington.
Bloxsome	Gough.	Coolanigal	Roxburgh.
Bodalla	Dampier.	Coonbaralba	Farnell.
Boduldura	Wellington.	Cooney	Sandon.
Boginderra	Bland.	Coorumbung	Northumberland.
Boiga	Wellington.	Copes' Creek	Hardinge.
Bolagamy	Gipps.	Copperhanna	Georgiana.
Bolaira	Yancowinna.	Cordeaux	Camden.
Bolderogery	Gordon.	Coree	Blaxland.
Bolton	Westmoreland.	Corella	Cunningham.
Bomangaldy	Yancowinna.	Corona	Farnell.
Bombah	Georgiana.	Corringe	Gipps.
Bomgadah	Mootwingee.	Corry	Buller.
Bookookoorara	Buller.	Coventry	Clarke.
Booloombayt	Gloucester.	Cowal	Gipps.
Boona	Kennedy.	Cox	Cook.
Do East	Cunningham.	Cranbrook	Clive.
Do West	do	Craven	Gloucester.
Boonabah	Bland.	Crowl	Mouramba.
Boonoo Boonoo	Buller.	Crudiac	Roxburgh.
Boorongail	Bland.	Culingerai	Bland.
Boorook	Buller.	Cullen Bullen	Roxburgh.
Bootoowas	Gloucester.	Cullendore	Buller.
Borancl	do	Callulla	Argyle.
Bowman	Clive.	Cummings	Wellington.
Boyd	Gough.	Curaburrama	Bland.
Brangalga	Bourke.	Curragurra	Wellington.
Branxton	Northumberland.	Currah	Gipps.
Bray	Yancowinna.	Currajong	Ashburnham.
Brigstocke	Mouramba.	Currambene	St. Vincent.
Bringellet	Bathurst.	Curreeki	Gloucester.
Broadmeadows	Gresham.	Currock	St. Vincent.
Broombee	Wellington.	Currowan	do
Broulee	St. Vincent.	Dabnorton	Gresham.
Brundah	Monteagle.	Danjera	St. Vincent.
Brunton	King.	Darby	Hardinge.
Brymur	Bland.	Derra Derra	Murchison.

Parish or part of.	County.	Parish or part of.	County
Dering	Farnell.	Joadja	Camden.
Dhoo	Yancowinna.	Jocelyn	Westmoreland.
Digby	Pottinger.	Julong	Georgiana.
Dinoga	Murchison.	Kahibah	Northumberland.
Dora	Northumberland.	Kalingan	Gipps.
Drumston	Bourke.	Kangaloolah	Georgiana.
Dumaresq	Gough.	Kangaloon	Camden.
Dungeree Phillip	Phillip.	Kedumba	Cook.
Dungowan	Parry.	Kembla	Camden.
Dunleary (part of)	Bathurst.	Kempfield	Georgiana.
East Gulgunnia	Blaxland.	Kiandia	Wallace.
Edgar	Yancowinna.	Kildary	Bourke.
Egbert	Bathurst.	Killeen	Blaxland.
Eldon	Gloucester.	Do South	do
Ellerslie	Cunningham.	Kinchelsea	Mouramba.
Do	Wynyard.	Kingsgate	Gough.
Ellon	Bourke.	Kinnear	Mouramba.
Elmsmore	Gough.	Kirk	Yungnulgra.
Emore	Yancowinna.	Knowla	Gloucester.
Do	Sandon.	Krue	Mouramba.
Eskdale	Roxburgh.	Lake Macquarie	Northumberland.
Ettrema	St. Vincent.	Lands End	Gough.
Euadera	Wynyard.	Langdale	Westmoreland.
Eaglo South	Gipps.	Lennox	Bathurst.
Eumur	Darling.	Lewis	Yancowinna.
Eusdale	Roxburgh.	Do	Wellington.
Fairy Hill	Yancowinna.	Lidsdale	Cook.
Falnash	Roxburgh.	Livingstone	Gipps.
Fitzroy	Kennedy.	Loftus	Parry.
Flagstones	Gough.	Lorne	Arrawatta.
Forbes	Ashburnham.	Lowther	Westmoreland.
Do	Wellington.	Macintyre	Murchison.
Fowler's Gap	Farnell.	Maharatta	Yancowinna.
Freemantle	Bathurst.	Maitland	Northumberland.
Frazer	Gough.	Malongulli	Bathurst.
Do	Clive.	Mandamah	Bland.
Gadara	Wynyard.	Mandolong	Northumberland.
Gairdner's Creek	Mootwingee.	Manildra	Ashburnham.
Galbraith	Bathurst.	Marangaroo	Cook.
Galwadgere	Wellington.	Marbanga	Bland.
Gibraltar	Clive.	March	Wellington.
Gibrigal	Gipps.	Markdale	Georgiana.
Gidgingidginbung	Bland.	Marsden	Gipps.
Giles	Farnell.	Marsh	Buller.
Gilgunnia	Mouramba.	Martin	Ashburnham.
Do	Blaxland.	Marulan	Argyle.
Do (East)	do	Maryland	Buller.
Gillgurry	Buller.	Mayo	Hardinge.
Gillenbine	Kennedy.	Megalong	Cook.
Gillendich	Georgiana.	Meglo	Georgiana.
Glenken	Selwyn.	Melrose	Roxburgh.
Gnupa	Auckland.	Merinda	Wellington.
Cooran	Blaxland.	Merrigalah	Sandon.
Gooloongolok	Gloucester.	Metz	do
Goonumbla	Ashburnham.	Micaligo	Beresford.
Gordon	Gough.	Mickimill	Kennedy.
Gouron (part of)	Murchison.	Middlehope	Durham.
Graeme	Macquarie.	Middlesex	Mouramba.
Grattai	Wellington.	Mildil	Gipps.
Guapa West	Blaxland.	Millah Murrab	Roxburgh.
Gulgong	Phillip.	Milring	Evelyn.
Gulph	Dampier.	Mingelo	Narromine.
Gundong	Narromine.	Mininjary	Bland.
Guntawang	Phillip.	Mitchell	Gough.
Gindantherie	Cook.	Do	Clarke.
Hall	Clarke.	Mogood	St. Vincent.
Do	Darling.	Molroy	Murchison.
Do	Murchison.	Mongarlowe	St. Vincent.
Hamilton	Gough.	Moogem	Clive.
Hampton	Bathurst.	Moonam	Durham.
Haning	Inglis.	Nooney Mooney	Harden.
Hargraves	Wellington.	Moora Moora	Gipps.
Hartley	Cook.	Moorkaie	Yancowinna.
Haystack	Gough.	Moquilamba	Robinson.
Heathcote	Cumberland.	Morrisset	Northumberland.
Herbert	Gough.	Morundurey	Roxburgh.
Herborn	Raleigh.	Moruya	Dampier.
Hexham	Northumberland.	Morangarell	Bland.
Hiawatha	Gipps.	Mouin	Cook.
Highland Home	Gough.	Mount Alleu	Blaxland.
Hughes (part of)	Yancowinna.	Mount Gipps	Yancowinna.
Hume (part of)	Mouramba.	Mount Hope	Blaxland.
Hyandra	Gordon.	Muckerwa	Wellington.
Ironbarks	Wellington.	Mugga	Bland.
Inverary	Argyle.	Mugincoble	Ashburnham.
Inverell	Gough.	Muir	Gough.
Jamberoo	Camden.	Mulbring	Northumberland.
Jamieson	Cook.	Mulga	Gipps.
Do	Mouramba.	Mulgunnia	Georgiana.
Jellore	Camden.	Mulwaree	Argyle.
Jeremy	Georgiana.	Mundi Mundi	Yancowinna.
Do	do	Mungabarina	Goulburn.
Jerricknorra	St. Vincent.	Murga	Cunningham.
Jesse	Roxburgh.	Murrimba	Camden.
Jingellie, East	Selwyn.	Myall	Murchison.
Jingerangle	Bland.	Nadback	Yancowinna.

Parish or part of.	County.	Parish or part of.	County.
Naradin	Yancowinna.	Teralba	Northumberland.
Narraburra	Bland.	Thanowring	Bland.
Narragudgil	do	The Peaks	Westmorland.
Narrangarril	Argyle.	Therabung	Bland.
Nattery	do	Thornshope	Roxburgh.
Nepean	Cook.	Thurungly	Bland.
Nerang Cowal	Gipps.	Tia	Vernon.
Nerrigundah	Dampier.	Tiabundie	Darling.
Nerrimanga	Argyle.	Tiara	Vernon.
Newcastle	Northumberland.	Tienga	Hardinge.
Do (City and Environs)	do	Timbarra	Clive.
Do District	Durham, Northumber- land, and Gloucester.	Tindayrey	Robinson.
Newry	Darling.	Tintern	Bathurst.
Do	Raleigh.	Tomago	St. Vincent.
Noorooma	Dampier.	Tomaree	Gloucester.
Nootumbulla	Mootwingee.	Toogong	Ashburnham.
North Nullamauna	Ararat.	Topi Topi	Gloucester.
North Peak	Blaxland.	Torrowangee	Farnell.
Nullama	Gresham.	Torrens	Bathurst.
Nundle	Parry.	Tout	Kennedy.
Nullum	Rous.	Trianbil	Wellington.
Oallen	Argyle.	Trigalana	Gipps.
Oberon	Westmoreland.	Trigalong	Bland.
Oldcastle	Durham.	Tuena	Georgiana.
Olney	Northumberland.	Tuggarah	Northumberland.
Omadale	Durham.	Tumbarumba	Selwyn.
Ophara	Yancowinna.	Udah	Gipps.
Opton	King.	Ugalong	do
Orr	Evelyn.	Ulmarrah	Wellington.
Pampara	Yungnulgra.	Umberumberka	Yancowinna.
Para	Yancowinna.	Umhiella	Roxburgh.
Paradise North	Gough.	Undercliff	Buller.
Parke	Ashburnham.	Undoo	Beresford.
Picton	Yancowinna.	Ungarie	Gipps.
Prospero	Durham.	Uralla	Sandon.
Purfleet	Bathurst.	Urobodalla	Dampier.
Purnamoota	Yancowinna.	Victor	Blaxland.
Purvis	Clive.	Waarbilla	Bland.
Reid	Buller.	Wagga	Blaxland.
Robe	Yancowinna.	Wagonga	Dampier.
Rock Glen	Clive.	Walberton	Roxburgh.
Rock Vale	do	Walcha	Parry.
Romney	do	Walladilly	Bland.
Rosebery	Bathurst.	Wallah Wallah	Forbes.
Rose Valley	Beresford.	Wallarah	Northumberland.
Ruby	Buller.	Wallandry	Bland.
Rusden	Gough.	Walters	Wellington.
Sandy Creek	Hardinge.	Wamboyne	Gipps.
Sara	Gresham.	Wangalo	Georgiana.
Do	do	Wangat	Gloucester.
Sarsfield	Kennedy.	Wargin	Bland.
Scene	Gough.	Warragamba	Cook.
Scott	do	Warralunga	Bland.
Seaham	Durham.	Warratra	Wellington.
Sebastopol	Clarendon.	Warre Warral	Clarendon.
Do	Yancowinna.	Waterbeach	Roxburgh.
Secley	Clarke.	Waukeroo	Yancowinna.
Sentinel	Yancowinna.	Wawgan	Gloucester.
Severn	Gough.	Wellington, North	Gough.
Silent Grove	Clive.	Do Vale	do
Single	Hardinge.	Wells	Roxburgh.
Sofala	Roxburgh.	Wertago	Yungnulgra.
Somers	Bathurst.	West Fairfield	Drake.
Somerset	Kennedy.	West Plains	Gipps.
Soudan	Yancowinna.	Wiagdon	Roxburgh.
Southend	Cumberland.	Wilbertree	Gipps.
South Gundagai	Wynyard.	Williams	Hardinge.
South Peak	Blaxland.	Willie Ploma	Wynyard.
South Yackerboon	do	Willyama (village of)	Yancowinna.
Springbrook	Gresham.	Windeyer	Wellington.
Stanford	Northumberland.	Wingello	Camden.
St. David	Bathurst.	Wongawilli	do
Stephen	Yancowinna.	Wonona	do
Stockrington	Northumberland.	Wood's Reef	Darling.
Stockton	Gloucester.	Woolomombi	Sandon.
Do (town of)	do	Woraro	Yungnulgra.
Stonehenge	Gough.	Worcester	Bathurst.
Stowell	Gloucester.	Worra	Gresham.
Strachan	Gough.	Wyaldra	Phillip.
Strathbogie	do	Wyalong	Gipps.
Do North	do	Wyalong, South	Bland.
Strathspey	Buller.	Wyanbene	Dampier.
Sutton	Gloucester.	Wylie	Buller.
Swinton	Hardinge.	Wyndham	Auckland.
Talbragar	Bligh.	Wyrra	Bland.
Tallaganda	St. Vincent.	Wellington	Wellington.
Tambaroora	Wellington.	Yackerboon	Blaxland.
Tange	Murchison.	Do South	do
Tara	Yancowinna.	Yalwal	St. Vincent.
Tarcombe	Blaxland.	Yancowinna	Yancowinna.
Tarcutta	Wynyard.	Do North	do
Telezars	Gloucester.	Yarralaw	Argyle.
Temora	Bland.	Yiddah	Bland.
Tenandra	Lincoln.	Young	Monteagle.
Tent Hill	Gough.	Younga Plain	Gipps.
		Yowaka	Auckland.

Mining District Maps.

Bathurst Mining District.	Southern Mining District (part of).
Hunter and Macleay Mining District (part of).	Tamboora and Turon Mining District.
New England Mining District.	Tumut and Adelong Mining District (part of).
Peel and Uralla Mining District (part of).	

INSPECTION OF MINES OTHER THAN COAL AND SHALE MINES.

Mr. Slec, F.G.S., Chief Inspector of Mines, reports 36 fatal and 28 non-fatal accidents in connection with the metallic mines during the year, which is an increase of 8 fatal and 1 non-fatal over the previous year.

Of the 36 fatal accidents, 5 were in quartz, 7 in alluvial gold-mining, and 20 in silver-mining, principally at Broken Hill; also 1 in copper, 1 in chrome, and 2 in limestone.

I observe that the percentage of fatal accidents is greater during the year 1895, being 1.25 as compared with 1.16 during 1894, and the non-fatal .97 as against 1.12 during the same period.

The number of men employed in and about the metallic mines in the Colony has considerably increased during the year, the number being 28,923, as compared with 24,038 in 1894.

The undermentioned localities were visited and inspected during the year:—

By the Chief Inspector.

Cootamundra, Wyalong, Reefton, Barmedman, and Temora twice; Ryepark, Gundagai, Adelong, Bowring, Yass, Gunning, Yarrawa, Boorowa, Young, Grenfell, Bywong, Captain's Flat, Murrumburrah, Garungula, Albury, twice; Bulgandra, Bowna, Corowa, Marulan, Bungonia, Broken Hill, twice; Tarrawingee, Milparinka, Tibbooburra, Mount Brown, Cobar, Mount Drysdale, Byrock, Coolabah, Bald Hills, Nymagee, Gilgunnia, Overflow, White Cliff (Wilcannia), Tenterfield, Boono Boono, and Drake.

During the visits of the Chief Inspector of Mines to these districts he also inquired into applications for aid from the Prospecting Vote, and also acted as Warden at several localities during the year.

By Inspector Milne.

In the Northern District.—Armidale, Barraba, Bingara, Bear Hill, Borah Creek, Crow Mountain, Dungog, Elmore, Glen Innes, Glen Elgin, Guy Fawkes, Hillgrove, Inverell, Kookabookra, Moonan Brook, Monkerai, Murrurundi, Narrabri, Niangala, Nundle, Stewart's Brook, Seone, Swamp Oak, Tamworth, Tia, Tilbuster, Tingha, Uralla, Walcha, Wangat, and Warraldi.

In the Southern District—Araluen, Braidwood, Bungonia, Bateman's Bay, Brimbramalla, Moruya, Mogo, Nelligen, Welcome Reefs, Nerriga, Shoalhaven River, Snowball, and Tarago.

In the Western District—Capertee, Clear Creek, Caloola, Cobborah, Dark Corner, Brown's Creek, Bathurst, Blayney, Burnt Yards, Box Ridge, Forest Reefs, Gratti, Hill End, Hargraves, Leadville, Lucknow, Lewis Ponds, Long Creek, Mudgee, Mount McDonald, Molong, Macquarie River, Menindee, Newbridge, Ophir, Orange, Pyramul, Palmer's Oakey, Sunny Corner, Slattey's Creek, and Sofala.

The Inspector reports that the regulations are generally complied with. As a member of the Prospecting Board Mr. Milne reported on a large number of applications for aid from the Prospecting Vote throughout the different districts inspected by him.

By Inspector Hebbard.

Besides making frequent inspections of the various extensive mines at Broken Hill, Mr. Hebbard visited all the outlying portions of the district with the exception of Mount Brown.

By Acting Inspector Godfrey.

Broken Hill, where he was stationed for the first three months of the year.

In the Western District—Newbridge, Barmedman, Reefton, Sebastopol, Temora, including Possum Power and Combaning, Trunkey, Yalgogrin, including Mulyan and Nariah, Young and Wyalong, where I remained for two and a half months.

In the Southern District—Adaminaby, Bywong, Bega, Bombala, Braidwood, including Major's Creek and Bell's Creek, Burrowa and Frogmore, Bateman's Bay, including Bimbimble, Big Hill, Brimbramalla, Bungonia, Burrier, Captain's Flat, Cooma, including Cowra Creek, Fiery Creek, Macanally, Myalla and Arable, Cootamundra, Candelo, Delegate, Gundaroo, Dairy Creek, Kiandra, Murrumburrah, Mount Dromedary, Marulan, Nerriga, including Mountain and Tim's Gully; Nadgingomar, including Manton Reef and Welcome Reefs, Nerrigundah, Pambula, Queanbeyan, Thawa, Wyndham, Wolumba, Wallendbeen, Wagonga, and Yalwal.

The Inspector found that the regulations were generally complied with, and care exercised in the conduct of mines.

During his visits of inspection, Mr. Godfrey reported on a large number of applications for aid from the Prospecting Vote.

Diamond

DIAMOND DRILLS.

The total depth bored in 1895 was 299 feet, or 285 feet less than during the year 1894.

The average cost per foot for boring in 1895 was £1 10s. 9½d., as compared with £1 16s. 5½d. in 1894.

Diamonds used in 1895 cost 3s. 9½d. per foot, as compared with 9d. per foot in 1894, the large increase being due to the hard nature of the rock bored through.

The earnings of the diamond drills during the year was £153 18s. 1d., and the amount paid into the Treasury was £171 16s.

GOVERNMENT METALLURGIST.

This officer reports that the progress made in this Branch during the year has not been so satisfactory as he could wish, mainly owing to financial reasons; but towards the end of the year a better state of affairs began to prevail, and, as a result, the construction of the Government Metallurgical Works is now in actual progress.

In May, he visited Victoria to investigate the Christmas Process of extracting gold from antimony ores by the addition of lead to the fused antimony sulphide as it flowed from the hearth of the liquation furnace.

He took the opportunity of visiting various engineering works in Melbourne in which special types of metallurgical and mining machinery are manufactured, and he inquired into certain processes which have been partially or completely installed there. He also paid a rapid visit to Ballarat to see the well-known mining school there, and the chlorination works at Sebastopol, to which considerable quantities of our ores and concentrates, notably from Wyalong, are sent.

In August he paid a short visit to Newcastle to inspect a site for special smelting works proposed to be erected in that district.

In December he made a rapid visit to the Cornish Copper Company's Mine at Gulf Creek, near Barraba, to advise the directors as to the installation of a water-jacket furnace for copper-smelting in place of the reverberatory furnace hitherto employed there.

Of gold-saving appliances proposed as new, or remodelled, which have been specially submitted to the Department, there has been quite an average number. Of the round dozen looked into, not more than one or perhaps two are actually at work, the rest of them are not yet out of the experimental stage.

A special method of working up Broken Hill sulphides was brought under the notice of the Minister by Messrs. Garland and Climo, being part of a scheme submitted to the Minister in 1894 by Mr. John Plumb, and on which he reported at the time. Messrs. Garland and Climo brought some tons of the sulphides to Sydney with which to demonstrate the efficacy of the process. By direction of the Minister he attended the experimental work, which extended over several months; unfortunately the result did not come up to the expectations of the inventor, and, so far, it has not been demonstrated the process has any special value.

He is receiving a steady stream of inquiries as to the treatment of the various ores found in greater or less quantity in the Colony.

METALLURGICAL WORKS.

After much delay, the site recommended on the Duck River, near Clyde, for the construction of these works, has been resumed at a cost of £517 for about 4½ acres. There is navigable water on one side, Duck River; thence by Parramatta River to Sydney Harbour; and a railway siding has been run in from the adjoining Clyde sidings.

With the aid of Mr. J. A. Griffiths, B.Sc., &c., for a short time, plans for most of the necessary buildings have been got out, and the block containing offices and laboratory has been erected at a cost of £448. The contract for the erection of the main buildings has been let at the price of £698, the work to be finished by the end of March.

As soon as the building is ready for machinery the erection of this will be put in hand; most of it has been collected, and is now lying in Sydney. The following list will indicate the plan according to which it is proposed to commence operations:—

Babcock and Wilcox steam boiler, 45-horse power actual, capable of working up to a pressure of 160 lbs. per square inch.

Tangyes' compound high pressure steam engine of about 19-horse power nominal, capable of developing more than double that amount.

Gates' No. 1 rock-breaker.

Clarkson's Nos. 1 and 5 rapid samplers.

Tustin's large size roller mill.

Fraser and Chalmers' sample grinder.

Besides these copper tables, classifiers and concentrators have yet to be procured.

As

As soon as this portion is at work, provision will be made for the treatment of platiniferous concentrates, which it is hoped will be produced in considerable quantity from the black sands of the Northern Beaches. Chlorination plant will next be put in hand, and that will be followed by the appliances required for the cyanide process.

It is intended to have the works in operation within the first half of 1896. Already numerous applications are being received from miners anxious to send ore for treatment, and there is every indication that the establishment of the works will be appreciated by the mining community.

SCHOOL OF MINES.

The School of Mines, which was established at the Sydney University, with the aid of this Department, is now in full working order, and it is very gratifying to know that the University authorities have received excellent accounts of the quality of the work performed by those graduates who have obtained appointments. The two students, who were the first to obtain the degree of Bachelor of Mining Engineering, received junior positions in the Mount Morgan Mine in Queensland. During the past year they were promoted, and the manager of the mine (Captain Richards) not only expressed great satisfaction with their qualifications and work, but has since given employment to three other graduates of the school. No higher tribute could be paid to the excellence of the course of instruction provided at the School of Mines, and there is every reason to believe that it will have a beneficial effect upon the Mining interests of the Colony. All the graduates have obtained employment, and this fact will probably induce many other students to enter the School.

MINERAL PRODUCTS.

The aggregate value of the mineral products of this Colony to the end of 1895 amount to £113,888,865 9s. 7d. The value of such products for the year 1895 was £4,552,018, a decrease of £504,118 upon the value of the minerals won in 1894. There is a very marked increase in the value of gold, copper, and shale, won during the year, but there is a very considerable decrease in the value of the silver lead, and ore produced. The very low price of silver and lead which prevailed during the year, combined with the disastrous fire which caused the temporary stoppage of operations at the Proprietary Company's mine at Broken Hill is no doubt responsible for the decrease. With the recent valuable discoveries made in the system of treating sulphide ores, there is every probability that the decrease in this product will not continue. Although there is an increase of 66 513 tons in the output of coal during the year, as compared with 1894, still there is a decrease of £60,246 in the total value. This unfortunate result is directly due to the very low price of this product, the average price per ton being lower than any recorded since the opening of our coal-fields.

The total value of the minerals won during the year under notice exceeds the decennial average by £220,914 which taking into account the very low price of coal and silver more particularly, I venture to assert very satisfactory.

The following table shows the aggregate value of minerals, the product of New South Wales, for the years 1894 and 1895 respectively compared:—

Minerals.	Quantity.			Value.			Quantity.			Value.			Increase in Value.			Decrease in Value.			
	1894.			£ s. d.			1895.			£ s. d.			£ s. d.			£ s. d.			
Gold	324,787	70	oz.	1,156,717	7	7	360,165	45	oz.	1,315,929	5	4	159,211	17	9	.....	.....	.....
Silver*	846,822	00	„	94,150	0	0	550,142	00	„	81,858	0	0	.....	.....	.....	12,292	0	0
Coal	3,672,076	21	tons	1,155,573	7	10	3,738,589	00	tons	1,095,327	1	0	.....	.....	.....	60,246	6	10
Shale	21,171	00	„	31,781	5	0	59,426	00	„	75,218	18	8	43,437	13	8	.....	.....	.....
Coke	34,458	00	„	33,209	5	7	27,630	40	„	24,683	5	0	.....	.....	.....	8,526	0	7
Tin	2,801	12	„	187,197	0	0	2,276	15	„	138,623	0	0	.....	.....	.....	48,574	0	0
Copper	2,136	17	„	73,481	0	0	3,851	3	„	140,885	0	0	67,404	0	0	.....	.....	.....
Iron†	2,368	30	„	17,170	4	9	2,403	15	„	15,620	8	9	.....	.....	.....	1,549	16	0
Antimony	1,250	35	„	18,744	0	0	478	8	„	7,251	0	0	.....	.....	.....	11,493	0	0
Bismuth .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Silver-lead and Ores	180,326	50	tons	2,195,339	0	0	219,880	95	tons	1,560,813	0	0	.....	.....	.....	634,526	0	0
Manganese	13	50	„	44	0	0	3	35	„	10	0	0	.....	.....	.....	34	0	0
Oxide of Iron and Pig-iron	432	90	„	670	0	0	152	35	„	348	0	0	.....	.....	.....	322	0	0
Chrome	3,034	30	„	12,336	0	0	4,229	45	„	13,048	0	0	712	0	0	.....	.....	.....
Lead (Pig)	31	15	„	260	0	0	19	80	„	197	0	0	.....	.....	.....	63	0	0
Limestone (Flux)	89,990	00	„	69,289	14	0	104,194	00	„	68,160	0	0	.....	.....	.....	1,129	14	0
Alunite	862	00	„	3,448	0	0	832	00	„	3,328	0	0	.....	.....	.....	120	0	0
The Noble Opal	198	00	lb.	5,684	1	6	333	00	lb.	6,000	0	0	315	18	6	.....	.....	.....
Cobalt	2	50	tons	10	0	0	5	50	tons	26	0	0	16	0	0	.....	.....	.....
Fireclay	24	00	„	60	0	0	19	50	„	55	0	0	.....	.....	.....	5	0	0
Marble	8	00	pkgs	80	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	80	0	0
Stone (Building) .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
„ (Ballast) .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grindstones .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sundry Minerals .....	.....	.....	.....	892	0	0	.....	.....	.....	4,637	0	0	3,745	0	0	.....	.....	.....
				5,056,136	6	3				4,552,017	13	9	274,842	9	11	778,960	17	5	
																274,842	9	11	
																Net decrease...£	504,118	7	6

* The greater part of the silver produced is exported in the shape of silver lead.

† Not manufactured from the ore, but old iron.

The following Return shows the Quantity and Value of Gold, Coal, Shale, Copper, Tin, Silver, Silver-lead Ore, and the several other Metals and Minerals produced in the Colony of New South Wales during the last ten years:—

	1836.		1887.		1888.		1889.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Gold	101,417 oz.	£ 396,294	110,288 oz.	£ 394,679	87,563 oz.	£ 317,100	119,759 oz.	£ 434,070
Coal	2,830,175 tons	1,303,164	2,922,497 tons	1,346,163	3,203,443 tons	1,455,193	3,655,632 tons	1,638,848
Shale	43,563 "	90,976	40,010 "	87,761	34,869 "	73,612	40,501 "	77,666
Copper and Regulus	4,027 "	167,665	4,763 "	199,102	3,899 "	275,034	4,182 "	206,641
Tin and Tin Ore	4,998 "	497,653	4,961 "	525,420	4,809 "	583,496	4,650 "	415,171
Silver	1,015,433-56 oz.	197,544	177,307-75 oz.	82,453	375,064 oz.	66,668	416,805-35 oz.	72,001
Silver-lead and Ore	4,802-10 tons	294,485	12,630-15 tons	541,952	29,841-60 tons	1,075,737	81,545-30 tons	1,899,197
Iron	3,635-85 "	19,068	2,707-40 "	14,543	3,747-00 "	23,721	2,130-00 "	18,330
Antimony and Ore	273-15 "	3,381	168-35 "	1,641	190-35 "	2,913	221-40 "	3,344
Asbestos								
Bismuth	20-00 tons	3,870	36-55 tons	6,695	18-07 tons	3,911	42-50 tons	11,340
Oxide of Iron							459-05 "	1,329
Zinc Spelter							96-85 "	983
Lead (Pig)							322-30 "	6,711
Limestone Flux								
Opal								
Manganese								
Cobalt								
Coke								
Alumite								
Fireclay								
Lime								
Marble								
Stone (Building)								
(Ballast)								
Grindstones								
Slates								
Sundry Minerals	69 tons	5,327	1,481 tons	15,024	119 tons	3,485	95-75 tons	719
		2,928,427		3,165,938		3,879,883		4,780,364

	1890.		1891.		1892.		1893.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Gold	127,760 oz.	£ 460,284	153,336 oz.	£ 553,306	156,570 oz.	£ 569,178	179,288 oz.	£ 651,256
Coal	3,060,878 tons	1,279,088	4,037,020 tons	1,742,700	3,750,968 tons	1,462,359	3,278,328 tons	1,171,722
Shale	56,010 "	104,103	40,349 "	78,160	74,197 "	136,070	55,060 "	101,221
Copper and Regulus	3,745-90 "	173,311	4,325-55 "	205,093	4,834-00 "	137,706	2,067-00 "	63,420
Tin and Tin Ore	3,068-75 "	329,841	3,144-52 "	271,412	3,492-00 "	314,114	2,785-00 "	229,743
Silver	490,552-20 oz.	85,410	729,590-05 oz.	134,850	350,661-00 oz.	56,884	531,972-00 oz.	78,131
Silver-lead and Ore	181,030-65 tons	2,667,144	147,779-70 tons	3,484,739	133,355-00 tons	2,420,952	214,200-00 tons	2,953,539
Iron	3,413-40 "	89,948	4,125-30 "	30,101	2,782-00 "	22,405	2,191-00 "	14,736
Antimony and Ore	1,020-00 "	20,240	914-85 "	22,057	728-00 "	14,680	1,774-00 "	25,092
Asbestos								
Bismuth	2-10 tons	306	40 tons	500	14-00 tons	1,030		
Oxide of Iron	450-30 "	884	228-75 "	434	453-00 "	869	1,260-00 tons	1,320
Zinc Spelter	210-45 "	2,378	218-00 "	2,022	445-00 "	5,055		
Lead (Pig)	126-00 "	1,537	190-05 "	2,025	71-00 "	726	426-00 tons	4,205
Limestone Flux	41,430-80 "	41,989	74,057-00 "	65,957	103,368-00 "	93,031	130,635-00 "	111,041
Opal	195 lb.	15,600			42 lb.	2,000	440 lb.	12,315
Manganese	100 tons	325	133-00 tons	340	16-00 tons	47		
Cobalt			1-15 "	470	76-00 "	1,110	26-00 tons	305
Coke	31,097 tons	41,147	30,310-35 "	34,473	7,690-00 "	8,852	17,858-00 "	20,233
Alumite	220 "	3,000	704-00 "	1,833	821-00 "	8,284	821-00 "	3,284
Fireclay			16-80 "	65	35-00 "	80	21-00 "	46
Lime			410-00 "	958	403-00 "	822		
Marble			635 pkg.	2,677				
Stone (Building)			4,735 No.	6,205	2,478 No.	2,938	860 No.	855
(Ballast)			619 tons	713	224-00 tons	276	132-00 tons	166
Grindstones			471 No	311			2 No.	3
Slates			31,234 "	351				
Sundry Minerals	973-75 tons	7,262	788-95 tons	8,217	92-25 tons	1,153	67-00 tons	557
		5,283,840		6,656,010		5,306,815		5,438,532

	1894.		1895.		Total.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Gold	324,787 oz.	£ 1,166,717	360,165-45 oz.	£ 1,315,929	1,721,173 oz.	£ 6,229,743
Coal	3,072,076-21 tons	1,165,573	3,738,639 tons	1,095,327	34,180,507 tons	13,644,267
Shale	21,171 "	31,731	69,420 "	75,219	444,645 "	833,796
Copper and Regulus	2,130-85 "	73,481	3,851-3 "	140,885	33,030 "	1,687,344
Tin and Tin Ore	2,801-60 "	187,197	2,276-15 "	138,023	27,653 "	3,461,048
Silver	840,822-00 oz.	94,150	550,142 oz.	81,868	5,490,420 oz.	900,954
Silver-lead and Ore	180,326-50 tons	2,195,339	219,880-95 tons	1,660,813	1,155,260 tons	19,201,583
Iron	2,363 "	17,170	2,463-15 "	15,020	29,650 "	221,892
Antimony and Ore	1,250 "	18,744	478-8 "	7,251	7,024 "	119,348
Asbestos						
Bismuth					134 tons	27,711
Oxide of Iron	432-90 "	670	182-35 tons	348	3,465 "	6,000
Zinc Spelter					970 "	11,043
Lead (Pig)	31-15 "	290	19-30 tons	197	1,385 "	15,711
Limestone Flux	39,090-00 "	69,289	104,194-00 "	63,160	543,680 "	448,535
Opal	193 lb.	5,634	333-00 lb.	6,000	1,217 lb.	41,599
Manganese	13-50 tons	44	3-35 tons	10	270 tons	768
Cobalt	2-50 "	10	5-50 "	26	110 "	1,921
Coke	34,458 "	33,399	27,630-40 "	24,683	149,252 "	102,030
Alumite	862 "	3,445	882-00 "	3,323	4,200 "	18,232
Fireclay	24 "	60	19-50 "	66	111 "	296
Lime					813 "	1,780
Marble	8 pkg.	80			643 pkg	2,667
Stone (Building)					8,063 No.	8,898
(Ballast)					975 tons	1,155
Grindstones					473 No.	314
Slates					310,234 "	351
Chrome	3,034-80 tons	12,336	4,229-45 tons	13,048	7,263 tons	25,334
Sundry Minerals		892		4,637	4,069 "	51,460
		5,056,138		4,562,017		47,129,817

GOLD.

The output of gold from the opening of our gold-fields to the end of 1895 amounts to 11,394,562 oz., valued at £42,326,588 3s. 9d. For the year just past the output was 360,165 oz., valued at £1,315,929 5s. 4d., an increase of £159,211 17s. 9d. over 1894. Without a doubt this gratifying result is in a measure due to the large number of unemployed men sent to the gold-fields as fossickers, as the marked increase dates from the inauguration of that scheme. Although the earnings of these men were much restricted by the exceptional drought experienced throughout the Colony during the year, the increased yields from the Lucknow and Hillgrove mines did much to make up the decrease from this cause. There is every reason to believe that the yields from these fields will be maintained, and in face of the prospects of a large increase in the yield from the Wyalong, Pambula, and Bulgandra Gold-fields, a very much larger output of gold may be confidently expected during 1896. It is also important to note the satisfactory progress made in the methods of treating the auriferous refractory ores which abound throughout the Colony. Should some inexpensive system be discovered for treating these pyritous ores, it will have the best possible effect on the gold-mining industry of the Colony, by opening up large deposits of this class of ore, which, under the present system of treatment, can only be made to pay expenses.

TABLE showing the Quantity and Value of Gold won in the Colony of New South Wales from 1851 to 1895.

Year.	Quantity in oz.	Value.	Year.	Quantity in oz.	Value.
		£ s. d.			£ s. d.
1851	144,120	468,336 0 0	1875	230,882	877,693 18 0
1852	818,751	2,660,946 0 0	1876	167,411	613,190 7 9
1853	548,052	1,781,172 0 0	1877	124,110	471,418 4 4
1854	237,910	773,209 0 0	1878	119,665	430,033 2 7
1855	171,367	654,594 0 0	1879	109,640	407,218 13 5
1856	184,600	689,174 0 0	1880	118,600	441,543 7 7
1857	175,949	674,477 0 0	1881	149,627	566,513 0 0
1858	286,798	1,104,174 12 2	1882	140,469	526,521 12 5
1859	329,363	1,259,127 7 10	1883	123,805	458,508 16 0
1860	384,053	1,465,372 19 9	1884	107,198	395,291 12 5
1861	465,685	1,806,171 10 8	1885	103,736	378,665 0 3
1862	640,622	2,467,779 16 1	1886	101,416	366,294 7 7
1863	466,111	1,796,170 4 0	1887	110,288	394,578 16 3
1864	340,267	1,304,926 7 11	1888	87,503	317,099 12 0
1865	320,316	1,231,242 17 7	1889	119,759	434,070 8 4
1866	290,014	1,116,403 14 5	1890	127,760	460,284 16 2
1867	271,836	1,053,578 2 11	1891	153,336	558,305 12 3
1868	255,662	994,665 0 5	1892	156,870	569,177 17 4
1869	251,491	974,148 13 4	1893	179,288	651,285 15 8
1870	240,858	931,016 8 6	1894	324,787	1,156,717 7 7
1871	323,609	1,250,484 15 11	1895	360,165	1,315,929 5 4
1872	425,129	1,643,581 16 11			
1873	361,784	1,395,175 8 7		11,394,562	42,326,588 3 9
1874	270,823	1,040,328 13 6			

The following information taken from the reports sent in by the Wardens and Mining Registrars of the various Mining Districts indicate pretty clearly the condition of mining in New South Wales during 1895:—

THE BATHURST MINING DISTRICTS.

Corra Division.

This Division is rapidly improving its position as a gold-producing district, the returns being 1,810 oz. as compared with 802 oz. in 1894. The recent discoveries on private property at Binni Creek are responsible for the increase, and as prospecting work is being rapidly carried forward further satisfactory developments may be looked forward to. Good work is being done at Scrubby Rush, where some very promising reefs have been opened out, one of the leases being floated for a large sum. A little gold is being got on Crown lands by a number of fossickers, but the principal operations are being carried out on private land. A small rush took place during the year at Woodstock, where some good-looking stone had been struck, but nothing worthy of special notice came of it.

Mount M'Donald Division.

Mining operations in this Division have been extremely dull during the past year as will be shown by the returns, the quantity of gold won being 421 oz. as compared with 996 oz. in 1894. The Balmoral Company is still carrying on prospecting work, and intend to thoroughly test their property. Several other parties are at work in the Division, and it is expected that some important developments will be reported before long. The work of the fossicker in the district has been greatly retarded owing to the scarcity of water, but so far they have been able to procure sufficient gold to keep them in rations.

Carroar Division.

There is a very large decrease in the output of gold from this district, as compared with previous years, the total value being £4,356, a reduction of £3,243 on the yield for 1894. The decrease in the yield can, however, be satisfactorily explained by the fact that the whole of the mines at Galley Swamp have been taken over by the Anglo-Australian Exploration Company (Limited) of London, who for the last six months of the year, have been devoting their sole attention to the sinking of shafts, the erection of machinery and other development-work. The machinery being erected embraces all the latest improvements and gold-saving appliances. A very large increase in the yield for 1896 may be anticipated. Woodward and Party put through 70 tons for 326 oz., and Smith and Son 47 tons for 151 oz. Very little work has been done at Burnt Yard during the year, but a good deal of prospecting work is being carried on at Flyer's Creek and Slattery's Creek, the principal company at work being The Slattery's Creek Gold-mining Company. A few men are still at work in the alluvial with varying success.

Blayney

Blayney Division.

There are 162 men at work on the alluvial ground in this division, and the yield of gold was 612 oz., valued at £2,285, as compared with 2,333 oz. won in 1894. The large decrease is principally due to the extremely dry season which prevented work being successively carried on in the alluvial claims, and retarded the work of the fossickers in the creeks and gullies. The Compagnie des Mines D'Or, at Brown's Creek, employ 120 men, and during the year have expended a large sum in the erection of works and machinery for treating their lode-stuff on a large scale. The operations of the company are expected to largely swell the returns from this Division during 1896. Several parties are still at work at King's Plain with promising indications of success.

Nowbridge Division.

There is a very gratifying increase in the yield of gold from this Division, viz., 811 oz., as compared with 150 oz. in 1894, a large proportion of the gold being got from land thrown open under the provisions of the Mining on Private Lands Act, 1894. Prospecting work is being vigorously carried on at Caloola Creek and at the Sugar Loaf, where several parties are being assisted from the Prospecting Vote to further test their claims. A considerable number of men still manage to earn rations by fossicking in the district.

Trunkey Division.

This Division also shows a satisfactory increase, the yield being 2,340 oz. as compared with 1,423 oz. in 1894. There were 250 men employed in gold-mining throughout the Division during the past year, and all have been able to make a living, while some of them have done very well. The continued dry weather prevented sluicing all the year round, otherwise the yield would have been greatly increased. As an instance of the severity of the drought, it is stated that the Mulgunnia Creek has not been running since October, 1894. At Colo Creek, Messrs. Clarth and Company have erected a 30-head battery, and a 12-head battery has been started to work near the Alma Dam. Messrs. Crees and Party erected a 9-head battery on Wilson's Reef to treat the mullock which is plentiful in that locality, but were prevented from starting owing to the want of water. The Bathurst Mines Company (Ltd.) is also erecting a new battery on its property. Mount Gray was re-started during the year, but is again idle, as the machinery failed to treat the stone profitably. A Melbourne syndicate have taken up 35 acres of the old workings at Pine Ridge, and intend giving the place a thorough trial. Several parties are in receipt of prospecting aid in the Division, but so far have not succeeded striking anything payable.

Tuena Division.

The yield of gold from this Division during the year was valued at £6,495 as compared with £5,777 the previous year. There has been a very evident revival in alluvial mining throughout this District, and at the present time about 360 men are employed in the work. The Ames Gold-mining Company which is in receipt of aid from the Prospecting Vote, struck some very rich stone in its claim, one small parcel of about 5 tons yielding 150 oz. of gold. The Dyke Company crushed 150 tons for 8 dwt. per ton, and as the stuff can be got cheaply and is easy to treat, it should pay well with suitable machinery. M'Vicar and party put through 30 tons for 1½ oz. per ton, and Brennan and Party had a trial crushing which gave a return of 1 oz. per ton. At Junction Point, Martin and Party put through 200 tons which yielded nearly 2 oz. per ton. It is expected that a large number of men will be at work in this Division during 1896.

Rockley Division.

The yield from this Division is a little more than double that of 1894, being 1,540 oz. as compared with 750 oz. the previous year—the bulk of the gold being won from alluvial ground. The depression existing throughout the district compelled a number of men to turn their attention to mining, with the result that the old alluvial workings in the district have been fossicked over again, in some instance excellent returns being obtained. One party on Stoney Creek, working on a point that has been occasionally worked for over thirty years, averaged £10 per week for over three months. Rutherford and Party working a reef at Gilmandyke on private lands put 200 tons through their own battery for a yield of 227 oz. valued at £883 8s. 2d. Work at Mount Maud is in abeyance pending settlement of the prospector's, David Croziers, title to the land. A trial crushing of several tons of stone from the reef went over 6 oz. to the ton. On Church and School land at Caloola Creek three parties are at work on a sedimentary slate lode. They have erected a Huntingdon mill and have put through 1,300 tons for a yield of 214 oz. of gold. About twenty parties are working in this Division under section 33 of the Mining on Private Lands Act, some of whom are doing very well, others just making a living.

Burruga Division.

About 265 oz. was the yield from this Division, as compared with 185 oz. in 1894; but this return is likely to be largely increased in 1896. The Burruga Gold-mining Company which has been at work putting in a tunnel about 1 mile east of Mr. Lloyd's Copper-mine, have at last struck the reef, which is 10 ft. wide. A parcel of stone from it sent to the Clyde Works for treatment yielded half an ounce of free gold per ton. The company has erected a 10-head battery but unfortunately have not been able to start through the scarcity of water. M'Vicar, Phillips and Party, working on the Isabella River, are sinking on a very promising reef, assays from which have gone as high as 4 oz. per ton. The reef is now 2 feet wide and appears to improve as it goes down. A large number of men are fossicking in the district, but it is questionable if they earn more than rations, the dry weather having retarded work very much. Tuto and Lawler have a gold-saving machine at work on Mount Werong, and are said to be doing fairly well, the machine treats about eighty loads per day but could put through more with a plentiful supply of water.

O'Connell Division.

The only mining work carried on in this Division is by a few fossickers who won during the year 130 oz. valued at £390 which barely keeps them in rations.

Oberon Division.

The value of the gold won in this Division during the year was £1,450, an increase of £150 on the previous year. One of the old reefs has been taken up, and a small plant erected, and as parties have commenced work on nearly every available site, the locality is now in a fair way to be thoroughly tested. There are still a few fossickers working in the locality, some of whom appear to be doing fairly well.

Bathurst Division.

This Division shows a slight increase in the yield of gold over the previous year, the value being £4,617 as compared with 4,540 in 1894. This return would undoubtedly have been much larger had the season been a wet one. There is a good deal of prospecting work going on in the direction of Poel, where several very promising reefs are being tested at a depth. It is estimated that 425 Europeans, and sixty Chinese, were engaged in mining work in this district at the end of the year. James Dewar, who is receiving aid to sink on the Bald-Hills, struck wash in the drive 2 feet thick, carrying fine colours of gold. Another shaft is being put down to test the deep ground.

Wyagdon Division.

There were 215 oz. of alluvial gold won in this Division during 1895, a slight increase over the previous year. Bel and M'Lennan are being aided from the Prospecting Vote to test their claim on the high hill lying between Wyagdon and the Limekiln Road, and Thomas Brett to further test the "Black Monkey" reef situated about 2 miles west of the Limekiln Public School. A number of fossickers are still at work in the locality, with varying success.

Sunny Corner (Mitchell) Division.

There are 228 gold-miners working in this Division, and they won among them 3,645 oz. of the precious metal, an increase of 1,479 oz. on the previous year. The "Paddy Lacey" is still the principal gold-producing mine in this district, and employs from twenty to thirty men all the year round. A number of parties are working in this Division under aid from the Prospecting Vote, and some important developments are expected from this expenditure. When a sufficient supply of water is available, the men working in the creeks and gullies do fairly well.

Hartley Division.

A few parties are still prospecting on Cox's River, who obtain very fair prospects; but nothing really payable has been obtained so far.

Orange

Orange Division.

This Division now ranks as the largest gold-producing centre in New South Wales, the value of the gold won during the past year aggregating £292,229, as compared with £128,197 in 1894. The Wentworth Proprietary Company, at Lucknow, is responsible for the large increase in the returns, as it put through 9,381 tons of stone for a yield of 53,100 oz., valued at £203,350. This company employs over 300 men, and has erected plant on its property to the value of £50,000. Good stone is now being raised from the 800-ft. level. The Alladin's Lamp Gold-mining Company has also extended its operations during the year, and put through 3,889 tons for 23,078 oz., valued at £80,773. This company employs 100 men, and is working at the 700-ft. level. The Amara Company did very little work during the year, and has now ceased work. Derrett and party have put in a tunnel for a distance of 200 feet on Carroll's private land, and have very promising indications of obtaining payable gold. The D'Arcy Estate Gold-mining Company is still pushing forward prospecting operations, and employs twenty-five men on the work. At the Forest Reefs a little prospecting work has been carried on during the year, with varying success. The Ballarat Boring Company, which has obtained the use of a Government diamond-drill, is about to test the deep leads, and little other prospecting work will be done in this locality till the result of the boring is known. At Cadia some prospecting has been done in quartz and alluvial without any important results. In the neighbourhood of Byng a great deal of prospecting work has been done by the Witney Green Gold-mining Company, and the crushing it put through of 164 tons yielded 525 oz. 19 dwt. of gold, valued at £1,868 15s. 4d. The scarcity of water seriously interfered with mining operations at Lewis Ponds during last year; but, nevertheless, the alluvial miners were able to make rations. A 6-head battery has been put up, and there are several reefs it is thought will pay to work with this crushing facility. About forty men are working at Summer-hill Creek, and good-looking stone is being got at about 60 feet. Prospecting work is still being carried on on the Blatchington Estate in search of the lode being worked at Lucknow. Very promising indications are reported to have been met with.

THE MUDGEE MINING DISTRICT.

Cobbora Division.

There are about 300 alluvial miners working in this Division, principally in the Tucklan district, 13 miles from Cobbora, and the returns state that they won 333 oz. of gold, valued at £1,244. It is doubted, however, whether these figures represent all the gold got, as it is very difficult to obtain correct returns. Payable gold was first reported by Steinberg and party, who were working near Ford's Creek, under aid from the Prospecting Vote, who, from April to December, washed 200 loads for 100 oz. of gold. Payable gold was reported by Marshall and party as having been discovered by them at Stringy-bark Point, 35 oz. being washed from six loads of dirt. This discovery was made in November, and by the end of the year there were thirty claims on gold,—the prospects varying from 6 dwt. to 2½ oz. per load, the sinking being from 10 to 30 feet deep. The great drawback on this, as on many of the gold-fields of the Colony, is the want of water, which is being retailed for domestic use at 3d. per bucket, none being available for mining purposes. Should the year 1896 prove more favourable, large returns are expected from this locality.

Denison Town Division.

Very little mining is being carried on in this Division at the present time, work being confined to the vicinity of Cranky Jack's Gully, where a few fossickers are obtaining just sufficient gold to keep them in rations.

Gulgong Division.

The gold won in this Division during the year amounted to 4,000 oz. of alluvial gold, valued at £15,200, nearly double the quantity won the previous year; the average number of men employed being 650. About the month of July a rush took place to Yamble, where payable gold was discovered on the private land of Mr. C. M. Lowe. At one time 500 men were on the field, but by the end of the year the number was reduced to about 250, half of whom are getting payable gold in ground varying from 16 to 50 feet in depth. The English Company, under the management of Mr. Frame Fletcher, has temporarily suspended work. The following report on the work being done by the Star Lead Gold-mining Syndicate has been supplied by Mr. W. S. Brice, the manager:—"During the twelve months the Star Lead Gold-mining Syndicate has taken charge of the claim known as the No. 1 Mine, Star Lead, Gulgong. The work has been chiefly prospecting. The shaft required to be sunk to a greater depth, so that the deeper ground could be tested. Twenty-five feet was sunk in very hard pyritous quartz, leaders being cut through as the work progressed. As these leaders were cut the flow of water became stronger, in some instances 2,500 gallons per hour being baled out of the mine. This heavy flow of water exhausted itself down to 2,000 gallons per hour; which is the rate being maintained at the present time. After the shaft being sunk to the required depth, a drive was begun at 195 feet from the surface, and continued in an easterly direction to cut the Star lead, which is known to run almost due north and south. I may here state that the Star lead has been traced from its head down to the present workings into deeper ground. On account of its great depth, and the quantity of water to contend with, small parties of working miners could not command the necessary appliances to cope with such difficulties. Since the taking over of the mine by the present syndicate 240 feet has been tunnelled in an easterly direction, and on account of the hard diorite bars being met with the use of explosives had to be resorted to for more than 100 feet. At a distance of 74 feet from the shaft a cross-cut was put in in a south-easterly direction. This drive was continued for 86 feet, the country tunnelled through being very hard. At 69 feet in this direction a pyritous bar was cut through, the country being heavily charged with arsenical pyrites, which, upon examination, showed slight traces of gold. This bar to all appearance was a dyke, 20 feet through, cleanly bedded with a south-easterly dip of 47°. From the lower part of this face strong water was met with, but following the same strata of country as was met with in sinking the shaft to its present depth, our flow of water did not increase, but continued maintaining the flow of 2,000 gallons per hour. A drive has been tunnelled nearly in an opposite direction to our south-east drive, and extending in a north-easterly direction 40 feet, the hard country has not been met with in this drive, only decomposed diorite being cut through. Water comes strongly from overhead, apparently from higher ground. The water, unlike that met with from the southern side of our workings, holds lime in solution, whereas on our southern side the water carries a quantity of iron in solution. Sixty feet has been tunnelled in an upper level, proving a run of wash which existed in the upper strata; this wash, so far as proved, having an easterly dip, proving beyond doubt the existence of a deeper channel. The wash or gravel being, in some instances, compact and intermixed with cemented sand, caused without doubt by the infiltration of ferric salts held in solution in our southern water. Ninety (90) feet have also been tunnelled in this upper level to prove the dip of country, and, in some instances, auriferous gravel has been met with carrying fine and, sometimes, coarse gold. But the syndicate, in a true spirit of prospecting, decided to push on and prove once and for ever the existence of auriferous drifts and gravels in the deep ground of Gulgong. Summary of the year's work for the year ending December, 1895.—Distance of tunnelling completed by present syndicate, 456 feet; sinking shaft 25 feet, making a total depth of present shaft 207 feet; average number of men employed, 23."

Hargraves Division.

There is a very substantial increase in the yield of gold within this Division during the year, the quantity being 3,245 oz., valued at £8,920, as compared with 1,100 oz., valued at £4,125, won the previous year. The principal revival has been in quartz-mining, and the battery owned by Laing and Company has been kept going all the year through, treating 4,600 tons of stone for 1,470 oz. A battery is about to be erected on the Old Sawyer's reef, in which a tunnel has been driven in 180 feet by means of aid from the Prospecting Vote, when the reef 18 inches wide was struck, carrying fair gold. This is said to be a good property. Messrs. Scott and Company's "Lizzie Watson" 5-head battery was working during eight months of the year, and put through 300 tons for 175 oz.

Mudgee Division.

This Division produced gold to the value of £27,353, an increase of about £7,000 on the yield during 1894. The Old Rhobardah Gold-mining Company, near Cudjegong, has restarted work, and the New Peacock Gold-mining Company, near Limestone, is at work with powerful machinery, and good results are anticipated. The usual amount of fossicking has been carried on at Apple Tree Flat, Pipeclay, Limestone, Merredree, &c., &c., and small patches in various localities have been found payable, but nothing to last. At Slashers' Flat, about 9 miles from Mudgee, the old workings have afforded rations to a number of men during the year.

Winderyer

Windeyer Division.

There is a satisfactory improvement in the return of gold from this Division, the quantity being 2,400 oz. as compared with 2,000 oz. won in 1894. Mining matters have improved generally throughout this Division during last year, with every prospect of a continuance, Messrs. Leffley and party have a splendid claim, their last crushings of 230 tons yielded 450 oz. of gold, the stone being raised from the 60-foot level, where the vein is 2 feet wide. Townsend and party have three promising claims at work, from which they have raised 334 tons for 140 oz. This party have erected a 5-head battery, valued at about £800. Several other claims are at work, and a good deal of prospecting work is going on. Very little has been done during the year in alluvial mining, no water being available for sluicing purposes.

Peak Hill Division.

A scarcity of water has greatly retarded mining operations within this Division during the year, which accounts for the decrease in the quantity of gold won, viz., 8,192 oz. as against 12,231 oz. won during 1894. The Proprietary Company has partially suspended operations, and has let several parts of the mine on tribute. The tributors are said to be doing very well, owing to their careful selection of the ore crushed. No attempt has yet been made to treat the pyritous ores which occur in this mine below the 320-foot level on a large scale. There is a great body of this ore available, and could it be treated profitably, employment would be found for a large number of men. It is stated that the ore could be calcined and treated in bulk for 12s. 6d. per ton, which would yield a handsome profit, as the stone is said to carry about $\frac{1}{2}$ oz. of gold per ton. The water from this mine contains a metallic salt which interferes with the amalgamation of the gold. The Crown of Peak Hill Gold-mining Company is down 300 feet in their main shaft, and expect within the next three months to strike the pyritous lode coming from the Great Eastern mine. This mine is also worked by tributors. The Great Eastern Syndicate crushed 735 tons for 654 oz. The gold in this mine occurs in a hard quartzite resembling flint, and the deposit is extensive. Wythes and Mooney crushed 915 tons for 552 oz. of gold. The ore containing the free gold is nearly exhausted in this mine, but there is apparently an inexhaustible quantity of pyritous ore, which should pay with economical treatment. Work is still being carried on in the Bobby Burns mine, where shoots of ore occur similar to that found in the Proprietary mine, but the yield of gold is low. Very little work is being carried on in alluvial ground, and till a large supply of water is available there is no chance of any revival in that direction. At Tomingley five leases have been sold to an English syndicate for £42,000, and the mine will in future be known as the Myall United Gold-mining Company. The prospecting shaft on gold lease 2 was, during the year, sunk through an intrusion of country about 50 feet, when the reef was again picked up, 4 feet wide, with gold evenly distributed through the stone, 78 tons of which yielded 228 oz. of smelted gold. An important development has taken place in Cavin and Party's claim during this year, when a new make of payable ore was found, 8 feet wide, which yielded 260 oz. of gold from 206 tons of stone. The last crushing of 114 (included in the 206 tons) yielded 205 oz. An unusual feature in this lode is the fact that the wider the lode the richer the stone. There is no alluvial mining of any importance being carried on in the Tomingley district at the present time.

Wellington Division.

The returns from this Division show a very gratifying and substantial increase in the yield of gold during the past year, which are as follows:—789 oz. from alluvium and 7,032 oz. from quartz, valued at £29,723, an increase of £10,339 on the value of the gold obtained in 1894. The Mitchell's Creek Freehold Gold Estate Company at Daviesville is the largest gold producer in this Division, as it treated 9,260½ tons for a yield of 6,720 oz., valued at £25,610. This company has a very large and complete plant, which is valued at £20,000, and the average number of men employed by it is 650; and main shaft has now reached the depth of 680 feet from the surface. The alluvial mining being carried on in the Division at the present time, is confined to a number of men fossicking in the beds of the Macquarie River and its tributaries, the Ningala and Wuulmanu Creeks, where men with some experience in the work can make a fair living.

THE TAMBAROORA AND TURON MINING DISTRICT.

Hill End Division.

The yield of gold from this Division shows an increase of £1,502 over 1894; the quantity being 4,359 oz., valued at £16,569. The best returns were obtained from Hawkins' Hill, where several parties are on payable gold. In fact, all the claims at work in that locality at the present time are looking well, and it is expected that the number of claims on payable gold in this neighbourhood will be shortly increased. A number of the large mine-owners find that, to properly develop the ground, large capital is required, and several of the properties, such as the Hill End United, Emmett and Hughes, and others, are in course of disposal to English syndicates, and the introduction of English capital into the field when the ground can be properly tested will be the salvation of the District, and perhaps be the means of again winning the large quantities of gold which made Hill End famous in the early seventies.

At Tambaroora, the Tambaroora Creek Gold-mining Company is pushing on with the erection of its machinery at Red Hill, and hopes to have it completed shortly, when employment will be given to a large number of men. At Sally's Flat, Mullaney and Gough, who were assisted from the Prospecting Vote, have found a reef carrying fine gold, which would pay with a battery on the ground. At Macquarie River a number of men are employed quartz-mining, but have not been successful so far, with the exception of Trevethick and party, who have been on payable gold all through the year.

Sofala Division.

There is a slight decrease in the value of the gold won in this Division during the year; the figures being £14,250 as compared with £16,576 in 1894, which is directly traceable to the continued dry weather, which made sluicing operations impossible. Several parties at Palmer's Oakey have done very well during the year, and at a place known as Rowly Bob's Creek, in the same locality some very rich patches were found. On the Upper Turon several parties are doing well, one party of four men averaging £6 per week per man for four months. About 150 men are fossicking in the vicinity of Wattle Flat, but making little more than a bare living. At Crudine about seventy men are at work on the private property of Messrs. John Smead and M. O'Brien, where some very rich patches have been struck. About forty men are working at Box Ridge, and they seem to be doing fairly well. Messrs. Cox and M'Peake, prospecting at Redbank, got £200 worth of gold in one day, and 7 oz. the next. There are signs of a revival in quartz-mining in this Division. The Turon Gold-mines Company (Limited) has lately been floated in London with a capital of £100,000, and intends carrying on operations on a large scale. The company will start crushing as soon as water is available. The Queensland mine is still working, but cannot crush through want of water. W. H. Campbell, on Whalen's Hill, struck a payable reef at a depth of 225 ft. This discovery was the result of aid from the Prospecting Vote. Minni and party are still working at Big Oakey, and it is stated the property is in course of flotation on the London market. The Solitary Gold-mining Company, has commenced to sink a large shaft to cut the lode at a depth of 500 ft. The claims on Surface Hill have been leased to a Newcastle syndicate, which intends working the ground on the open-cut system and building a tramway to the river, 2 miles long, where a large battery is to be erected. About 250 quartz and 300 alluvial miners are employed in this Division, amongst whom are fifty Chinese.

Rylstone Division.

There are ninety-two gold-miners working in this Division, but the quantity of the gold won by them could not be ascertained. The men are chiefly employed prospecting and fossicking in the creeks and gullies.

Ironbarks Division.

This Division shows a slight falling off in the value of the gold won, the quantity being 1,994 oz. from alluvial and 700 oz. from quartz, valued at £10,508, as against £12,590 won in 1894. The decrease is in the alluvial gold, the dry season retarding sluicing operations. A large number of parties are prospecting in this Division, several in receipt of aid from the Prospecting Vote. Seven applications were made to lease private lands, embracing an area of 1'5 acres.

LACHLAN MINING DISTRICT.

Molong Division.

Although a considerable amount of prospecting work is being carried on in this Division, no discovery of any public interest has been made. Several permits were granted by the Warden to search on private land, but with the exception of a little gold got at Delaney's Dyke, by Egglestone, and party there were no results. Several parties are working under aid from the Prospecting Vote in this locality, but, so far, have not struck anything payable. The return from this Division is only 50 oz. of gold, valued at £187 10s.

Cargo Division.

There were 246 oz. of gold won in this Division as compared with 150 oz. in 1894. The Ironclad Mine is still shut down, and an attempt is being made to form it into a company. Prospecting work is still being vigorously carried on, and as some of the parties have very promising indications in their claims, next year's report may be of a more flourishing nature.

Cudal Division.

There is no report of any gold having been won in this Division during last year. Three parties have been prospecting at Loup Corner all the year around, but were unable to find anything payable, and abandoned the search. Fair prospects are obtainable in many places, but all attempts to trace the source of the gold have failed. Good prospects are also to be found on Kearney's land, at Paling Yards, and an application for a permit to mine on the land has been lodged with the Warden. Daniel Curry is receiving aid to sink a shaft on Dwyer's land at Barragan, where the indications are good; but the shaft is not yet bottomed.

Canowindra Division.

The quantity of gold won in this Division during the year is just about double that of the previous year, being 677 oz., valued at £2,440. The Lady Burdett-Countts Gold-mining Company put through a parcel of 149 tons, which yielded 280 oz. of gold. The Red Jacket, the Blue Jacket, and the Perseverance Companies were at work during the year, but did not crush much stone. The majority of the men employed in alluvial mining only work during the winter months, when plenty of water is available.

Forbes Division.

There is little of importance to report in connection with the gold-mining carried on in this district, and although complete returns could not be obtained, the gold won may be put down as about 300 oz. Some excitement was occasioned about the beginning of October by the discovery by Pennington and party of some very rich specimens in a lode, which was known in the early days of the field as the "Rise and Shine." The discovery was made at the 60-ft. level, and a crushing of 4 tons yielded between 4 and 5 oz. per ton. The lode—decomposed granite—is well defined, between slate walls, but has not yet been crossed by the prospectors. It is thought to be between 30 and 40 feet wide. Between thirty and forty men are at work near Strickland's Reef, and it is stated that one party washed sixty loads for half an ounce to the load. It is the opinion of the miners in the district that a payable lode will be found in this locality in deep ground. Several parties are at work on the Bald Hills, but have been badly hampered in their operations through the scarcity of water. A good many claims are at work in the neighbourhood of the Pinnacles, with fair prospects.

Parkes Division.

A very satisfactory increase is shown in the returns from this Division, the gold won amounting to 10,372 oz. as compared with 9,725 oz. in 1894, the number of men employed being 574. The principal mine in the district is the Bushman's Hill Gold-mining Company, which has erected very expensive machinery and other works. When the tribute expired in April last the mine was worked by the company, and the erection of machinery proceeded with. The underground workings of this mine are in an advanced state—1,800 feet of levels being now open, and being worked. The company estimate that 27,000 tons of stone is in sight. The last crushing of 800 tons by this company yielded 1,327 oz. of gold. If the supply of water would allow of the mine being fully worked, 150 men would find constant employment. On the west side of the above company a large area has been secured, to be called "The Bushman's Freehold," and leases have also taken up to the north and north-west of the Bushman's Hill Company. To the north of the land held by the Bushman's Freehold Syndicate, 40 acres have been applied for, with a view to form a company to cut the Bushman's Reef at a depth of from 1,700 or 1,800 feet from the surface. Still further north, Boyle and party are on a line of reef having the same underlay as the Bushman's; but it is a different line of reef. From this claim to the Dayspring all the land is leased, including Crown and private land. The Dayspring is being worked by a syndicate, who have proved the reef to a total depth of 375 feet, and driven along the course of the lode at the 200-foot level, a distance of about 500 feet. Quail's mine is let on tribute, but not much work has been done during the year. Hazlehurst's mine is also worked by tributors, and the last crushing taken out by them proves that payable stone still exists in the mine. The tributors of the Gladstone mine expect to strike payable stone shortly. A party of miners from Peak Hill have started work in a systematic manner on the old Caledonian Hill, and intend proving the ground thoroughly. The Koh-i-nor is also let on tribute, and the men seem to be doing well. The men working Wright's Reef have very promising prospects, and their last crushings show great improvement. Many other claims are at work on the Parkes Gold-field at the present time on ground which has been allowed to lie idle for a surprising period, and consequently some important discoveries may confidently be looked for during 1896. The unusual scarcity of water in the district during 1895 greatly retarded the returns of alluvial gold, and in fact, seriously affected quartz-mining.

Alectown Division.

The returns from this Division show that 594 oz. were won as compared with 362 oz. in 1894. The increase in the returns would have been much greater had a sufficient supply of water been available for treating the large quantity of wash-dirt at grass. A party of miners from Peak Hill took up an abandoned claim situated 7 miles from Alectown, on the Alectown-Peak Hill Road, and were fortunate, after very little work, in striking some very rich stone near to the working shaft. They raised 31 tons, 20 tons of which yielded 9 dwt. per ton, the other 11 tons at the rate of 33 oz. per ton, and there is a quantity of equally rich stone in sight. It is understood that this claim is under offer to a syndicate for £9,000. To show the apathy of miners in this locality at the present time, I might mention that the adjoining ground was left for several weeks notwithstanding the apparent richness of the stone in the locality, and in face of the fact that another claim in the immediate vicinity had just had a crushing of 33 tons which yielded 2 oz. per ton. A good many parties are, however, now at work, and some valuable discoveries are likely to be made during the present year. A large number of fossickers are still working in this Division, but it is difficult to obtain any information as to the gold won by them. They appear, however, to be making sufficient to keep them in rations.

Orenfell Division.

The value of the gold won during the year in this Division was £5,292 as against £5,620 in 1894, a slight decrease, which is directly traceable to the scarcity of water for mining purposes, preventing the treatment of over 500 tons of stone now at grass. There are undoubted signs of a marked improvement in quartz-mining in this Division, the number of men employed in that class of gold-mining being increased from 100 to 170, and fourteen claims which were idle during 1894 are now in full work. The Young O'Brien Mine-owners are still raising good stone, the quantity treated by them during the year being 852 tons for 322 oz.; the Enterprise tributors, 306 tons for 214 oz.; the Homeward Bound, 357 tons for 227 oz., and Holton and party, working the Missing Link Claim, 74 tons for 32 oz. A large number of small crushings brought the total quantity of stone treated in the division to 2,024 tons, which yielded 929 oz. of gold. Clapperzouli and party have erected at Weddin machinery for treating alluvial quartz and sand, but in consequence of the scarcity of water have not been able to make a start. About fifty fossickers are now working in the Division evidently making a living if nothing more.

Murrumburrah Garangula Division.

The returns from this Division show that 1,994 oz. of alluvial gold were won during the past year but no quartz gold, which is a considerable decrease on 1894. There are still about 200 men employed in alluvial mining, but there are only a few remaining in M'Kay's Paddocks. Barwang, or Tout's Paddocks are entirely deserted, but at Kemp Hill,

Hill, Cunningham Creek, several parties of miners are at work and doing fairly well. The quantity of gold won at Garangula may be put down at 4,302 oz., valued at £16,670. At the beginning of the year over 500 men were on the ground, but by the end the number had dwindled down to 250. The alluvial ground at the main camp and Strawstack Paddock are nearly worked out and this is the principal cause of the diminished population, a few men working in Osborne's Paddock are getting a little alluvial gold, and that part of the field is being further prospected. The reefs found in Strawstack Paddock are being vigorously prospected, with the result that Adam's reef seems payable. It varies in thickness from 6 inches to 24 inches, at the 100-foot level it is 22 inches. A considerable quantity of stone taken from the shaft yielded at the rate of 1 oz. 6 dwt. per ton, crushings from Lightland's claim returned 17 dwt. per ton; from English's 15 dwt. per ton; Notts' 1 oz. 3 dwt. per ton, and 235 tons from Mauly's yielded 176 oz. A 5-head battery was started early in the year, but it has now been increased to 10-head. The average yield from the alluvial at Garangula was a little over 9 dwt. per load. A small portion of the Prospecting Vote was allotted to test some ground near Frogmore, but nothing payable has been met with so far. A little alluvial gold is being got at Bramah, on the Fish River, in small patches. Some alluvial gold is being got at shallow depth at Grassey Creek, but, although a lot of prospecting work has been done, it proves nothing of importance. Tout and party prospecting near Galong discovered a reef from which high assays were obtained, and which is now being opened out. The old Marshal Macmahon Reef at Cunningham has been started again, and the owners anticipate good results.

Temora Division.

The quantity of alluvial gold won in this Division during the year could not be ascertained, but it must be considerable as there are a large number of fossickers working in the district, and they all appear to be getting a little gold. The quantity won from quartz was 7,473 oz., valued at £28,214, an increase of over £20,000 in the value of the gold won in 1894. New finds of quartz reefs have been made from time to time during the year in the vicinity of Scrub Yards, and a number of parties have been aided out of the Prospecting Vote to test their value at a depth. Hall and party have crushed 236 tons for 1,782 oz. 12 dwt. This vein is from 3 to 15 inches in thickness, and has been worked to a depth of about 100 feet, and the reef has been traced for a distance of over 400 feet along the surface. A 10-head battery has been erected which will start work immediately water is available. In the immediate neighbourhood of Temora, an effort has been made to prove the deep alluvial which was found in Parko's Prospecting Claim and the Golden Gate, and a grant from the Prospecting Vote has been made to assist in the work.

Barmedman Division.

Gold mining has practically been at a standstill during the past year in this Division, the total yield being only 117 oz., valued at £447, which is a large decrease on the 1894 yield. During the latter two or three months of the year, however, signs of renewed activity were manifested, and some of the old ground taken up. The Fiery Cross Lease, which had been cancelled for non-fulfilment of the labour conditions, has been taken up by a party who intend erecting powerful pumping machinery, and give the reef a good trial below water level. Klink and party are opening up an old reef to the west of the Fiery Cross, from which they took a trial crushing which yielded 14 oz. of gold. Maschivitz and party have taken over Nessi and party's claim and battery, and are now arranging to give this property a thorough good trial. The reef averages from 5 to 10 feet wide, in slate country, containing fine gold which requires careful handling to save. About 6 miles north-west of Barmedman, Roberts and party are working a prospecting claim and were successful in striking a reef, 23 tons from which, put through the battery at Barmedman, gave a return of 29 oz. 8 dwt. This locality which is quite untried country and something similar to that at Wyalong, being flat and covered with mallee scrub, is attracting some attention, and several parties are now vigorously carrying on prospecting operations and have already discovered several very promising veins. A syndicate has been experimenting with a heap of quartz tailings, of which there are about 40,000 tons in the locality, and have met with much success. A small and simple concentrating machine was erected at a cost of about £100, which driven by the crushing engine, enables them to put through from 130 to 150 loads per week. The concentrates which reduce the tailings by about one-sixth, are sent away for treatment, and so far has yielded a fraction over 3 oz. per ton, giving a clear profit of between £7 and £8 per ton. The whole of the 40,000 tons mentioned are not expected to give anything like the above return, yet the syndicate are so satisfied with the prospects of their venture that they are proceeding with the erection of another plant capable of treating 300 tons per week. This matter is really one of great public importance, more especially to those quartz-mining centres containing vast heaps of tailings which might be treated profitably and give employment to a large number of men.

Reefton Division.

This new mining Division, established during the year, previously formed part of the Barmedman Division, and its growing importance may be judged from the returns, which were 1,603 oz. of quartz, and 20 oz. of alluvial gold, valued at £5,075. Confidence in the prospects of the field is shown by the fact that several abandoned reefs have been taken up by experienced miners, who are determined to give the ground a thorough trial. In November last a rush took place to Nixon's conditional purchase, where a good thickness of wash had been discovered by Slattery and party, at a depth of 17 ft., which yielded 7 dwt. per load. The Christmas holidays coming on, little work was done to prove the find. By the end of the year the number of men on the ground had dwindled to fifty, and it is doubtful whether that number will be again exceeded unless a deeper channel is discovered. The wash is angular, and about a quarter of a mile from the quartz reef; but the wash found further away from the reefs is finer, and more water-worn, but does not contain payable gold.

Wyalong and Wyalong West Divisions.

Although the population on this field has decreased, owing to discoveries in other parts of Australia, the claims have been steadily developed during the year, and the quantity of gold won has increased from £35,946 in 1894 to £91,863 the value of the gold won in 1895. The want of water for crushing purposes, combined with the refractory nature of the ore below the water level, has tended to keep the returns down, although it has been proved that the reefs are payable at and below the water level. Among the deepest shafts on the field are:—

Hilderbrand's	245 feet	White Reef.....	185 feet
Hidden Treasure	225 "	Barrier.....	180 "
Pressers	210 "	Dickson's Bantam.....	170 "
Boltes'	193 "	Curragong	160 "
Snowden and party	185 "	Welcome Stranger.....	150 "

The foregoing are all considered payable claims. The old "Called Back" line of reef is again being worked with every prospect of success. The owners of No. 1 North sold to a Sydney Syndicate 23 tons of ore they had at grass at the rate of £10 per ton. The White Reef, Curragong, and Welcome Stranger Claims especially have given splendid returns, and shares in them have changed hands at large figures. A number of the claims have been under suspension for various causes, such as excess of water, refractory ore, but they will soon be at work again. As far as can be ascertained, the total yield of the field for the year is 24,337 oz. from 15,634 tons of stone crushed, but this does not include the return from small lots sent to the several Works in Sydney for treatment which would make the yield for the year little short of £100,000. It is considered that there are 90 payable claims on the Wyalong Gold-field at the present time, and the following returns are from some of the principal claims:—

Curragong	1,000 tons	2,620 oz.	Klink's	39 tons	311 oz.
White Reef	1,213 "	2,447 "	Four's.....	275 "	860 "
Welcome Stranger	318 "	1,782 "	Golden Fleece	152 "	332 "
True Blue	1,060 "	1,426 "	Wye and party.....	115 "	300 "
Perseverance	260 "	621 "	Cunning and party	32½ "	177 "
Hilderbrandts'	458 "	468 "	Christmas Gift	127 "	165 "
Neild's	205 "	433 "	Kelly and party	10 "	25 "
Mousetrap	97 "	496 "	Pioneer	6 "	18 "
Boltes'.....	71 "	390 "			

During the last quarter of the year Nicholas and Raymond's new battery started work, and has been kept constantly going. Climo and Company are erecting large works at a cost of about £8,000, and are expected to be at work about March.

March. The works for the treatment of tailings are just completed, and should prove of great benefit to the field generally. There are about 6,000 tons on the field now. A few figures with regard to the work done by the batteries on the field may prove interesting:—

Cough's No. 1 Battery	5,799 tons	9,099 oz.	Cox's	1,161 tons	1,170 oz.
West's	3,112 "	2,516 "	Nicholas and Raymond's	774 "	1,246 "
Channan's	2,153 "	3,793 "	Ashcroft's	821 "	620 "

Billy's Look-Out is now included in the Wyalong Division, and there are about 100 miners at work, who have won a fair amount of alluvial gold, but their operations were much retarded by the unusual scarcity of water in that locality, many of the claims yielding payable gold having to cease prospecting operations altogether. There is every prospect that payable reefs will ultimately be found in this locality, and when rain sets in sinking for reefs will be vigorously carried on.

Yalgogrin Division.

The quantity of gold won in this Division during the year is a little more than double that of 1894, being 804 oz., valued at £3,116, all quartz gold. This comparatively new field, situated westerly from Wyalong about 26 miles, has suffered quite as much from the drought of last year as any other field in the Colony; and although a few men have kept at work under great difficulties up to the end of the year, they must very shortly cease work unless rain sets in. An Otis Ball Crusher was able to work during four months of the year, and during that time treated 434 tons for a yield of 804 oz., and there is still about 150 tons at grass waiting treatment. The claims vary in depth from 30 to 100 feet, the reefs varying in thickness from 3 in. to 3 feet. With a favourable season important yields might be expected from this division. Prospecting for payable alluvial gold is still being carried on at Narriah, about 8 miles from Yalgogrin.

Young Division.

There were 2,228 oz. of alluvial gold won in this Division during 1895, which is an increase of nearly 300 oz. on the previous year. In the early part of the year a big rush set in to Spring Creek, where Staines and party had struck it very rich in their claim, where the sinking was 35 feet deep, the ground dry, and the wash yielding about 10 dw. per load. Although several other parties are on good wash, the prospectors' claim is the richest, with a body of wash that will take some time to work out. More recently, a small rush took place to Eastlake's farm, near Wombat, where 30 or 40 miners find employment, and average about 3 dw. to the load. Numerous other small rushes have tended to keep the mining industry in a state of healthy vitality, and combined with the dearth of other employment in the Division, systematic prospecting has been encouraged, which has reaped a reward in the shape of an extra output of gold. Sluicing has been almost at a standstill owing to the small rainfall. The South Burrangong Company are still at work, and their shaft is now down 93 feet. It is hopefully anticipated that the company will reap the reward of their enterprise during the coming year.

TUMUT AND ADELONG MINING DISTRICT.

Albury Division.

A very satisfactory improvement in the quantity of gold won in this Division is reported, the figures being 2,322 oz., valued at £8,860, as compared with 1,200 oz., valued at £4,200, won in 1894. Towards this total the new discovery contributed 940 oz., which was the yield from 1,244 tons of stone. Although this field was discovered in 1894, little work was done until April of last year. By August 450 men had arrived on the field, but owing to all the finds being on private property, and the owners insisting on a 10 per cent. royalty, the men left, and by the end of the year the number had dwindled to fifty men, leaving over twenty-five claims idle. The field covers an area of nearly 10 square miles, and eight distinct lines of reefs have been proved auriferous, some of them very rich, their thickness varying from 2 to 18 inches. The three principal lines of reefs are the "Lone Hand," which was floated in Melbourne; the "Goodwood," and "Show Day." Several shafts were sunk for alluvial gold, but were all abandoned without anything payable having been struck. The field has the advantage of a running stream, and with such a large area of auriferous country giving such promising indications, substantial returns may confidently be expected in future from this locality. In the vicinity of Albury a little prospecting work is still being carried on, on the Nail Can Ranges. Although nothing very rich has been met with, still the indications are sufficiently encouraging to warrant the hope that rich finds may be made in that locality. A few fossickers working in the Division manage to make a bare living.

Germanton Division.

There is very little mining being carried on this Division. A few men have been employed working the old abandoned quartz reefs on a small scale, but the returns are not very rich. A party is working the Old Sam Claim on The Four-mile Gold-field, but have not been able to bottom their shaft owing to the influx of water.

Corowa Division.

As far as could be ascertained, the only gold won in this Division during the year amounted to 50 oz. from quartz and 5 oz. from alluvium. A strong company is being formed to work the deep lead, supposed to cross the Murray River from Victoria. These leads are very extensively worked on the Victorian side of the river, and the proving of them at Corowa is a question of the utmost importance to the Colony. Substantial assistance has been granted from the Prospecting Vote to effect this object, and as very promising prospects have been obtained by means of boring, the company are pretty confident of success. The Hillside Gold-mining Company is also in receipt of Government assistance to prove its ground, in which operations have been begun.

Adlong Division.

There is a large falling off in the quantity of gold won in this Division, the quantity being 3,923 oz., as compared with 6,357 oz. won in 1894. The decrease in the yield is, however, considered only a temporary one, a considerable revival being noticeable about the end of the year. Some of the mines adjacent to the township are in course of being reopened, several of which have been idle for a long time. The Gibraltar mine, lately sold to an English Company, is being worked on an extensive scale. Three shafts are being sunk, and a complete plant of a superior character is on its way from England. The Great Victoria United Gold-mining Company holds 17 acres of land, which includes the old Annette and Research claims, which were worked some twelve years, and gold to the value of something like £50,000 taken from them. Since then they have been lying idle until taken over by the Gibraltar Hill Syndicate, who have worked the mine continuously for the past eighteen months. The main shaft is down 1,075 feet, the deepest in New South Wales, whilst three other shafts have been sunk on the property, viz., 770, 700, and 460 feet. The present syndicate have put in a drive at the 600-foot level in main shaft, about 420 feet south, and they are now cross-cutting east and west in hopes of striking the reef. During progress of the work, gold-bearing leaders were met with, likewise some pyritous quartz, from which about 150 oz. of gold were obtained from a crushing of 164 tons of stone. The Gibraltar Consolidated Gold-mines are still at work, and during the year raised a fair quantity of good stone. About 70 men were employed on the mines.

The Adelong Proprietary Company raised 327 tons for 353 oz., and the Lady Mary Company, at the Gap, 757 tons for 541 oz. Sheppard's alluvial claim, which still maintains its yield, has been sold to the Gibraltar Company, the "water rights" being the valuable property in their eyes. Quite a large number of men are making a living along the old workings of the Adelong Creek, and occasionally a very fair patch of ground is met with. About 320 men are employed gold-mining in this Division.

Gundagai Division.

This Division shows a substantial increase in the quantity of gold won during the year, which was 1,876 oz., as compared with 1,235 oz. in 1894. There is a considerable amount of quartz mining going on in the Division at the present time, but it is questionable if the owners are doing more than paying expenses, with the exception of one at Jones Creek, where some good gold is being got. This mine is 4 miles west of the town of Gundagai, on private land. A lot of prospecting work has been done during the year on Mount Parnassus, without any discovery being made, and the veins which fed the rich alluvial discovered at its base are yet to be found. The Kimo Ranges are being prospected in many places where rich gold was obtained in the old days, but, so far, without success. The Jackalass alluvial field at South Gundagai still affords a living for a considerable number of men, but no large finds are reported. This lead is continuous, but very patchy. Numbers of men are making rations by fossicking among the old workings throughout the Division.

Cootamundra

Cootamundra Division.

Little work has been done within this Division during the year, with the exception of prospecting, and no discovery of any importance has been reported.

Junee Division.

There were £996 worth of gold won in this Division last year—very little in excess of that obtained in 1894. C. Butler and party, working on the "Old Dust Hole," under aid from the Prospecting Vote, suspended operations during the year, and abandoned the ground. It was then taken as an extended quartz claim by a party of eight men from other fields. After sinking about a foot in No. 1 shaft, abandoned by Butler and party, they struck a reef about 3 feet wide, a trial crushing of 4 tons from which yielded 16 oz. of smelted gold. Several other crushings from the reef have taken place with very satisfactory results. Shares in the claim are now changing hands at a good figure. A party of miners from New Zealand are erecting a cyanide plant for the purpose of treating the large quantity of tailings lying near the mines. Samples sent over to New Zealand and treated yielded gold to the value of about £6 per ton. Mining matters have improved in the vicinity of Eurongilly during the year. From a reef struck on Doyle's Lease, the following crushings have been taken:—

2 tons 8 cwt. yielded	14½ oz.
1 " 3 " "	21 " "
3 " 0 " "	6½ " "

Some very good-looking stone, none of which has yet been tested, has been taken from a reef just discovered in King's Lease. A few miners are at work in the alluvial, but the want of water is retarding their progress. At Wantiool very little is doing in quartz mining at present; but a few men are working the alluvial, and making fair wages.

Tumut Division.

There were 105 oz. of alluvial gold won in this Division during the year. Although the yield is small, much activity is displayed in prospecting both for quartz and alluvial in this locality, but with little success so far. At Billibalula, about 15 miles north of Tumut, a long line of reef is being prospected, the ground being pegged out for several miles. The trial from the reef has not reached expectations; but the reef, being large, would probably pay were a battery erected on the ground, as there is abundance of wood and water close to the reef. The "Flats" along the Gilmore Creek, supposed to be very rich so long as they were closed against the miner, have proved on trial not payable. It is thought the highest levels of the valley towards Batlow are likely to prove richer.

Tarcutta Division.

As far as can be ascertained only 33 oz. of gold were won in this Division during the year. Mining matters have been very slack in this Division during the past twelve months. Three quartz claims have been working at intervals at Lower Tarcutta, but, although they are in receipt of Government aid, very little work has been done. There are always a few fossickers on the Humula and Carabost Creeks, but they manage to make a bare living only.

Batlow Division.

There are 164 European and 10 Chinese alluvial miners in this Division who won among them 930 oz. of gold, valued at £3,565, nearly £1,000 of an increase on the yield for the previous year. As the bulk of the mining is carried on by ground sluicing the dry season had a very serious effect on the yield, many of the claims having applied for, and been granted suspension. No new finds are reported during the year, the principal work being confined to the old workings, which a few years ago were not considered payable. On the Gilmore Creek an extensive race is being blasted through a hard bar, and sluicing operations will be started as soon as water is available. There is a very large dyke formation at the head of Adelong Creek which has been worked by hydraulic sluicing for some years. It is understood that a syndicate has been formed to crush the debris which cannot be treated by sluicing. On Bago Creek three races are being put in to sluice the creek flats, but as the rock is fairly hard progress is slow. Scattered patches of gold are still found under the basalt in the neighbourhood of Laurel Hill on the Range that divides the tributaries of the Murray and Murrumbidgee Rivers.

Tumbarumba Division.

Gold to the value of £6,290 was won in this Division during the year, which is a considerable increase on 1894. The Tumbarumba Sluicing Company are still at work with varying success. The Tumbarumba Basalt Deep Lead Gold-mining Company has restarted work and has been successful in striking good-looking wash in its western drive. A good deal of prospecting work is being carried on, and some very rich specimens are occasionally met with in the quartz veins at the junction of the dyke and granite country. The usual number of fossickers are met with in this Division, and when water is abundant they appear to do fairly well.

Narrandera Division.

The returns show that 964 oz. of quartz-gold, valued at £3,856, were won in this Division during the year, which is an increase of 406 oz. on the return for 1894. The Harry Smith Gold-mining Company is the principal mine in the district, and last year it crushed 1,242 tons for 960 oz. The main shaft is now down 200 feet, and when in full work the company employs 30 men.

Cooma Division.

The total value of gold from quartz and alluvial, won in this Division during 1895 was £5,072, as compared with £6,079 the previous year. The decrease is directly due to the extremely dry season, which completely paralysed mining during the year in some parts of the district. At Cowra Creek many of the mines from which good results were expected were idle the greater part of the year, being unable to crush. Whithy's battery, however, managed to crush 753½ tons for various miners, which yielded 478 oz. of gold. Lewis and Company also crushed 159 tons from the Victorian Gold Lease for 54 oz., and 47 tons from Brogan and party's claim for 20½ oz. Bartlett and William crushed 100 tons for 40 oz., and have 550 tons at grass awaiting water; and other miners have about 500 tons, which will be put through when water is available. The Star of Cooma Gold-mining Company own some 33 acres of leased land, and has a good machine, site, and water, but is at present idle for want of capital. During the year the company crushed 900 loads for a yield of 336½ oz. of gold. John Murray has put in a tunnel on the north side of the Bredbo River, for a distance of 204 feet, but lost the reef at about 150 feet. He is now trying to pick it up by cross-cutting. From another lease of his, known as the Democrat, he crushed 100 tons for 130 oz. This reef is about 15 inches wide, and appears to be a permanent and payable one. At Buckley's Crossing a large number of men are making a living on the river, owing to its lowness, and a reef is also being prospected on private land in the locality. At Brown's Campa party are opening out a reef, and several men are doing well on the Little Plain River. The Nelbothery mine is idle, and so far as can be seen, there is little prospect of its being worked. At Colinton, the lease owned by the Colinton Gold-mining Company was sold for wages, and was bought up by the men, and aid from the Prospecting Vote being granted to them, they took out of this drive 42 tons, yielding 19 oz. of gold. They have now opened up a large block of backs, and good results are expected from their next crushing.

Kiandra Division.

There were 810 oz. of alluvial gold got in this Division during the year, valued at £3,006, which is a decrease of about £930 on the yield for 1894. The New Chum Hill tributors did nine months' work for a return of 16 oz. of gold, and the mine is now for sale. The tunnels at the Twelve-mile have been steadily pushed on during the year, but without results, so far, although the prospects are considered good. John Robyns has put in his tunnel a distance of 400 feet, by means of aid from the Prospecting Vote. There suit of his operations are closely watched, and in the event of them proving successful, a large area of land will be eagerly taken up. Hooper and party, on Township Hill, anticipate striking the wash very shortly and if their expectations are realised, a large field for mining under the basalt will be opened up. This party has received every assistance from the Prospecting Board. Moulton and party, have struck a reef 4 feet 3 inches wide showing good gold. The shaft is now down 43 feet, but being an east and west reef some doubts are expressed as to its permanency. Weselman and party, close by, working a reef running north and south, 5 tons from which crushed at the Adelong battery, went 2 oz. per ton. Several other quartz claims are working in the vicinity, and a battery is about to be erected. Fossickers still continue

continue to make a fair living in the neighbourhood, and there is no question that the prospects of Kiandra, from a mining point of view, are brighter at present than they have been for some time. At Toolong, a number of miners still make a living, but the gold is very scattered, and uncertain as to quantities. At Grey Mares, Boogong, a tunnel is being put in under aid from the Prospecting Vote to test a reef at a depth. The sluicing claim in this locality continues to yield good wages. Prospecting operations are still being carried on at Bark Huts, but no discovery of any moment has yet been made.

Nimitybelle Division.

Very little gold is being got in this Division, at the present time the principal work carried on being purely of a prospecting nature, from which little has resulted so far. The lease taken up by Messrs Turbot and party, at Bunberra Creek, has virtually been abandoned, and will probably be reported for cancellation. The gold won during the year in the locality may be set down at at 50 oz.

Captain's Flat Division.

The Lake George United Mining and Smelting Company saved in connection with their copper and silver mining operations 2,164 oz. of gold. Since the amalgamation of the two companies, *i.e.*, The Lake George and the New Kohinoor, the number of hands employed has been greatly increased, and a second furnace has been put in blast. The company have hired one of the Government Diamond Drills to further prove the lode, and should their expectations be realised work will be found for a large number of extra men. The number employed at the present time is over 300.

Queanbeyan Division.

There were £1,368 worth of gold won in this Division during the year, as compared with £377 10s. during 1894, which is highly satisfactory, seeing the principal mining centres, *viz.*, Bywong and Macs' Reef, were cut off, and embraced in the new division of Bungendore. A good deal of alluvial mining has been carried on throughout this Division during the year by small parties of prospectors with very fair results, which would certainly have been better had the season been favourable and a good supply of water available.

Bungendore Division.

This new mining Division proclaimed during the year, returned 814 oz. of quartz gold, valued at £3,260. The rush to Bywong terminated somewhat suddenly, the dry season making work nearly impossible. Several of the claims still continue to put out good stone, the last crushings from Lowe's and Cartwright's claim going about 1 oz. per ton. Johnston and McAllister raised 700 tons for 200 oz.; Giles, Wilson, and party working the Energetic Claim, 62 tons for 114 oz.; The Bywong Gold mining Syndicate, 120 tons for 400 oz.; and The Coolgardie Prospecting Claim, 113 tons for 50 oz. A large quantity of good-looking stone is at grass, which will be treated immediately water for the purpose is available.

Gundaroo Division.

There were 65 oz. of alluvial and 48 oz. of quartz gold won in this Division during the year. About the middle of the year a slight rush set in to Dairy Creek, situated 7 miles S.E. of Gundaroo Township, consequent upon the discovery of a gold-bearing vein on the property of Messrs. Batt, Roid, and Purves. Several leases have been applied for, but so far little work has been done to prove the value of the discovery. Subsequent to this discovery another gold-bearing vein was found on the gold reserve adjoining the above property. Although narrow and difficult to follow, it is rich, and has proved payable. A gold-bearing reef has also been struck on Hurdwick's land which has been reported payable. As prospecting work is being vigorously carried on in this Division some valuable discoveries are anticipated during the coming year. Alluvial mining in this Division is restricted to Brook's Creek, where about twenty men are fossicking among the old workings.

Wagga Wagga Division.

Prospecting was very active during part of the year round Wagga Wagga, but the results have not reached expectations. The deposits of stream-tin carrying a fair quantity of gold, to be found near Pulltop, would, it is thought, prove payable were sufficient water available for sluicing purposes. There is a large area of payable ground in this locality, if the water difficulty could be overcome.

SOUTHERN MINING DISTRICT.

Braidwood Division.

There are 82 alluvial gold-miners working in this Division, including 12 Chinamen, who won among them 800 oz. of gold, valued at £3,080, which is 135 oz. less than the quantity won in 1894. Although a slight decrease is shown, the returns must be looked upon as satisfactory, in view of the fact that the year 1895 will long be remembered throughout the District as one of the most disastrous on record, both from an agricultural and mining point of view. The greatest portion of the small rainfall fell during the early part of the year, consequently the crops were a failure and the carrying on of mining operations rendered nearly impossible. Four batteries were thrown idle from want of water, and many of the streams considered permanent are now dry. The most important work carried on in the District during the year was the cutting of the granite-bar at Snowball by The Enterprise Sluicing Syndicate, by means of aid from the Prospecting Vote, a work that has been talked of by the local miners for the last thirty years. Notwithstanding that the operations of the Company have been greatly curtailed by want of water for sluicing purposes, gold in sufficient quantities to pay actual working expenses has been got, which goes to prove that the venture will be a profitable one when rain does fall. The dimensions of the race are $4\frac{1}{2}$ chains in length by 9 feet deep, through solid granite, it will serve to drain a large area of auriferous country hitherto unworkable.

Araluen Division.

Gold to the value of £11,577 was won in this Division, which is a little short of the yield during 1894. The effects of the late drought were severely felt in this Division, and when rain sets in a large increase in the field may be looked for. A party at Bell's Creek received aid from the Prospecting Vote to further test their claims—and have been successful in striking very good-looking stone. Efforts are now being made to raise money to develop the discoveries. At the Bell's Creek battery, 188 tons of stone were put through for a yield of 167 oz., and another 50 tons are ready to treat when water is available.

Major's Creek Division.

The returns show that the value of the gold won within this Division during the year, was £5,863, an increase of about £600 on the returns for the previous year. With few exceptions, no new discoveries have been made during 1895 in this Division, the gold being won principally from old abandoned ground. During the dry weather when sluicing work was stopped a great many of the claim-holders on the old workings were breaking down banks of earth into their ground-sluicers, which they expect will pay well when the wet season sets in. At Long Flat the puddling machines have been idle more than half the year, and great heaps of wash-dirt are stacked, awaiting rain. Snobs Reef has been reopened and the present owners mean to give it a fair trial. During the year they raised 1,430 tons, which yielded 257 oz. free gold; and 525 oz. from pyrites, which were treated at Maryborough in Queensland. The shaft is now down 186 feet, and 24 men find constant employment. So far only one party has taken advantage of the 33rd section of the Mining on Private Lands Act, 1894. Many of the miners in this District complain of the 10 per cent. royalty and the 10s. per month license fee, which they state is exorbitant for ground that has been worked off and on for the past forty-four years. It is confidently expected that some good quartz reefs will shortly be found in this locality.

Little River Division.

The extremely dry season had the effect of reducing the yield of gold in this Division from 2,260 oz. in 1894 to 1,669 oz. in 1895, the principal work being confined to mere fossicking in the vicinity of the river. Several quartz leaders were found by some of the parties and followed to water level, the crushings weighed in the aggregate 25 tons, from which 100 oz. of gold were got. This was, of course, picked ore, the lower grade stone being stacked for future treatment. A syndicate is said to be in course of formation to work the Day Dawn reef below water level 205 feet, at which point the water is unusually heavy, and requires powerful machinery to deal with it. The Homeward Bound and Scotch Lassie Leases stopped work at the 100-foot level—the water beating them out.

Nerriga

Nerriga Division.

The yield from this Division was 700 oz. of alluvial and 90 oz. of quartz gold, a decrease of 357 oz. due to the scarcity of water for mining purposes, the men being driven from the table land to work in the bed of the Shoalhaven River. During the early part of the year a large number of men from Sydney started work on the banks of the river, but the short stay made by them would indicate that their expectations were not realised. A sluicing Company has been formed to work certain alluvial claims at Colombo, and an English company has purchased the Beaula property, near Nerriga, whereon it proposes expending a sum of £30,000. Other companies on the river intend improving their water supply, and on the whole there is a marked improvement on the river in connection with this class of mining.

Nelligen Division.

Mining matters were anything but brisk during the year in this Division, and only 190 oz. of quartz gold were won, the result of a crushing of 256 tons, only about one-third the quantity won in 1894. The low average yield per ton may be accounted for by the fact that during the year several new reefs were found and tried, some of them giving very small yields, although a large percentage went over 1 oz. per ton. Matters will probably liven up somewhat during the coming year, as 40 acres of leases were applied for during the last two months of 1895, principally at Clyde Mallow, where a battery is in course of erection. Brimbamalla is considered a good field, but is languishing for capital, the miners being mostly poor men. There are several good properties there, which, if amalgamated, should pay handsomely, and they have the advantage of an abundant supply of water. The crushing plant erected by the Phoenix Company at Currowan has been removed, but Braithwaite and party are still doing fairly well by means of one stamper worked by hand. The same party are erecting a four-head battery, to be worked by horse-power, the tailings to be saved for special treatment. Another good property of 30 acres is being developed by White and party; but at present there is no battery in the vicinity to treat this stone. There is very little alluvial mining going on in this Division at the present time, and the quantity of gold got was only about 5 oz. from this source.

Bateman's Bay Division.

This is a new division of the Southern Mining District, and was formed in consequence of the growing importance of the mining operations being carried on on Big Hill, near Bateman's Bay. The returns show that 90 oz. of alluvial, and 204 oz. of quartz gold were won during the year, giving a total value of £1,041. Fullerton and party have sold their claim to a company who have purchased several adjoining claims, with a view of floating them on the London market. Fitzgerald Bros., had one crushing of 33 tons for 87 oz. Several other parties are at work on the Hill, prospecting, with promising indications, some of them in receipt of aid from the Prospecting Vote. At Sandy Creek, lying between Mogo and Bimbimbi, some good veins have recently been struck, and several parties are now at work in the locality. Coates and party had a trial crushing of 10 tons for 22 oz. of gold. Keating and party, at Bimbiubi, have erected two batteries, and have sold their claim for a good figure. Several other parties are at work, and are sanguine of striking something payable during the coming year.

Moruya Division.

Bateman's Bay, formerly part of this Division, having been proclaimed a separate division under the Mining Act, has reduced the returns materially, the quantity of gold won being 330 oz., valued at £1,195. At Turlinjah, Statham and party have leased part of the Italia Mine, but little work has been done since the lease was taken up. They are raising a little quartz from the 50-foot level, their deepest level being 130 feet. Several quartz claims are at work, on Donkey Hill, near Moruya, and although the stone has to be carted a long way for treatment, the miners appear satisfied with the result. Cleaver and party are in receipt of aid from the Prospecting Vote to sink a 100-foot shaft on their reef. About twenty men are fossicking among the old workings, but the scarcity of water has prevented them from earning more than a bare living.

Nerrigundah Division.

The returns from this Division show a satisfactory increase on the previous year, being 1,174 oz. valued at £5,127, the yield in 1894 being 889 oz. valued at £3,600. In quartz mining very little work has been done, and only 170 tons were crushed at the local battery, which gave 122 oz. of gold. Cram and party during the year discovered a new vein on Captain's Creek and their trial crushing of 29½ tons yielded 49½ oz. of gold. The Tin Pot Mine was abandoned during the last quarter of the year, but there is a probability of it being taken up again by an English company. There are several other quartz claims at work but they are only doing prospecting work. In alluvial mining about 160 men have been making a fair living during the year. A party of 20 chinamen on Cowdroy's private land have won a considerable quantity of gold, but the exact amount could not be ascertained.

Wagonga Division.

There were 652 oz. of gold won in this Division during the year as compared with 1,119 oz. in 1894. During the year Bailey and Miles sold their mine to the Mount Dromedary Gold-mining Company (Limited), and the two mines are now being worked under the one management. The returns from stone crushed during the year proved satisfactory, but the scarcity of water for the purpose retarded operations very much. The other mines on the mountain are in the same position—a large quantity of stone has been raised but cannot be treated for want of water. Considerable prospecting work has been done westerly from the old workings and several veins discovered, that give promise of yet becoming payable. A syndicate took up a 20-acre lease on old alluvial ground at Bermagui, on which they placed a patent gold-saving machine, but the result has not reached expectations. The Prospectors is the only claim at work on the Coolagalite Field, all the other leases having been cancelled.

Cobargo Division.

There is very little mining going on in this Division of any importance. There are still a few fossickers working the old alluvial ground who seem satisfied with their returns. A party of three are sinking on a reef at Brassknocker, but have not been successful in striking anything payable so far.

Bega Division.

The principal scene of mining operations in this Division is known as the Nelson Diggings, situated 10 miles north from Bega. Work is carried on in the various creeks and gullies that take their rise in the Doctor George Range of mountains. The country is mostly composed of slate, though the range is of granite formation. A belt of basalt crosses the creek at almost right angles immediately above where the gold is found and the general opinion of the more experienced of the men employed is that a lead of gold exists under the basalt. From one of the reefs outcropping in the locality 3 tons were raised from a depth of 30 feet, and on treatment at a Pambula Battery yielded 17 dwt. per ton. Prospecting work is being vigorously proceeded with and occasionally specimens much richer than the quartz treated at Pambula are found. At the foot of the ranges and a mile nearer to Bega, alluvial mining has been carried on for many years past where the gold is found fairly coarse in sinking from 10 to 18 feet. It is thought that a thorough prospecting of this Division would lead to important discoveries.

Pambula Division.

The value of the gold won in this Division during the year was £27,534, more than double the value of that won in 1894. A decided revival set in during the last few months of the year, on the Pambula gold-field, owing to the important fresh developments in the Falkner's mine. A great number of the cancelled leases have been retaken up, and work started, which has resulted in new finds being made on those portions. The Falkner's Gold-mining Company's shaft is now down 120 feet; but work has been carried on during the year, principally at the 90-foot level, and the quantity of stone raised was 2,051 tons, which yielded gold to the value of £21,546, the average number of men employed being sixteen. The Mount Gahan Gold-mining Company employs eighteen men, and during the year raised 1,465 tons of stone, which returned 466½ oz. of gold, and from 1,740 tons of tailings the same company saved by the cyanide process other 858½ oz. of gold, valued in all at £4,289. This company's shaft is 360 feet deep, at which level work is now being carried on. The Mount Lewisson Gold-mining Company raised 45 tons, which yielded gold to the value of £560. The Great Victory Company, 17 tons for 119½ oz., valued at £478; and the Hidden Treasure Company, 43 tons for 94½ oz., valued at £277. The Victory, the Diorite, and Great Southern Companies are still at work, but returns as to their yield during the year were not available. Gold-mining in the neighbourhood of Wyndham, was, during the early part of the year all but abandoned.

abandoned. Early in July, however, Donnelly and party reported having discovered payable gold on cancelled mineral lease portion 6, and that their trial crushing of 14 tons had yielded nearly 45 oz. of gold. This caused a large number of miners to start prospecting work, and ground was pegged out in all directions. Several syndicates have taken up land in this locality, and are making arrangements to give the ground a thorough trial. Messrs. R. Y. Medcalf and party, who hold 143 acres under mineral lease, have sent 30 tons of stone to Germany for special treatment, but the returns are not yet to hand. Robert Saddington and Co., of Sydney, have taken up several abandoned leases, and are erecting machinery to pump the water from the shafts. A few alluvial miners are at work about 15 miles north-east from Timbilica Post-office, which is situated a few miles from the Victorian border. The deposits so far found have not proved to be of any extent, but it is thought that fresh ground will be struck on the ranges to the north-east of the prospectors' claim.

Bombala Division.

There are seventy-eight men, including thirteen Chinese, employed in gold-mining in this Division, and the result of their labour was 545 oz. of alluvial gold, valued at £2,071, which is an increase of a little over 100 oz. on the previous year. Quartz-mining in this Division is confined to prospecting, and several parties are receiving Government assistance to prosecute that work.

Yalwal Division.

The returns from this Division could not be obtained, although the quantity of gold won must have been considerable. The Caledonian mine continues to yield good gold, and the lease adjoining is reported to be very rich. By the end of the year all the batteries, with the exception of a small one at Clyde Mallow, had to shut down through want of water. When the English companies formed to work the mines in this locality have completed their work for conserving water large returns may be expected from this district.

Rye Park Division.

There were about 100 men prospecting throughout this Division during the year, but no payable finds were reported. The alluvial ground tried was proved to be not payable, and the quantity of gold found, if any, could not be ascertained.

Berrima Division.

With the exception of the East Kangaloon Diamond-mining Company there is little mining work going on in this Division. The above-named company in connection with its diamond prospecting operations save a little gold. The company has erected a small steam puddling-machine, and constructed two small dams to conserve water. The hydraulic sluicing companies on the river, have, with one or two exceptions, ceased working principally through scarcity of water, but it is stated that an English company is making preparations to start work on a gravitation scheme for supplying water to work the deposits instead of pumping it. It is believed that by this means the extensive body of auriferous drifts on the river can be profitably worked.

Yass Division.

The only mining being carried on in this Division is on the Red Hill, about 14 miles from Yass, where several shafts have been sunk. A trial crushing of 6 tons was sent to Sydney for treatment, which was reported to have gone 6 oz. of gold per ton. Very little work has been done on the ground since, but it is the intention of the party to have another parcel of the stone tested in Sydney. Several claims have been pegged out in the vicinity of the prospectors' claim, but little work will be done till the result of the further test of the stone is known.

THE HUNTER AND MACLEAY MINING DISTRICT.

Copeland Division.

The gold won in this Division during the year amounted to 454 oz., valued at £1,558, about £1,000 worth less than the quantity won in 1894. This district has suffered severely from the drought, and many of the batteries were unable to work. The Lady Belmore mine did not turn out so well as in past years; only one crushing of 70 tons was put through, which yielded 172 oz. of gold, a much poorer return than obtained from previous crushings. The party working the old Mountain Maid mine took out a small quantity of stone from the old stopes, which returned about 1½ oz. per ton. Carter, Fallon, and Seiman, who hold leases on the old Mountain Maid line of reef, are still driving their tunnel under aid from the Prospecting Vote, but have not yet struck the reef. The tributors of the Hidden Treasure took out a crushing which did not turn out payable. The machinery on the mine is now unable to cope with the heavy influx of water into this mine. Chubb and party are still working on the Centennial reef, but it does not show any gold at present. At Bowman mining is at a standstill owing to the scarcity of water, the batteries there being driven by water-wheels. At Cobark, Fitzgerald and party and Mitchell and party have raised small crushings, which have not paid wages. Anderson and party won about 32 oz. from their sluicing claim, and about 80 oz. of alluvial gold were got by the fossickers working in the creeks and gullies.

Dungog Division.

The returns from this Division have not come up to expectations, the total yield being only 137 oz., as against 205 oz. won during 1894. Several claims at Monkerai have stopped work owing chiefly to the want of capital. About the end of the year 20 acres of Church and School lands on Lawler's Creek were pegged out, whose splendid surface shows can be obtained. The prospectors are sanguine that they will strike something payable. The claim at Cherry Tree Hill, near Dungog, has been idle during the year. The quartz-claims at Whispering Gully, above Upper Wangat, are deserted, and the miners have turned their attention to the alluvial ground in the valley with good results, some beautiful nuggets being unearthed at Wangat. Four claims have had fair returns from their crushings, viz., the Brandon, Mountaineer, Welcome Stranger, and Wonga Wonga. Gardner and party at Redbank, near Lower Wangat, are steadily pushing in their tunnel, which is now in 171 feet. They are in receipt of aid from the Prospecting Vote.

Kempsey Division.

As far as could be ascertained only a few ounces of gold were won in this Division during the year. The Deep Creek gold lease was not worked. Some years ago this mine was purchased by Messrs. Cochrane and Gearey, and some difficulty arose which prevented the leases being transferred to their names. When this has been done it is the intention of the purchasers to fully develop the mine, which, if proved payable, would be of great benefit to the district. The plant and chlorination works on the mine are valued at £14,000.

Taree Division.

There are about forty-five men prospecting in this Division, principally at Twill Creek, situated about 60 miles from Taree, and it is stated that they are earning fair wages, although no information as to the quantity of gold won could be got. About twenty-five men are employed at Cells Creek, where some good stone is being obtained, which is crushed by a battery worked by water-power.

PEEL AND URALLA MINING DISTRICT.

Glen Innes Division.

Owing to the partial or total cessation of work on many of the auriferous reefs, and the want of water for sluicing purposes, there has been a falling off in the production of gold in this Division during the year, which as near as can be ascertained was 661 oz., as compared with 1,848 oz. in 1894. The returns from Oban show an increase, mainly due to the settlement there of a number of the unemployed sent up from Sydney in the early part of the year. Work is still being carried on at Glen Elgin, but the production of gold from these mines has decreased considerably, and shows no present sign of recovering. The machinery employed for crushing and saving the gold is ample and costly, and the lodes not difficult to work, which average over 1 oz. per ton. Still no increase in the yield from this locality can be reported. A good deal of prospecting work is going on in this district, and although no new discoveries have been reported during the year, it is quite probable that important developments may take place at any time.

Kookabookra

Kookabookra Division.

The quantity of gold won in this Division during the year was about 635 oz., which is very little less than the previous year. Quartz-mining in this locality has been entirely in abeyance during the year, and is likely to remain so until a more economical and careful system of working and treating the stone obtains in lieu of the wasteful method formerly in vogue. The reefs here would pay the working miner if held under miner's right and the abundant water-power at hand in the Mitchell River utilised for driving the batteries, and so reducing the generally heavy cost of crushing to a minimum. The old Butcher's reef was worked for a couple of months during the latter part of the year by Cameron and Mourilyan, who erected a small 3-head stamper battery worked by water-power. They raised about 10 tons of stone, which is said to have yielded 2 oz. per ton. A large number of men are fossicking on the old Oban Field, Nowland's Creek, and the Mitchell River, and appear to be quite satisfied with the returns from their labour.

Armidale Division.

There were 854 oz. of alluvial gold won in this Division during the past year, being just about double the quantity won in 1894. Some good returns are being got at Puddledock, where a number of men are making fair wages. Work is still going on at Tilbuster, and the Great Britain mine is in course of being floated into a company, when operations will be extended. Rafferty and party, who received aid to further test the Zulu Reef in vicinity of Tilbuster, reported payable gold on the 15th January, 1896. The reef is situated three-quarters of a mile S.E. from the Tilbuster public school. The reef averages 9 inches wide, and 7 tons 17 cwt. taken from the 54-foot level yielded 9 oz. 17 dwt. of gold. Several parties are now at work prospecting for a continuation of the vein.

Hillgrove Division.

This Division ranks next to Orange as the largest gold-producing district in New South Wales, the output for the year being 21,617 oz., valued at £75,660, which is just 567 oz. of an increase on the yield for 1894. The Baker's Creek Gold-mining Company still holds the pride of place in this Division, and have been continuously crushing during the year, the quantity of stone put through being 13,753 tons, for a yield of 15,304 oz., valued at £55,095. Four dividends of 1s. per share were paid during the year, representing £20,000. The company has rapidly proceeded with the development of its property, and the depth of the main shaft is now 800 feet, and levels are opened out every 100 feet. The reefs in this property appear to be still going down, and according to present indications this mine will be a large employer of labour for many years to come, and promises to be prosperous and permanent. The past year has seen a great change in the Eleanora mine, the stone treated being 12,202 tons, for a yield of 4,907 oz., valued at £17,016. Under the new management the work of development has been pushed on, and the mine is now fairly well opened up. The depth of the main shaft is 615 feet, and the south shaft 250 feet. Ten additional 6 feet frue vanners have been erected and will start working in a few days. This mine furnishes an object lesson in concentration. Owing to the highly mineralised nature of the ore, it is very difficult to treat, but the company have erected the best concentrating plant procurable to overcome the difficulty, and only a trace of gold can now be got in the tailings. After the concentrates are collected from the frue vanners they are calcined in a reverberatory furnace, the antimony, sulphur and other volatile substances being driven off. The ore is then bagged and sent to Wallaroo, when the gold is extracted. Seventy thousand tons of tailings which have accumulated at this mine will be treated in due course, and this, with the fact that the reef appears to get richer with depth, should materially increase the returns from this Division during the coming year. This company's plant is valued at £29,000. The Garibaldi Gold-mining Company's mine has been worked by a few tributors only, who obtained 110 oz. of gold from 61 tons of stone. This mine is on the same line of reef as the Eleanora Company, and has just been floated on the London market for a large sum. The Baal Gammon lease has been worked on the surface only, and 50 oz. of gold, valued at £175, were got from 7 tons of stone. Capital is badly needed to develop this property. The Golden Gate Company has just completed the erection of a 10-head battery driven by electric power, and the construction of a dam capable of conserving a large quantity of water. The length of the main drive is now 400 feet along the course of the reef, and aid has been granted from the Prospecting Vote to continue it. Concentrating machinery is urgently required on this mine, as a large percentage of the gold is lost in the tailings. The stone put through was 107 tons, for 176 oz. of gold. Baker's Creek No. 1 Extended have obtained nine months' suspension, and the syndicate is trying to float the property on the London market. The Baker's Creek Proprietary Company has been at work during the year, but owing to the dry season has been unable to crush for more than a few weeks, but they obtained 341 oz. of gold. A trial crushing of 110 tons was put through, which went over 1 oz. per ton. It is expected that operations on a more extensive scale will be carried on during the coming year. Numerous other small parties have been at work in the vicinity of Hillgrove during the past 12 months, and in most instances have made good wages. The Rock Vale Freehold Company's mine at Rock Vale has lately been taken over by a Sydney syndicate, who purpose treating the stone by concentrating, and with that view are erecting frue vanners. There are fourteen men employed on the mine at the present time raising stone and making alterations in the plant. Several parties are working on the Wollomombi River for alluvial gold with varying success. One party is sinking through the basalt at Surface Hill for a deep lead supposed to be there, but have not yet bottomed. Speaking generally of this Division, it is to be regretted that electricity as a motive power has not proved such a complete success as anticipated, due to the late excessively dry season, and before the system can be considered complete provision will have to be made for storing water in the Gara River to combat the effects of a future drought. It is also considered that if the other companies would erect proper concentrating plant that the returns from this field would show a marked difference in the future.

Hillgrove West Division.

The returns from this Division show that 7,588 oz. were won during the year, valued at £26,759, a decrease of 2,730 oz. on the return for 1894. This result is directly due to the drought, which lasted from February until October, when the principal mines had to be shut down the greater part of the year. The West Sunlight Reef Gold-mining Company suffered considerably from want of water, and could only crush 5,894 tons of stone, which yielded 2,262 oz. of gold, valued at £8,035. This mine is now in good working order; large additions have been made to the gold-saving machinery. The Sunlight Gold-mining Company worked under more favourable circumstances through the year, although it had to shut down at different times from want of water. The stone crushed by it was 10,668 tons, which yielded 4,839 oz., valued at £16,888. Additional gold-saving machinery has been erected by the above company, which is working well. Murgatroyd and party are still driving their tunnel to cut the reef worked by this company. A number of the old Earl of Hopetoun blocks have been satisfactorily worked by different parties on tribute, the quantity of stone crushed being 240 tons for 337 oz. The Starlight mine crushed 60 tons for 150 oz. The tributors work under a great disadvantage, as their stone has to be packed to the public battery on top of the falls.

Uralla Division.

The gold product of this Division was 2,220 oz. of alluvial gold, a decrease of 36 oz. on the previous year. During nine months of the year the alluvial mines on the Rocky River Gold-field could not be fully worked, and sluicing was out of the question, owing to the drought. Early in the year gold was struck by Nixon and party at the head of Sawpit Gully, after sinking through 150 feet of basalt. A small rush set in, and a large number of shafts were sunk without success, and the place is now almost abandoned. In many instances, however, the ground could not be thoroughly tested owing to the heavy influx of water. Gold is still being obtained by the prospectors. There is a revival in mining on the old Melrose Field, where several reefs have been struck; some of them carrying rich gold. A number of leases have been applied for, but little has yet been done by way of development. Several reefs have been discovered on private land during the year, the value of which is now being proved.

Walcha Division.

There were 1,069 oz. of gold won in this Division, as compared with 921 oz. in 1894. Healy and party, at Glen Morrison, raised about 30 tons of stone from their Brunga Park claim, which yielded 23 oz. 18 dwt., and from another quartz-claim at Wrandunby they obtained 17 oz., valued at £3 5s. per oz. About thirty men are employed in the vicinity of Nowendoc working the alluvial, and they average £1 per week per man. Prospecting work is still being carried on at Tia, where very promising indications are being obtained.

Swamp Oak and Niangala Division.

The Mining Registrar's Office at Niangala has been abolished and amalgamated with that at Swamp Oak. As far as could be ascertained, the gold won was 2,156 oz., valued at £6,830. There is no improvement to report in this Division, as the majority of the leases are idle; the only ones worthy of note working are the "Highland Mary," at Swamp Oak, and the "Jersey," at Niangala, both of which are putting out first-class stone, averaging 3 oz. per ton. These mines are both sinking, and the stone improves with depth: the "Highland Mary" shaft being down 110 feet, and the "Jersey" 130 feet. Capital is required to cope with the water and continue the shafts to a depth on this field, when it is thought that many of the reefs now idle would be found payable. The bulk of the claims at Paradise are idle.

Tamworth Division.

If there was any gold won in this Division during the year the amount could not be ascertained. A number of men are working up Spring Creek and around Moonbi, and although some of them reported small finds of gold, it is very difficult to obtain correct information as to the quantity of gold won by them. Marsh and party have taken up 8 acres of land at Moonbi under the Mining on Private Lands Act, and operations will be started at an early date.

Nundle Division.

The gold won in this Division was 4,856 oz., valued at £16,825, as compared with 3,616 oz. won in 1894, which is a very satisfactory increase considering the very dry weather experienced during nine months of the year. Isaacsohn and Thompson's claim has been sold to a London Company, and is now worked by the Tamworth Gold-mining Company. Under new management the mine is being thoroughly opened up and put in working order. A 10-head Frazer battery, with 800-lb. stamps, is being erected with self-feeding and concentrating tables, to be driven by a 48-inch Pelton wheel. Work is being pushed forward on the claims at the Rocks, but nothing payable has been struck so far. A patch of 25 oz. was struck in the Black Snake mine about Christmas time, and Deegan and party got some very rich quartz. Stringer and party, working at Hanging Rock, got a patch which yielded 200 oz. of gold. At Bowling Alley Point mining matters have been very quiet. The Peel River Proprietary Company did a lot of work during the first half of the year in blank country, but afterwards picked up the shoot of gold, and the subsequent crushings have proved payable, but its total returns for the year were not available. A few sluicing parties in this locality are making fair wages. A large number of men are still working on the banks of the Peel River, some of them it is said do well, while others only make a bare living.

Bendemeer Division.

There were 298 oz. of gold won in this Division, got principally on the McDonald River, where 60 Europeans and 6 Chinese find employment. Had a sufficient supply of water been available, the returns from this locality would have been much larger.

Bingara Division.

Returns from this Division state that 1,494 oz. of gold were won during last year, as against 1,393 oz., valued at £5,129, won in 1894. Numerous applications were made during the year for suspension owing to the scarcity of water, while other claim-holders left without applying for suspension. A Sydney syndicate has been vigorously carrying on prospecting work at Barrack Creek, and are so satisfied with their prospects that they have erected a battery. Attention is again being directed to the old Ballarat and Bendigo leads at Upper Bingara, and also the Black Reef, where a large area has been taken up under lease application. Several of the parties, notably Jones and company on Little Bendigo, and Messrs. Miller and party on the Black Reef, are obtaining good results. The old All Nations gold leases at Bingara township have been applied for again, but no work has been done so far. About 130 men are fossicking in this Division, some making more than wages, one man producing 1 oz. 18 dwt. for a week's work. A large number of the men are not the holders of a Miner's Right, but if they strike anything worth protecting they soon take steps to procure one.

Barraba Division.

The returns give the yield of this Division as 250 oz., but it is questionable if it includes all the gold won in the district. About seventy miners and their families are located at Wood's Reef, where a lot of prospecting work is being carried on; but the field is badly in want of machinery to develop it. There is a small battery on the ground, but it does not crush for the public. Geo. Allen and party have a good show of gold in their new find, and several other parties have very promising indications indeed. H. Goodman's water-wheel is at a standstill for want of water. At the Crow Mountains there are about six claims on good gold, and this locality, from all appearances, is the coming field within this Division. Watt and Davis have erected a crushing machine on this field for their own use, but when occasion permits they oblige the miners by putting a small lot through. The usual number of fossickers are still scattered throughout the district, getting sufficient gold for their immediate wants.

Stewart's Brook Division.

The gold won in this Division is set down at 1,210 oz., valued at £4,356. No new development has taken place on the field during the year. The Stewart's Brook Gold-mining Company has been formed to work the claim lately held by W. L. Adams and party, and Towns and Ninness, both on the Hidden Treasure line of reef. The works are progressing very favourably, and the prospects of the new company are promising. The New Royal Standard Company's mine is turning out good stone, and the shareholders are receiving dividends. The smaller claims are working away as usual; but under the disadvantages attending the want of capital to properly develop their claims, and erect the necessary plant required to make them highly payable. The Denison field is much in the same state, and will remain so till capital is brought in to put the claims on a good working basis.

NEW ENGLAND MINING DISTRICT.

Fairfield Division.

There were 2,978 oz. from quartz, and 3,769 oz. from alluvial won in this Division during the year, valued at £23,614, an increase of £2,397 over the previous year. Notwithstanding the fact that the scarcity of water greatly retarded alluvial mining, it is highly gratifying to be in a position to report an increase in the yield. The increase in the yield from alluvial can be accounted for by the coming into force of "The Mining on Private Lands Act," which caused a large area of auriferous land on the Yulgilbar Estate to be thrown open to prospectors. The result of this is that over 100 men find profitable employment, who further speak well of the kindness and consideration shown them by the owner, Mr. Ogilvie. Mining in the vicinity of Yulgilbar and Lionsville is now assuming a more promising aspect and a large number of respectable men are collecting in this locality, a large amount of prospecting work is sure to be carried out during the coming year when further developments may be looked for. On the various old Diggings in this Division, a large number of men find employment, and are likely to do for many years to come. Some make fair wages, the others average about 20s. per week. During the past year several new developments have taken place notably in the basalt formation at Frasers' Gully, near Tooloom, but the unusual scarcity of water has prevented the miners from thoroughly prospecting the ground. The scene of the discovery referred to is on a high ridge of some extent. The depth of sinking varies from 12 to 28 feet, and in some places about 4 or 5 feet of hard basalt is pierced before the wash is met with, which is composed of river-sand and water-worn boulders on a very irregular slate bottom. There is every indication that this auriferous deposit is of some extent, and is the bed of an ancient river running at right-angles to the present course of the Clarence River. Several new discoveries have also been made in quartz mining during the year, and some rich patches of gold met with, but unfortunately they have not been of any great extent. The following list gives the names of the principal quartz mines in full work, at the present time, with the results from crushings put through by them during the last twelve months:—

Lady Jersey	1,091 tons, yielded 2,483 oz. of gold.
All Nations	400 " " 620 "
Adeline	506 " " 291 "
Parkers	64 " " 203 "
Hawkins	48 " " 117 "
Littles'	30 " " 55 "
	2,139 3,769

The above mines are all considered payable and as development proceeds, the output of gold will be greatly increased. The total number of men employed gold-mining in this Division is 490; 72 of whom are Chinese. Several parties are in receipt of aid from the Prospecting Vote within this Division, the principal work of that nature being carried on is at Boonoo Boonoo, where a party is being assisted to sink a shaft to a depth 300 feet in search of the Buck Reef. The men are proceeding vigorously with the work.

Penterfield

Tenterfield Division.

There is very little of importance to report in connection with this Division, the number of men employed in gold-mining being thirty-nine, and the quantity of gold won, was 450 oz. of alluvial valued at £1,237 10s.

Wilson's Downfall Division.

The total quantity of gold won in this division was 161 oz. valued at £563 10s., all from alluvial, principally won from the Accacia Creek and the tributaries of the Clarence River. This is a slight increase on the yield of previous years, and with a favourable season, still better results may be looked for.

CLARENCE AND RICHMOND MINING DISTRICT.

Grafton Division.

There are 127 gold miners scattered throughout this Division, and they won among them 1,347 oz. of alluvial and 345 oz. of quartz gold, valued in all at £5,931, a very substantial increase of the yield for 1894, which was only 427 oz. During the year new discoveries were made in the neighbourhood of Bucca Creek, but unfortunately the discoveries have not been followed up with any great energy, no doubt occasioned by the exceptional scarcity of water in these localities. The operations of the Sir Walter Scott Gold-mining Company have been much retarded from the same cause, and from accidents to the machinery. As repairs have now been effected, and it has a supply of water available, the company may be expected to add to the returns from this division very considerably. Should the coming year prove favourable, a large number of men will be at work prospecting throughout this Division.

Nana Creek Division.

There is a very satisfactory increase in the returns from this Division for the year, the yield being 1,554 oz. valued at £5,833; as compared with 427 oz. in 1894. The new finds at Coramba, have drawn attention to that locality, where a number of leases have been applied for. A trial crushing from the Coramba Queen Claim, of 158 tons, gave a return of 121 oz. The Coramba King, 76 tons for 41½ oz. The Evening Star Claim, 9 tons for 80 oz., and 17 tons for 23½ oz. of gold. Huxham and Rudder had a 5-ton crushing, which yielded close on 4 oz. per ton. Nicholson and Pollock crushed from their prospecting claim 15 tons for 70 oz., and Tyson and Cook, the owners of gold-lease 332, had five crushings of 68 tons in the aggregate which yielded the handsome return of 175 oz. of smelted gold. The above returns will show that some of the reefs at Coramba are highly payable, and as none on them have been proved to any great depth, the locality seems to be one worthy the attention of capitalists. Several parties are at work at Tallewadjah Creek raising good stone. Jarrett and party, the prospectors, had one crushing of 28 tons for 63 oz. Lachlan M'Kinnon, working the Homeward Bound Claim, 54 tons for 42½ oz., and Wm. Parker and party, crushed 12 tons for 17 oz. of gold. Prospecting is also being carried on by Goldspring, Tyson, and party at the West Branch, Upper Orara, where the indications are very promising.

Dalmorton Division.

Returns from all the mine-owners within this Division could not be obtained, but as far as can be ascertained the yield was 572 oz., valued at £2,144, as compared with £3,984; the value of the yield in 1894. Mining matters have been very dull in this Division for some time, with no immediate prospect of an improvement. Many of the old mines have been retried by different parties of men, but the result invariably proved unsatisfactory, and most of them are now abandoned. The Tower Hill Mine has been worked a little during the year, but the results have not proved satisfactory. The Mount Rea Mine has been purchased by an English Company, and is likely to prove a payable property; machinery is to be erected without delay. The Mount Remarkable Mine has been turning out payable stone during the last few months of the year, and may yet repay the outlay of the owners. The New Era Mine was again tried to the extent of a 20-ton crushing, but the result was only 5½ dwt. per ton, and it will probably be again abandoned. A party of two are raising a crushing from the Carbine, in the hope that it may pay to work. McDougall and party are putting in a tunnel at the head of Chandler's Creek, by means of aid from the Prospecting Vote; but the reef does not seem to improve as it goes in. The owners of the Hawk-eye claim have recently had a small crushing, which yielded 1 oz. 5 dwt. per ton, which will pay if systematically worked. All the other mines in this Division are shut down for an indefinite period. Several grants of aid from the Prospecting Vote were made to miners in this Division, but so far only one party have availed themselves of the assistance offered. The explanation seems to be, that unless the aid offered is sufficient to cover the full cost of the work, it is allowed to lapse. The Black Slate Mine is in course of being floated on the London market, and when arrangements have been completed, employment will be found for a large number of extra hands, the number employed at the present time being about 30. Fossickers are not meeting with much success in this locality, and can only make a bare living.

Ballina Division.

The quantity of gold won in this Division is set down at 2,345 oz., valued at £9,962, which is an increase of £6,512 on the yield for 1894. All the gold was won from the sand on the various sea-beaches and terraces, and it is estimated that 600 men now find profitable employment at this class of mining. A good payable lead was discovered during the year in the locality of the Esk River by M'Auley and party. The scene of the discovery is situated about three quarters of a mile inland in a direct line from the sea beach, and is known as M'Auley's Lead. Some of the claims on this lead have proved very rich, and have returned to the lucky owners as much as £10 per week per man for some months past. Prospecting work is being vigorously proceeded with on the various beaches and terraces on the coast lying between the Clarence River and the Brunswick Heads, more especially in the neighbourhood of Jerusalem, Bullock and Glosby Creeks, Evans River, Woodburn, Broadwater, and Byron Bay.

NOTE.—Attention is directed to an exhaustive and valuable report by Mr. Geological Surveyor Carne, on pages 149 to 160 of this volume, who deals fully with the field and its prospects. It may be here stated that the Department has decided to assist the miners from the Prospecting Vote to further test these beaches in a systematic manner.

Macleay Division.

It is estimated that 455 oz. of gold were won in this Division during the year. As in the Ballina Division the mining is confined chiefly to the sea-beaches, and from the number of men engaged in purely prospecting work in the locality there is every probability of new leads being discovered.

THE COBAR MINING DISTRICT.

Cobar and Mount Drysdale Division.

The returns of gold from this Division fall short of the yield for 1894, the amount being only 10,000 oz. as compared with 18,524 oz. the previous year. The large decrease can be accounted for by the fact that the Mount Drysdale and the New Eldorado Companies did not crush so much ore during the year as usual, a large number of the men being employed constructing dams and erecting machinery. The Mount Pleasant Company has also erected a 10-head battery, and the Young Australian Company has machinery on the ground ready to erect. The Fort Bourke Tunnel and several adjoining properties have been acquired by Messrs. Janin and party, who propose erecting a large cyanide plant on the mine. The following list gives returns from stone put through by several of the principal companies:—

Occidental	8,647 tons for.....	1,492 oz.
Cobar Mining Co.	1,761 " "	288 "
Mount Drysdale	150 " "	1,700 "
Mount Pleasant	469 " "	87 "
Great Western	870 " "	951 "
New Eldorado	350 " "	1,350 "

The rush to the new finds at Gilgunnia during the year caused a number of the Mount Drysdale miners to leave the district, the result being that numbers of claims have been abandoned, and are now lying idle. Prospecting work is being vigorously carried on in several localities in this Division, and aid from the Prospecting Vote has been granted in several instances. Since the passing of the "Mining on Private Lands Act," 48 permits were issued by the Warden, with the result that good gold was discovered at the Peak, near Cobar, and seventeen leases applied for. *Gilgunnia*

Gilgunnia Division.

This is a new Division formed during the year in consequence of the discoveries made near Gilgunnia in the month of April by an aboriginal. Since then a very satisfactory advancement has been made in the prospects of the field, there being now thirty-five claims on gold. The true value of each claim cannot be given, in the absence of machinery to treat the stone; but it is confidently anticipated that a large number of them will prove payable. The erection of crushing machinery is likely to be proceeded with at once, as a tender has been accepted for the construction of a battery tank. Among the principal claims are the Tarcombe Prospecting Claim, with a shaft down 100 feet, the reef at that level being 18 inches wide. At the 50-ft. level a drive was put in on the reef for a distance of 120 feet on good gold-bearing stone. About 100 tons of stone from this drive were sent away for treatment, and yielded at the rate of 2 oz. per ton. Nos. 1 and 2 claims have been amalgamated, and are now held by the Great Tarcombe Gold-mining Syndicate. The reef in No. 1 shaft, at the 150-ft. level, is 2 feet wide, showing good gold. No. 2 shaft is down 50 feet, and the reef is 12 inches wide at that level. The owners of the Eight-Hour Claim have a shaft down 70 feet on a 15-in. reef, showing good gold. About $\frac{3}{4}$ of a mile west of the Tarcombe line of reef, Rubby and party are down 96 feet on a reef 20 inches wide, showing a little gold. This shaft has been connected by a drive at the 50-ft. level with No. 2 shaft. This party have 300 tons of stone broken down, which they estimate will go 3 oz. per ton. Fin and party, working the Her Dream Claim, have sunk two shafts. From No. 1 shaft they took 15 tons, which averaged 8 oz. 18 dwt. per ton. Altogether this party have treated 85 tons for 425 oz. Mullins and party's Rising Sun Claim joins Her Dream Claim on the north. This party sent 6 tons to Sydney for treatment, which yielded 27 oz. of smelted gold, and a total of 49 tons yielded 99 $\frac{1}{2}$ oz. This shaft is down 135 feet. What is known as the Four-mile diggings is situated 4 miles east of the main field. A large number of claims are being worked there on good-looking reefs, which are expected to prove payable. A large quantity of stone is at grass awaiting the erection of a local crushing plant, and a further supply of water, which wants have greatly affected the development of the field. About 185 men are employed in the various claims, and about sixty men are prospecting in the vicinity. It is expected that some further valuable discoveries will be made in this district.

Nymagee Division.

About the beginning of the year fair prospects were discovered in quartz-reef on Restdown Station. Several claims were taken up and worked for some time without anything payable being struck. On the Gilgunnia rush setting in, the ground was all but abandoned. Some very promising prospects have been met with at Hunter's Gutter on Overflow Station. Several shafts are being sunk to prove the value of the reefs. There is a large area of land on this station which experienced miners consider well worth testing, and it is not improbable that before the end of the year payable lodes will be found in this locality.

Mount Hope Division.

During the year 3,339 tons of stone were treated by the Mount Allen Gold-mining Company for a yield of 1,187 oz. which is given as the total yield from this Division. This company's mine is situated 12 miles from Mount Hope, and their operations have been much retarded through a scarcity of water. The gold occurs in an ironstone-slate formation, and the stone is now being raised from a depth of 150 feet. During the year thirty-five men, on an average, were employed in the mine on which plant to the value of about £4,000 has been erected. The Mount Dromedary Gold-mining Company in the same locality has not been working, and several other leases in the neighbourhood have also been idle through the scarcity of water.

Euabalong Division.

The principal mine in this Division is owned by The Errebenderry Gold-mining Company, which put through 637 tons of stone for a yield of 420 oz., valued at £1,650. Work is now being carried on at the 142-ft. level, where the reef averages from 1 to 5 feet wide bearing north-east and south-west. The company has a battery and pumping-gear on the ground, valued at about £700. Partial suspension was granted the company for six months to enable it to deepen the shaft, which work is now at a standstill owing to heavy water. A large amount of prospecting work has been done in this Division during the year without any new finds of importance being made. True, Knight, and party are searching for alluvial gold at Ilawong, 40 miles north-east from Cudgellico, where gold in small quantities was found. A little gold was also got at Tallabang, 14 miles south-east from Cudgellico, where 25 acres were applied for and other ground pegged out. Mining is going on at Wilga Mount, 15 miles from Euabalong, and the reef worked there is considered payable.

Condobolin Division.

The quantity of gold produced in this Division during the year under notice was 410 oz. valued at £1,591. In January, McClure and Linden reported that they had discovered payable gold at Cugong, when a small rush set in, and in a very short time twenty-five claims were pegged out along the line of reef, and a small township was formed about a quarter of a mile westerly from the line of reefs. The new find is situated about 6 miles from the Kiacatoo Station, and about 25 miles from Condobolin, the Lachlan River being about 4 miles from the township. The population has varied from 50 to 150 since March last, and at the present time about 75 men are on the field. The best returns so far have been obtained from No. 1 South, better known as the Yellow Streak Claim, from which 21 $\frac{1}{2}$ tons of stone were sent to the Clyde Works, Sydney, for treatment, giving the handsome return of 92 oz. of gold. There is 150 tons of stone lying at grass on this claim awaiting the erection of Mr. Pooler's battery, which is nearly completed. Many of the other claims are stacking stone which now amounts to over 500 tons awaiting treatment. The erection of this plant will greatly assist the development of the reefs in this locality, as the almost prohibitive cost of carriage to the nearest battery greatly retarded mining operations. Tough and party have taken up the abandoned gold-lease known as the "Surprise," in the Melrose Road, near Condobolin, and are sending a trial crushing to Sydney for treatment.

Fifield Division.

The exceptional scarcity of water completely paralyzed mining operations in this Division during the past year, reducing the returns to 249 oz. as compared with 875 oz. in 1894. At the end of the year, there were upwards of 6,000 loads of wash-dirt at grass, estimated to average all through 25s. per load, but which could not be dealt with till rain fell. Prospecting operations were at a complete standstill, the only water near being a small dam at Fifield which was reserved entirely for domestic purposes. Platinum is still being won in connection with the gold-mining operations, the yield during the year being 413 oz., worth 23s. per oz. At Fifield and Platina, which are about 3 miles apart, there are 250 miners, this number will be greatly increased should the coming year prove favourable.

THE ALBERT MINING DISTRICT.

Milparinka Division.

The disastrous drought of the past year had the effect of reducing the quantity of gold won to 320 oz., as compared with 2,300 oz. won in 1894. The alluvial mines at Stringer's Hill, Four Mile, and Mount Browne, could not put their wash-dirt through, owing to the scarcity of water, and it is all stacked waiting rain. Kitto and party, working the Hard-Up Claim, struck a patch at the 112-ft. level, from which they washed 36 oz. of gold from seven loads of dirt. The gold continued to the 165-ft. level, and in all they won 102 oz. from the patch, including one nugget of solid gold weighing 25 oz. Kershaw and party's puddling-machines have been at work when water was available, and saved about 50 oz. of gold, and two dry blowing machines about 30 oz. Smith and party are down about 200 feet, and they saved about 60 oz., but the other mines made little more than wages, if that. The new find of reefs at Warratta and Bendigo was made in February, and ground has been pegged out in all directions. The first lease was applied for by Roberts, and Downs, who formed a syndicate of Melbourne residents to test the ground. A large amount of work has been done by them in sinking shafts and by open-cutting. During the progress of this work, various leaders or veins were cut, all carrying rich, free gold, the veins varying in width from half an inch to 9 inches, but no well defined reef of any size has yet been found. It may be worthy of mention, that it was on this lease that the rich specimens were discovered in 1874, and the supposition is that these specimens came from a rich reef in the vicinity. Very encouraging indications are being obtained at West Warratta, in several

several open cuttings put in, but insufficient work has been done as yet to prove its value. Work is being carried on steadily at Warratta East and Moffit's Gully, and stone is being raised from reefs varying from 18 inches to 3 feet wide. None of the stone has been tested in bulk so far, but good results are obtained by dollying. The old crushing machine that was originally erected at Old Warratta has been purchased and put into thorough repair. It completed two crushings during the year, one from Hause's Prospecting Claim at New Bendigo, of 25 tons which gave a return of 4 oz. 2 dwt. per ton, and the other from Mannix's lease, Evans' Gully, of 15 tons which yielded $\frac{1}{2}$ oz. per ton, but this was only poor-surface stone. At New Bendigo seven claims, including the Prospectors', are on good stone showing free gold, but only one parcel has been crushed. It is believed that this would prove a payable field if capital were brought to bear on it. All the quartz-claims and leases are in the hands of poor men who have not the means to develop them. There are 130 men employed in gold-mining in this Division including ten Chinese.

Tibooburra Division.

The quantity of gold won in this Division is given as 1,325 oz., valued at £5,300, all taken from alluvial ground. The puddling machines have been unable to work during the greater part of the year through want of water. A good deal of prospecting work is being carried on throughout the Division, and some new finds might be expected if the men had an opportunity of getting steadily to work.

White Cliffs Division.

The only mining being carried on in this Division is on the White Cliff Opal Field, which will be dealt with on pages 68 and 69 of this report.

Broken Hill Division.

The Broken Hill Proprietary Silver-mining Company saved in connection with their silver-mining operations 4,650 oz. of gold, as compared with 4,079 oz. saved by them in 1894. There is still a little prospecting work for gold going on in this Division, but nothing of a payable nature has been met with so far.

Wentworth Division.

The only work being carried on in this Division is some prospecting by the Federal Prospecting Company at Poon-carrie. The company have been testing an ironstone lode by sinking shafts, and putting in a number of cuttings along the lode for a distance of over half a mile. This deposit trends away for miles, and outcrops can be traced running probably towards the Cobar country. The stone was found on assay to contain about 3 dwt. of gold per ton, with traces of silver. The company has, however, been compelled to stop work from want of funds.

I am indebted to J. MacDonald Cameron, Esq., F.I.C., the Deputy Master of the Royal Mint, for the following information:—

QUANTITIES of Gold, the produce of New South Wales, received into the Royal Mint, Sydney, during 1894 and 1895, compared.

District.	Division.	1894.	1895.	Increase.	Decrease.
		oz.	oz.	oz.	oz.
Bathurst	Bathurst	1,129.52	2,086.55	957.03	.....
	Carcoar	3,640.82	5,624.86	1,984.04	.....
	Orange	26,362.58	37,338.74	10,976.16	.....
	Trunkay Creek	313.62	202.79	.....	110.83
	Tuena	170.41	632.32	461.91	.....
Tamboroora and Turon	Mount M'Donald	89.37	324.62	235.25	.....
	Hill End	1,173.14	651.98	.....	521.16
	Tamboroora	231.00	38.73	.....	192.27
	Sofala	5,929.57	3,136.60	.....	2,792.97
Mudgee.....	Stony Creek.....	.....	.....	.....	.....
	Mudgee.....	2,379.01	4,975.46	2,596.45	.....
	Gulgong .....	.....	.....	.....	.....
Lachlan.....	Hargraves	30.70	.....	.....	30.70
	Wellington	808.72	1,379.35	570.63	.....
	Parkes	8,821.05	9,827.97	1,006.92	.....
	Forbes	87.39	.....	.....	87.39
	Grenfell	878.20	1,169.38	291.18	.....
Albert	Young	983.68	1,956.41	972.73	.....
	Temora	1,909.25	3,891.26	1,982.01	.....
	Wilcanna	1,386.57	1,421.42	34.85	.....
	Goulburn	996.77	833.01	.....	158.76
	Braidwood	4,288.74	2,597.21	.....	1,691.53
Tumut and Adelong	Bermagui .....	.....	.....	.....	.....
	Araluen	1,243.75	81	.....	1,242.94
	Shoalhaven	13.04	418.51	405.47	.....
	Nerrigundah	88.92	451.73	362.81	.....
	Adelong	4,508.84	201.36	.....	4,307.48
	Tumut	232.79	356.38	123.59	.....
	Cootamundra	1,191.34	644.06	.....	547.28
	Tumbarumba	2,167.48	2,445.29	277.81	.....
Peel and Uralla	Gundagai	1,369.79	1,936.44	566.65	.....
	Cooma	1,074.15	1,273.80	199.65	.....
	Kiandra	480.80	125.31	.....	355.49
	Wagga Wagga.....	112.18	201.80	89.62	.....
	Armidale	24,796.52	406.00	.....	24,390.52
Hunter and Macleay	Rocky River	30.26	16.51	.....	13.72
	Nundle .....	.....	.....	.....	.....
	Tamworth	669.77	749.57	79.80	.....
	Bingera	1,352.02	1,406.08	54.06	.....
	Copeland	56.76	47.07	.....	9.69
Clarence and Richmond	Grafton.....	842.02	1,543.51	701.49	.....
	Tenterfield	989.38	2,240.87	1,251.49	.....
New England	Western, Northern, and	62,459.88	42,682.38	.....	19,777.50
	Southern. .....	.....	.....	.....	.....
Localities unknown .....	.....	57,698.37	67,075.86	9,377.49	.....
	Total	222,988.17	202,317.03	35,559.09	56,230.23

SUMMARY.

District.	1894.	1895.
	oz.	oz.
Bathurst	31,706·32	46,209·88
Tambaroora and Turon	7,333·71	3,827·31
Mudgee	3,218·43	6,354·81
Lachlan	12,679·57	16,845·02
Albert	1,336·57	1,421·42
Southern	6,631·22	4,306·27
Tumut and Adelong	11,137·37	7,184·44
Peel and Uralla	26,848·37	2,578·19
Hunter and Macleay	56·70	47·07
Clarence and Richmond	842·02	1,543·51
New England	989·38	2,240·87
Mixed—Western, Northern, and Southern	62,459·88	42,682·38
Localities unknown	57,698·37	67,075·86
	222,988 17	202,317·03

From the above table it will be seen that the quantity of gold sent to the Mint in 1894 exceeded that sent during last year by 20,671 oz. The principal decrease is in the Armidale, and in mixed Northern, Western, and Southern Districts, but a large increase is shown in the return from the Orange District, due, no doubt, to the operations of the Companies working on the Wentworth Estate at Lucknow.

The following table is compiled from information kindly furnished by the Collector of Customs:—

EXPORT OF GOLD, 1895.

Gold.		Quartz Tailings and Pyrites		Total.	
Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
oz.	£		£	oz.	£
112,035	399,626	20,721 packages	189,057	162,450	588,683

The quantity of gold sent to the Royal Mint—plus the quantity exported in 1895—equals 361,767 oz., but of the 162,450 oz. exported we are informed that 4,601 oz. passed through the Mint, and is included in the returns furnished by the Master. The output of gold for the year may therefore be set down as 360,165 oz., an increase of 35,378 oz. as compared with 1894.

The Broken Hill Proprietary Silver-mining Company are still saving gold in connection with their silver-mining operations, the quantity so saved last year being 4,650 oz., valued at £18,600.

RETURNS of Gold for 1895. from Mint and Mining Registrars compared.

District.	Mint.	Mining Registrars.	Excess.	Deficiency.
	oz.	oz.	oz.	oz.
Bathurst	46,209·88	99,632·00	.....	53,422·12
Tambaroora and Turon	3,827·31	10,855·90	.....	7,028·59
Mudgee	6,354·81	32,342·80	.....	25,987·99
Lachlan	16,845·02	52,583·35	.....	35,738·33
Albert	1,421·42	6,294·40	.....	4,872·98
Southern	4,306·27	18,798·75	.....	14,492·48
Tumut and Adelong	7,184·44	23,112·95	.....	16,680·01
Peel and Uralla	2,578·19	45,802·40	.....	43,224·21
Hunter and Macleay	47·07	594·40	.....	547·33
Clarence and Richmond	1,543·51	8,256·30	.....	6,712·79
New England	2,240·87	7,358·00	.....	5,117·13
Cobar .....	.....	12,768·80	.....	12,017·30
Mixed—North, South, and West	42,682·38	.....	42,682·38	.....
Localities unknown	67,075·86	.....	67,075·86	.....
	202,317·03	318,400·05	109,758·24	225,841·26
				109,758·24
The returns from Mining Registrars exceed returns from Mint by				116,083·02

From the foregoing table it will be seen that the returns furnished by the Mining Registrars of gold won in their respective divisions exceeds the quantity sent to the Mint by 116,083 oz., but is less by 41,765 oz. than the year's production, as shown by the Mint and Customs returns. The Mining Registrars have in many instances a difficulty in obtaining full and complete information from mine owners and others,

others, occasioned either by neglect to keep a correct record of the yield of their mine or an unwillingness to disclose the information. With regard to the numerous fossickers throughout the Colony, who mostly dispose of their gold as it is won, a greater difficulty is experienced.

MINING Registrars' Returns of Gold for 1894 and 1895 compared.

District.	1894.	1895.	Increase.	Decrease.
	oz.	oz.	oz.	oz.
Bathurst	50,024	99,632	49,608	.....
Tambarooora and Turon	11,444	10,856	.....	588
Mudgee	28,439	32,343	3,904	.....
Lachlan	31,106	52,583	21,477	.....
Albert	7,766	6,295	.....	1,471
Southern	23,742	18,799	.....	4,943
Tumut and Adelong	16,116	23,113	6,997	.....
Peel and Uralla	45,965	45,802	.....	163
Hunter and Macleay	960	594	.....	366
Clarence and Richmond	2,885	8,256	5,371	.....
New England	6,665	7,358	693	.....
Cobar	20,593	12,769	.....	7,824
<i>Less Decrease</i>	245,705	318,400	88,050	15,355
<i>Increase in yield for 1895</i> .....	.....	.....	72,695	.....

From the above table, comparing the return sent in by the Mining Registrars for the last two years, it will be seen that there is an increase in 1895 of 72,695 oz. As the Mint and Customs returns only show an increase during the year of 35,378, it is made abundantly clear that the information supplied to these officers is far from complete.

COMPARATIVE Statement of Average Yields from Alluvial Mines for 1894-95.

1894.				1895.			
District.	Quantity.	Average per ton.	Yield of Gold.	District.	Quantity.	Average per ton.	Yield of Gold.
	Loads	oz. dwt. gr.	oz. dwt. gr.		Loads	oz. dwt. gr.	oz. dwt. gr.
Bathurst	6,400	0 2 7	740 0 0	Bathurst	1,174	0 11 7	665 0 0
Clarence and Richmond ..	120	0 10 4	62 0 0	Cobar .....	.....	.....	.....
Lachlan	5,367	0 5 16	1,505 15 21	Lachlan	4,364	0 6 4	1,364 7 22
Tumut and Adelong	2,442	0 1 10	174 4 0	Tumut and Adelong ..	200	0 1 12	16 0 0
Southern	96,900	0 0 6	1,043 5 0	Southern	500	0 3 14	80 0 0
Hunter and Macleay	1,100	0 1 13	84 0 0	Hunter and Macleay ..	640	0 1 0	32 0 0
Mudgee	720	0 8 1	290 0 0				
	112,989	0 6 17	3,898 4 21		6,878	0 0 5	2,156 7 22

The foregoing table is intended to show the returns obtained from the treatment of parcels of alluvial wash in each district during the year, but the greatest difficulty is experienced in obtaining the information necessary to make it nearly complete. The miners rarely keep a record of wash-dirt put through, and in the case of Sluicing Companies, to obtain a correct data is nearly impossible. It can be readily seen from the table that there are immense quantities of wash-dirt treated of which no information is given, but which, if supplied, would be of interest to the public and a benefit to the miners themselves. It is, however, given as fully as possible under the circumstances.

COMPARATIVE Statement of Average Yields from Quartz-mines for 1894-95.

District.	1894.			District.	1895.		
	Quantity.	Average per ton.	Yield of Gold.		Quantity.	Average per ton.	Yield of Gold.
	Tons.	oz. dwt. gr.	oz. dwt. gr.		Tons.	oz. dwt. gr.	oz. dwt. gr.
Bathurst	18,600	1 18 18	36,168 2 12	Bathurst	17,641	4 15 17	88,958 10 0
Tambarooora and Turon ..	4,773	0 0 12	2,288 18 2	Tambarooora and Turon ..	3,784	0 14 12	2,740 6 0
Lachlan	51,943	0 4 13	11,784 0 0	Lachlan	19,223	1 8 7	27,202 0 0
Southern	6,059	1 13 23	10,293 7 16	Southern	6,007	0 10 21	3,278 14 0
Tumut and Adelong	5,552	1 3 10	6,496 16 20	Tumut and Adelong	5,488	0 18 23	5,210 1 0
Peel and Uralla	22,601	0 10 15	11,930 15 0	Peel and Uralla	43,137	0 13 9	28,878 12 0
Hunter and Macleay	506	1 1 4	535 5 0	Hunter and Macleay	440	0 14 23	335 0 0
Clarence and Richmond ..	704	1 3 6	817 16 0	Clarence and Richmond ..	3,063	0 17 7	2,652 13 0
Mudgee	25,953	0 8 17	11,309 16 0	Mudgee	15,988	0 12 7	9,169 19 0
Cobar	11,815	1 8 2	13,410 9 0	Cobar	12,507	0 10 13	6,601 10 0
New England	1,248	1 14 1	2,125 0 0	New England	2,130	1 15 5	3,769 0 0
	149,514	0 14 8	107,188 14 1		128,431	1 7 1	173,806 10 0

The foregoing statement shows the average yield of sundry parcels of quartz crushed in the several mining districts. Less difficulty is experienced in obtaining information as to yields from quartz crushings than returns from alluvial washings, as there is often a necessity to keep some record of the stone crushed.

Were it possible to obtain the complete information a very interesting table could be compiled, which would be of much service to the persons who might, but who do not, supply it. As will be observed, there is a large increase in the average yield for the year, due to the rich stone raised at Lucknow, in the Bathurst Mining District, and to the splendid returns from the Wyalong gold-field, in the Lachlan District. I take this opportunity to impress on the Mining Registrars and the miners the benefit complete information of this nature would be to the mining community, and hope they will conjointly use their best efforts to obtain the desired results.

The number of miners employed in gold-mining, more or less constantly during the year, was 21,434, an increase of 4,227 over the number employed during 1894. Of that number there were 10,498 Europeans and 833 Chinese(?) working on the alluvial fields, and 10,103 on quartz. The principal increase is in the number of alluvial miners employed, due to large numbers of unemployed men drafted to the old gold-fields as fossickers.

If the total quantity of gold won during the year, viz., 360,165 oz., is divided by the number of the men employed, it would appear that the average earnings of each man was 16 oz. 19 dwt. 5 gr., valued at about £63 12s. These figures can, however, only be taken as approximate as large numbers of the men must necessarily be employed in prospecting and preliminary works from which no returns have yet been obtained, but in the absence of more complete information this very rough system of computing the earnings cannot be improved upon. It might also be mentioned that a section of the men only engage in alluvial mining when a good supply of water is available for ground sluicing or treating their wash-dirt, and resort to other employments when this fails them.

During the year 4,327 samples were assayed for gold in the laboratory of the Geological Survey Branch of this Department:—

2,453 yielded nil.

944 „ under 5 dwt. per ton.

930 „ as follows:—

Official number.	Locality—stated by the finder to be.	Description.	Per ton.	
			Gold.	Silver.
			oz. dwt. gr.	oz. dwt. gr.
1456	Adelong (" Proprietary Mine).	Quartz, with copper and iron pyrites	4 18 14	0 15 2
2020	"	Pyritous grey quartz	1 12 16	0 7 14
2555	"	Massive iron pyrites	30 9 18	6 13 21
2651	" (near)	Highly pyritous white quartz	15 0 11	2 1 9
2764	"	Pyritous pegmatite.....	2 13 8	0 11 20
2116	" (" Kurrajong Mine).	Quartz, with copper and iron pyrites and blende	0 17 9	1 2 20
2122	"	"	0 12 22	0 8 17
2922	"	Pyritous bluish quartz	1 10 11	0 6 12
3593	" (2½ miles from)	Iron-stained pyritous quartz	1 8 6	0 4 8
3143	"	Pyritous quartz	1 0 13	0 7 14
2903	Albury (near)	Arsenical pyrites, with quartz and lodestuff	0 15 2	0 4 8
4323A	" Common	Quartz in mica schist.....	5 19 15	0 10 21
4683	" District	Pyrites	3 0 22	1 8 6
1891	" Hill (40-ft. shaft)	Pyritous grey quartz, with galena	8 9 19	0 8 17
1892	"	Grey quartz	3 16 5	0 10 21
1245	Amaroo	Pyrites, with a little quartz	0 17 9	1 19 4
3109	Appletree Flat.....	Pyritous quartz (crushed).....	1 1 18	0 4 8
4089	Arable	Iron pyrites, containing a little chlorite	0 6 12	0 4 8
558	Armidale District	Zinc-blende	0 12 22	94 1 13
2492	"	Crushed sample	0 9 19	0 3 6
2601	"	" (roasted)	3 8 14	0 10 21
4612	" (8 miles from)...	Ferruginous quartz rubble	7 16 18	2 12 6
4613	"	"	4 2 17	0 17 9
4614	"	Quartz, a portion containing antimonite	1 10 11	0 19 12
4615	"	Zinc-blende	0 19 11	56 16 19
2236	Back Creek, Rockley	Ferruginous cavernous quartz with mica	2 3 13	0 4 8
3690	"	Ironstone in weathered slate	2 3 13	0 4 8
2472	Back Droubalgie	Pyritous quartz	1 12 16	0 4 8
4601	Backwater, north of (Glen Innes District).	Rotten granite, containing molybdenite	1 0 21	0 4 13
346	Bald Hill (30 miles south of Byrock).	Fragments of a narrow vein of ferruginous quartz	2 11 3	0 7 14
347	"	"	0 7 14	0 5 10
348	"	Ferruginous quartz	1 5 10	0 4 8
3768	"	Pink quartz, carrying a little pyrites	3 0 22	0 6 12
4021	"	Pyritous quartz	1 11 13	0 7 14
4020	"	Iron-stained quartz	1 9 8	0 5 10
4337	"	Iron-stained milky quartz	44 15 0	22 4 6
4039	Bald Hill, Forbes	Quartz	3 5 8	0 6 10

Official Number.	Locality—stated by the finder to be.	Description.	Per ton.	
			Gold.	Silver.
			oz. dwt.gr.	oz. dwt.gr.
706	Barrack Creek, near Bingara.	Copper-stained rock, apparently serpentinous in character. (Copper 1.07 per cent.)	7 1 13	4 7 2
1042	Barmedman	Slimes	0 19 14	0 4 8
1043	"	Tailings	1 5 13	0 4 21
		Concentrates 9.6 per cent. =	6 7 8	1 2 20
2174	Barrington River	Pyritous quartz	0 12 22	0 3 6
2175	"	Concentrated pyrites	1 11 18	0 4 3
2721	Barraba ("North Quirindi" Mine).	Quartz	0 8 16	0 6 12
712	Bateman's Bay	Very pyritous quartz	0 7 14	2 4 15
1278	"	Crushed ore	0 5 10	0 2 17
1587	" (Scotchman's Claim).	"	1 5 0	1 9 8
1588	Bateman's Bay (Fisher's Claim).	"	0 10 21	0 5 10
3132	"	White quartz with much pyrites	0 5 10	0 3 6
4505	"	Ferruginous quartz	0 16 4	0 5 10
4537	"	Pyritous quartz	24 9 23	9 7 6
4538	"	Ferruginous quartz, cellular in part	0 8 17	3 5 8
1087	Batlow	Quartzite	0 8 17	0 2 4
1088	"	Micaceous ferruginous quartzite	3 5 8	0 12 22
1153	" (Harrison and Timmis' Mine.)	Limonite after pyrites	2 18 18	0 10 21
4323	Batlow	Ferruginous mica schist	0 6 12	0 2 4
4476	"	Small cubes of limonite resulting from the oxidisation of pyrites.	8 12 0	0 6 12
3001	Bathurst (near)	Quartz	2 12 6	0 5 10
3002	"	White quartz with nests of yellowish mica	17 1 18	0 8 17
3281	"	White quartz with talcose schist (course free gold present)	10 11 5	0 6 12
3282	"	Dark quartz, with a little pyrites (free gold present)	11 19 12	0 6 12
1216	Bega District	Iron-stained quartz	2 13 8	0 5 10
4606	" (near)	Ferruginous cellular quartz	1 10 11	12 1 16
4405	Bell's Creek	Concentrated pyrites	8 14 5	3 18 9
4045	"	White quartz, with arsenical and iron pyrites	4 16 21	0 8 17
4454	Ben Bullen	Ferruginous cellular quartz	1 12 16	1 14 20
4455	"	Quartz rubble	0 16 4	0 7 14
4798	Berlang	Pyritous granite, or coarse-grained porphyry	0 5 10	0 2 4
1822	Bethungra	Ore	1 3 22	0 19 11
2192	" (10 miles from)	Ferruginous quartz and micaceous schistose rock	0 11 20	0 3 6
3070	Billabalara	Rubble	0 19 11	0 8 17
145	Billago	Quartz in slaty rock	6 6 3	39 6 4
146	"	"	1 12 16	90 18 10
147	"	"	4 7 2	138 16 14
303	" (old mine)	Ferruginous quartz, with a little slaty material	53 7 2	527 2 13
1407	"	Argentiferous breccia	14 14 0	290 14 13
1473	" (old)	Silicified slate, containing native silver	2 18 18	130 6 18
1669	" (½ mile E. of)	Pyritous quartz	0 5 10	0 2 4
36	Bingara (near)	Serpentine	2 3 13	2 3 13
177	"	Serpentinous rock	1 8 6	1 3 22
384	"	" stained with green carbonate of copper.	4 4 20	4 13 12
1030	"	"	7 1 13	5 13 5
1411	"	" showing a very little fine gold	2 14 10	2 14 10
1486	"	"	2 3 13	2 1 9
2486	"	"	10 11 5	5 15 9
3409	"	Quartz, with copper pyrites	2 10 1	2 3 13
4159	"	Crushed sample	0 9 19	0 4 8
2096	Binnie Creek, Cowra	White quartz	0 16 4	0 2 4
3139	Boona Boona	Iron-stained quartz	0 7 14	0 3 6
718	Bourke Tunnel Co.	Very ferruginous quartz	2 13 13	0 6 12
1989	Boralla	Rubble	1 8 6	0 10 21
2570	Bowna, Albury	Ferruginous cavernous quartz	2 14 10	3 0 22
2907	Bindogandra, 12 miles from ("Miss Matteson" Mine)	Ironstone	1 14 20	0 6 12
2910	"	Copper gossan, traversed by bands of blue carbonate of copper. (See 2910 under Copper.)	0 5 10	4 3 20
2773	Blue Mountains	Ferruginous pyritous quartz, with galena	0 12 22	17 6 8
1285	Black Bullock Mtn., near Oberon.	Gossan	1 3 22	11 19 12
1286	"	"	0 10 21	34 19 1
3679	"	Highly pyritous, crushed sample	0 12 22	8 12 0
3680	"	Crushed sample	1 11 0	57 8 2
3681	"	"	1 1 13	12 18 0
3682	"	" (highly pyritous)	0 16 4	33 18 8
3683	"	"	1 6 2	16 16 8
3894	"	Friable iron pyrites	1 3 22	121 0 12
3895	"	"	0 16 4	102 12 11
4042	"	Crushed sample	1 3 22	23 6 0
4043	"	"	1 0 13	25 5 4
4524	"	"	0 16 4	12 15 20
4616	"	Weathered slaty rock	0 8 17	3 7 12
1365	Blayney (near)	Arsenical pyrites	1 3 22	0 8 17
4168	"	Gossany ironstone	0 7 14	0 16 4
3853	" (5 miles from)	Quartz, with greenish clay	0 10 21	1 8 6
809	Braidwood	Lode quartz	0 19 11	0 4 8
811	"	"	0 18 8	0 3 6
2703	" District	Ferruginous quartz	1 7 4	0 7 14
2745	"	Iron-stained quartz	4 4 22	0 17 9

Official Number.	Locality—stated by the finder to be.	Description.	Per ton.	
			Gold.	Silver.
			oz. dwt. gr.	oz. dwt. gr.
3427	Braidwood District	Ferruginous cavernous quartz	6 3 23	1 3 22
4530	" east of (Kur-rambucca).	Rubble	0 5 10	0 3 6
4465	Brimbamalla	Quartz	7 5 21	0 6 12
4600	Brundah Gully	Ferruginous micaceous sandstone	16 17 10	7 10 6
3913	Broadwater (3 miles from)	Sand	8 1 10	0 3 22
3094	Brungle, Tumut	Quartz, ferruginous in part, with a little pyrites and mica	5 4 12	0 6 12
3823	Burnt Yards	Ferruginous quartz in silvery schist	4 11 10	0 6 12
3829	"	Iron-stained quartz in pale blue slate	2 7 21	0 6 12
3831	"	Ferruginous quartz, with a little pyrites	0 12 22	0 4 8
3833	"	Iron-stained quartz	3 4 5	0 5 10
3486	"	Ferruginous quartz, with veins of iron pyrites	2 10 1	0 8 17
150	Barra, parish of (county of Clarendon).	Vitreous white quartz, rich in cubical pyrites	16 6 16	0 8 17
151	" " "	Crushed pyrites	2 10 1	0 4 8
2617	" " "	Magnetic pyrites, with a little quartz	0 12 22	1 1 18
567	Bungendore District	Ferruginous quartz	30 14 2	0 6 12
568	" " "	" " "	6 17 3	0 15 2
569	" " "	" " "	20 13 18	0 6 12
570	" " "	" " "	5 2 8	0 6 12
1916	Burrage	Pyritous quartz	0 9 19	0 3 6
2071	Bungonia	Ferruginous quartz	2 13 8	0 3 6
2072	"	" " "	1 13 18	0 3 6
2074	"	" " "	0 6 12	0 2 4
2307	Burrowa District	Quartz, with a few specks of pyrites	0 10 21	0 4 8
2491	"	Ferruginous quartz	3 2 0	1 0 13
2519	" (9 miles E. of)	" " "	0 17 9	0 4 8
4164	" (17 miles N. of)	" " "	0 12 22	0 4 8
4407	"	" " with an iridescent film of ferric oxide	1 1 18	0 4 8
1781	Byng	Quartz (showing free gold)	10 4 16	1 18 2
3962	" (near)	Ironstone, containing a little carbonate of copper	2 3 13	0 8 17
4570	" (Teelom)	Loose ferruginous material, evidently resulting from the decomposition of some rock.	76 19 12	5 6 17
4253	Byrock (near)	Ferruginous quartz	6 10 16	0 8 17
802	Bywong	Blanketings from Huntongdon Mill	0 11 22	0 3 6
862	" (Robbins & Cartwright's mine).	Concentrated arsenical pyrites	2 18 18	1 3 22
2784	Bywong	Glassy grey quartz	1 3 22	0 8 17
4262	"	Concentrates	0 13 1	1 19 4
4714	"	Dark-coloured glassy quartz	0 9 19	0 3 6
103	Canowindra	Slightly ferruginous crushed quartz	2 12 6	0 4 8
2344	"	Iron-stained quartz	6 17 3	1 14 20
2847	"	Milky quartz, with specks of arsenical pyrites	3 3 3	0 19 11
2848	"	" with pyrites and galena	23 12 14	6 19 8
2852	"	"	0 14 0	0 5 10
2855	"	Pyritous greyish quartz	10 6 21	0 10 21
3785	"	Iron-stained quartz	3 11 20	0 6 12
3786	"	White quartz, showing specks of pyrites and partings of chloritic matter.	0 7 14	0 2 4
1	Cangi ("Walter Scott" Mine)	Bulk sample	2 10 6	6 15 21
2	" " "	Concentrates	12 6 21	33 3 18
4	" " "	Gangue slimes	0 9 3	4 0 11
5	" " "	Bulk sample	0 16 23	0 9 3
6	" " "	Concentrates	3 9 6	1 12 16
8	" " "	Gangue slimes	0 5 5	0 6 12
441	" " "	Ore	2 5 17	2 7 21
442	" " "	"	1 7 4	3 12 18
4377	" " "	Tailings	0 5 6	0 7 20
1717	Carcoar	Ferruginous cellular lodestuff	0 15 2	1 19 4
3249	" District	White quartz	354 7 5	84 3 8
3252	"	" with iron pyrites	0 8 17	0 8 17
2490	Capertee (10 miles W. of)	Ferruginous quartz, with slate	1 15 22	0 7 14
617	Cell's Creek	Quartz	0 10 21	0 3 6
618	"	"	1 12 15	0 8 17
620	"	"	0 18 8	0 5 10
621	"	"	3 5 8	0 10 21
3509	"	" pyritous	2 1 9	0 5 10
4049	"	" crushed	0 7 14	0 3 6
4051	"	"	0 10 21	0 3 6
3018	"	Silicified breccia	1 6 2	0 15 2
2156	Chambigne ("Star of Hope" Mine).	Concentrated tailings	15 2 3	1 11 18
1412	Clarence River	Pyritous quartz, with sooty material	4 0 13	9 13 19
3010	"	Zircon sand	1 2 20	0 3 6
3114	" (10 miles N. of)	" loosely coherent	1 12 16	0 2 15
3744	" Heads (near)	Beach sand	6 11 2	0 5 6
3745	" " "	Concentrated (apparently) titaniferous iron	1 2 20	0 3 6
158	Cobar District	Ferruginous cavernous quartz	0 8 17	0 4 8
160	"	" " "	0 7 14	0 3 6
161	"	" " "	2 10 1	0 4 8
251	"	Ferruginous quartz in red slate, showing gold freely, and rich in chloride of silver.	33 18 11	398 17 17
252	"	Ferruginous quartz in red slate, rich in chloride of silver	13 16 12	293 15 14
357	"	Ferruginous cellular quartz	0 8 17	8 18 13
358	"	Siliceous clay slate	3 13 9	32 0 5
551	" (Bald Hills)	Ferruginous cavernous quartz, with black oxide of manganese.	0 7 14	0 3 6

Official Number.	Locality—stated by the finder to be.	Description.	Per ton.	
			Gold.	Silver.
581	Cobar District (Fort Bourke Hill).	Ferruginous quartz	oz. dwt. gr. 0 9 19	oz. dwt. gr. 0 3 6
582	"	"	1 19 4	0 6 12
583	"	"	11 17 8	0 15 5
1746	"	"	0 7 14	0 3 6
1813	(Bald Hills)	Ironstone in quartz	1 8 6	0 4 8
2426	"	Crushed sample	1 1 18	0 10 21
2427	"	"	3 3 3	0 8 17
2428	"	"	1 13 18	0 16 4
2774	"	Slate	30 18 11	7 3 17
2821	"	Very siliceous slaty rock	18 18 22	6 6 3
3024	Cobar (40 miles from)	Siliceous antimony ore. (See 3024 under "Antimony.")	0 9 19	0 3 6
3064	District	Sandstone	0 5 10	0 3 6
3527	"	Talcose schist	7 14 14	0 8 17
3605	(near)	Highly silicified white rock	3 9 16	1 19 4
4034	"	Pink clay slate	3 5 8	0 6 12
4529	"	Conglomerate	3 0 22	53 7 2
202	Condobolin (Back Wardry)	Very ferruginous quartz	0 17 9	0 4 8
443	"	Ferruginous cavernous quartz	1 14 20	0 8 17
1111	(2 miles N.W. of)	Quartz	22 17 7	6 14 23
1858	(near)	"	5 19 15	2 10 1
1944	"	"	2 19 20	1 18 2
287	Cooma	Siliceous pyritous lodestuff	0 6 12	2 3 13
606	(14 miles S. of)	Greenish quartz, with iron pyrites: concentrates, 17.2% =	8 12 0	0 17 9
331	"	Quartz stained with iron and copper, and containing copper pyrites.	2 7 21	0 10 21
2917	(Fiery Creek)	Pyrites	1 10 11	0 12 22
4431	District	Quartz	1 3 22	0 6 12
644	Coonamble	Ferruginous pyritous quartz	0 17 9	0 4 8
749	Coff's Harbour	Milky quartz, with a little mica	15 0 11	1 14 20
911	Cox River, (12 miles from Hartley.)	Ferruginous and cellular quartz, with galena. (See 911 under "Lead.")	0 10 21	62 18 16
3177	"	Cavernous and cellular quartz carrying galena	2 14 10	29 10 21
4007	"	Ferruginous quartz	0 9 19	1 0 13
1499	Cowra (N.W. of)	"	3 16 5	0 4 8
3023	District ("Woodcutters' Reef.")	Pyrites with chloritic material	2 38 18	0 15 2
4283	District	Iron-stained quartz	7 18 22	1 6 2
1152	Cooloongoolook	Apparently an igneous rock—felsite, said to have been burnt.	0 5 10	0 2 4
1231	District	White quartz	0 15 2	0 4 8
3269	Cooligoobra (Bombala District).	Weathered felspathic rock, with casts left by the removal of pyrites.	0 17 9	0 4 8
3270	"	Ferruginous cellular quartz	0 17 9	0 4 8
1566	Cowra Creek ("Star of Cooma" Mine).	Battery tailings	0 8 17	0 2 4
1567	"	Slimes from pau	0 10 6	0 2 17
1568	Cowra Creek	Gossan	1 1 18	0 4 8
2160	"	Pyritous quartz, with veins of sulphate of iron	3 12 22	0 10 21
2457	"	Ironstone gossan	1 3 22	0 4 8
2458	"	Very ferruginous quartz, cellular in part	4 13 14	0 6 12
2978	Mine	Pyritous ore	0 8 17	0 3 6
2979	"	"	0 13 8	0 3 6
2980	"	"	0 12 22	0 4 8
2981	"	"	0 11 20	0 3 6
2982	"	Felspathic lodestuff	2 13 8	0 5 10
2983	"	Pyritous quartz	0 16 4	0 4 8
3301	"	Ferruginous quartz in blue slate	2 10 1	0 4 8
3302	"	"	0 7 14	0 3 6
3303	"	Weathered slate	0 9 10	0 3 6
3304	"	Ferruginous quartz and pyritous weathered slate	0 14 2	0 3 6
3305	"	slate	0 15 2	0 3 6
3308	"	"	0 17 14	0 3 6
4636	"	Iron-stained, somewhat cavernous, white quartz	0 12 22	0 4 8
4712	Cowabba	Buff-coloured, weather-banded rock	0 16 4	0 3 6
1873	Cootamundra	Quartz	1 10 11	0 4 8
3432	"	"	15 0 11	0 18 8
3787	Cobargo	and lodestuff	1 3 22	0 4 8
4223	"	Pyritous quartz	12 6 0	0 8 17
4222	"	Ironstained quartz	0 11 22	0 3 6
4735	"	Quartz	7 8 1	0 4 8
4736	"	"	0 7 14	0 3 6
4737	"	"	8 3 7	0 10 21
4141	Coolac (3 miles from)	Coarsely crushed ferruginous quartz	0 10 21	0 4 8
3792	Condorc.	Concentrates from a dish of dirt	0 13 0	4 4 22
3134	Coramba	Quartz	3 16 5	0 17 9
3135	"	"	13 18 16	2 1 9
1623	Croker's Mint	Pyritous quartz	0 9 19	0 3 6
1625	"	Quartz	0 10 21	0 3 6
4003	Crooked Corner (8 miles from Binda).	White quartz, with chloritic partings containing numerous crystals of iron pyrites.	0 18 8	0 3 6
3655	Crookwell	Iron-stained quartz	14 9 14	1 3 22
465	Cudgong R. (The Gulf)	Pyritous quartz with a little zinc-blend and galena	7 1 13	0 17 9
466	"	Quartz, with galena and a little pyrites	5 8 21	4 2 17
4731	"	Cavernous white quartz, with galena and blende	1 6 2	0 6 12
4732	"	Iron-stained quartz	13 12 4	0 8 17
4733	"	White quartz, with galena and blende	2 10 1	12 8 5

Official Number.	Locality—stated by the finder to be.	Description.	Per ton.	
			Gold.	Silver.
1251	Culingera, parish of, county of Bland.	Ferruginous vitreous quartz	2 3 13	5 11 1
1336	" "	" pyritous quartz	2 8 23	0 5 10
1337	" "	" quartz	1 3 22	0 10 21
2136	Cujong (near Condobolin)	Quartz	2 7 21	0 6 12
4508	" "	Iron pyrites	1 8 6	0 8 17
4561	Cudgellico (14 miles from)	Ferruginous chrystone	2 5 17	0 4 8
2772	Cudgeon Ck. to Richmond River Heads (between).	Beach sand. (See 2772 under "Platinum and Tin")	1 0 9	.....
438	Dargal's Creek (head of) ..	Apparently a decomposing igneous rock	11 6 11	1 3 22
1029	Dalton	Ferruginous lodestuff	0 6 12	2 5 17
1680	Dampier, county of	Weathered blue slate, with quartz	0 9 19	0 3 6
1201	Dairy Creek, Gundaroo ..	Decomposing schistose rock, containing quartz	1 1 18	0 3 6
1584	" "	Dark coloured quartz	1 8 6	0 4 8
2614	" "	Concentrates	11 0 14	0 13 14
2615	" "	Tailings	0 11 20	0 5 10
8125	Dalmorton (16 miles from)	Glassy-blue quartz	0 5 10	0 3 6
3906	Dalmorton	Dark-grey quartz, with a little secondary pyrites	10 7 23	0 9 19
4136	" (11 miles from)	Blanketings	4 2 17	0 8 17
4603	" "	Friable ferruginous quartz	2 17 16	0 11 20
4663	Deep Creek Mine	Pyritous (iron and arsenical) quartz	0 6 12	1 6 2
4568	Delegate	Banded quartz	1 14 20	0 4 8
3999	" "	White quartz, highly charged with iron pyrites	11 4 6	1 6 2
2599	Dowling, parish of, county of Ashburnham.	Tailings	1 19 4	0 8 17
4345	Donkey Hill (near Adelong).	Pyritous quartz	0 7 14	0 3 6
2685	Dinga Dinga, parish of ..	Quartz, with galena	1 7 0	12 14 8
2686	" "	Silicious ironstone	0 7 14	0 9 19
137	Drake	Silicious feldspathic lodestuff, containing blue carbonate of copper and copper pyrites. (See 137 under "Copper") ..	2 10 1	1 17 0
901	" ("Lady Burdett-Coutts" Mine).	Micaceous sedimentary rock	0 12 22	2 1 9
2682	" "	Quartz, with much zinc-blende	15 7 0	3 5 8
2889	" "	Quartz	27 13 3	92 2 10
2905	" ("Lunatic" Reef)	Tailings	0 12 22	0 5 10
1424	Dungaree, parish of, county of Phillip).	Crushed sample	0 5 10	1 2 20
1425	" "	" "	1 2 20	0 15 2
3628	Dungaree (near)	Ferruginous quartz (pulverized)	0 6 12	0 2 17
225	Dungog (near)	Quartz	8 3 7	1 1 18
1688	Dungog (near)—Smith, Brown & Co.'s Claim—Daisy Bell.	" "	0 8 17	0 2 4
3336	Ellenbough River	Pyritous silicious breccia	1 8 6	0 6 12
3420	Enmore	Quartz	10 9 1	0 15 2
4139	Esk River Beach Deposits.	Concentrates. (See 4139 under "Tin and Platinum") ..	2 19 3	.....
*943	Eurongilly	Ferruginous quartz, with copper pyrites	2 12 6	1 5 0
1057	" "	Tailings	0 5 10	0 8 17
1516	Fernmount	Ironstained quartz, showing free gold	2 3 13	0 5 10
3227	Fiery Creek, Numeralla ..	Pyritous earthy material	4 9 6	2 19 20
4631	" "	Gossan	1 14 20	1 3 22
857	Fish River, near Oberon ..	Very ferruginous cellular quartz	1 10 11	0 15 2
858	" "	Quartz	1 14 20	0 19 11
3720	" (near)	Highly pyritous, crushed sample	0 10 21	11 8 16
3721	" "	" "	1 10 11	62 18 16
3722	" "	Ironstone (crushed sample) ..	1 0 13	12 6 0
3723	" "	Highly pyritous, crushed sample	0 14 0	34 2 16
3724	" "	" "	1 7 4	17 6 3
4087	" "	Ferruginous quartz	0 14 0	0 5 10
498	Flyer's Creek (portion 544 and adjacent claim).	Soft ironstained stone, possibly sedimentary	0 9 19	0 3 6
499	" "	" "	0 5 10	0 2 4
1272	Flyer's Creek	Claystone	0 10 21	0 15 2
1857	" "	Cubical pyrites in limestone	1 19 4	0 4 8
2690	" "	Massive iron pyrites	0 12 22	3 7 12
3920	" "	Ferruginous, cavernous, pyritous quartz with clay	0 6 12	0 12 22
3921	" "	" "	0 7 14	0 3 6
2052	Forbes	Blanketings	0 12 22	0 2 4
2117	Forest Beefs	Alluvial concentrates	0 16 7	0 4 13
2119	" "	Pyrites concentrates	1 8 16	0 8 11
3194	" "	Silicious iron pyrites ore	0 16 4	0 5 10
566	Frogmore (near)	Quartz	0 17 9	0 15 2
22	Galley Swamp	Tailings	3 2 1	0 5 7
74	" "	" "	6 17 3	0 15 2
*4269	Esk River (M'Auley's Lead).	Concentrated beach sand, first treated with boiling washing soda, and then passed over copper plates three times. (See 4269 under "Platinum and Tin") ..	15 1 12	.....
951	Galley Swamp	Dark grey translucent quartz ..	3 6 10	0 11 22
4510	" "	Silicified slate, slightly pyritous ..	0 9 13	0 3 6
4511	" "	Highly silicified altered slate ..	4 0 13	0 8 17
2875	Garangula	Blanketings	6 6 3	4 8 4
4709	" "	Tailings (apparently)	1 3 22	1 2 20
863	Gibraltar	Pyritous white quartz	7 18 22	0 10 21
875	" "	" "	2 9 13	0 5 10

Official Number.	Locality—stated by the finder to be.	Description.	Per ton.	
			Gold.	Silver.
			oz. dwt. gr.	oz. dwt. gr.
2363	Gilgunnia (8 miles E. of).	Very ferruginous quartz	0 8 17	0 3 6
2364	" " "	" "	3 0 22	0 6 12
2366	" " "	" "	0 5 10	0 2 4
2370	" " "	Ironstained quartz	3 5 8	0 6 12
2393	" (near)	Ferruginous quartz with weathered slate	46 1 3	5 11 1
4371	"	Rubble, slate, &c.	0 6 12	0 2 4
4164	Girilambone	Ironstone	11 4 6	6 8 8
1019	Glen Innes	Quartz (Bismuth, 7.87 per cent.)	0 12 22	2 14 10
1020	"	" " 13.17 "	0 5 10	3 12 22
3877	" (near)	Silicious pyritous stone	1 18 2	0 5 10
3053	Gloucester	Quartz and calcareous stone with a few specks of pyrites	0 7 14	0 4 8
3059	"	Magnetic iron sand	35 19 14	4 10 8
3908	"	Crushed sample	0 17 9	0 6 12
4487	" (county of)	Ferruginous quartz	3 7 12	0 8 17
4489	"	Sandy clay	0 7 14	0 3 6
4490	"	Ferruginous cellular quartz	24 1 6	2 14 10
4491	"	Crushed roasted quartz	0 9 19	0 2 4
4739	"	Quartz	3 14 1	0 7 14
4740	"	"	1 10 11	0 6 12
4741	"	"	3 9 10	0 6 12
3598	Glen Elgin	Spongy ironstone and pyrites in a calcareous rock	1 0 13	0 7 14
129	Goodwood (Thomas's Pad-dock).	Ferruginous quartz and felspathic lodestuff	5 6 17	0 8 17
130	" " "	Ferruginous quartz	16 11 0	3 3 3
4719	Gordon Brook	Quartz with cubes of pyrites and much chloritic material	0 9 19	0 3 6
4296	Golden Gully (near Bur-ragn).	Ironstained cavernous quartz	3 18 9	0 4 8
3545	Golden Gate	Quartz and slate with arsenical and iron pyrites	0 19 12	0 12 22
3662	Golden Point, Trunkey	Concentrates	1 9 8	0 15 2
3434	Goulburn (near)	Tailings	0 9 19	0 6 12
545	Grenfell	Vitreous quartz	5 5 14	0 1 17
546	"	"	114 6 15	2 10 1
2258	" (north of)	Alluvial tin. (See 2258 under "Tin")	5 8 21	0 16 4
3276	"	Blanketings	6 12 7	0 9 19
3405	" (Lucknow Mine)	White quartz with veins of arsenical pyrites	1 6 2	0 6 12
1895	Grattai	Quartz rubble	0 18 8	0 3 6
2057	Grong Grong	Quartz with mispickel	0 8 17	0 2 4
2058	"	Ferruginous cellular quartz	0 15 2	0 3 6
4119	"	Ironstained quartz with micaceous clay	0 7 14	0 2 4
3478	Grafton, South	Greyish quartz with a little pyrites	0 9 19	0 3 6
1140	Gundaroo	Decomposing slaty material	2 12 6	0 6 12
4155	Gundybindyal (6 miles from) near Temora.	Ferruginous quartz	2 5 17	0 8 17
181	Gundagai District	White quartz	31 19 2	33 4 18
182	"	"	0 7 14	0 3 6
183	"	" with felspathic-like material	0 6 12	0 2 4
1269	"	Highly pyritous quartz	2 12 6	0 6 12
1270	"	" and ferruginous quartz	3 5 8	2 10 14
3307	"	Pyrites and blende with a little quartz and galena	6 4 1	2 7 21
3560	" (near)	Limonite pseudomorphous after pyrites	0 9 18	0 3 6
3905	"	Slate	9 13 17	0 10 21
3959	"	Quartz (broken up)	0 7 14	0 3 6
4347	" , South	Ferruginous cellular quartz	62 17 14	2 8 23
4591	"	"	0 6 12	0 12 22
1759	Gulgong	Mispickel and quartz traversing felspar rock	0 5 10	0 2 4
3529	" (3 miles from)	Tailings	0 5 10	0 17 9
3532	"	Ferruginous copper ore. (See 3532 under "Copper")	0 8 17	18 15 15
125	Hartley (Cox River)	Very ferruginous quartz	0 19 11	0 6 2
295	Harefield	Ferruginous quartz	5 2 8	0 9 19
4796	Harden (6 miles east of)	Quartz with pyrites (iron, copper, and arsenical)	59 19 23	13 12 4
4797	"	Quartz with much galena and arsenical pyrites, and a little copper pyrites.	4 18 0	17 8 10
4218	Hartley Vale	Silicious ironstone	2 5 17	0 10 21
2440	Hastings River	Quartz	0 5 10	0 3 6
3617	"	Quartz, with a little iron pyrites	1 19 4	0 12 22
1776	Hazelgrove	Honey-combed gossan	1 3 22	21 15 13
2862	"	Massive and granular iron pyrites	0 15 2	46 7 16
3065	" (3 miles from)	Average sample	1 15 22	26 13 13
3066	"	Pyrites	0 9 19	18 11 7
3309	"	Ferruginous quartz (crushed sample)	1 3 22	8 2 5
4005	"	Quartz rubble	1 3 22	12 19 3
4106	"	"	1 1 18	16 15 9
2528	Hazelmere (near Tarana)	Gossan	0 17 9	8 18 13
2527	"	Ironstained white quartz	2 3 13	0 15 2
3436	Hazelgrar	Apparently much-weathered mica schist	0 6 12	15 0 11
3097	Herbert Park (Armidale)	Ironstone	0 8 17	2 7 21
114	Hillgrove (25 miles E. of)	Grey vitreous quartz	0 11 20	0 3 6
1277	"	Crushed ore	0 5 10	0 2 4
3031	"	Broken up quartz	1 1 18	0 4 8
780	Hill End	Furnace slag	2 18 18	0 10 21
1303	Homeward Bound (near Coramba).	Ironstained quartz (free gold present)	2 7 21	0 4 8
4702	Howe Mountain	Ferruginous quartz	1 3 22	0 8 17
4104	Iluka (Clarence River)	Loosely coherent sand	0 17 14	0 1 23
2750	Ilford	Quartz, with antimonite (antimony, 10.14 per cent.)	0 18 8	0 5 10
2751	"	" " " 5.44 "	0 17 9	0 8 17
2752	"	" " " 21.75 "	1 0 13	0 7 14

Official Number.	Locality—stated by the finder to be.	Description.	Per ton.	
			Gold.	Silver.
			oz. dwt.gr.	oz. dwt.gr.
1227	Inverell District	Titaniferous iron and quartzite	3 5 8	0 14 0
3614	" (20 miles from)	Arsenical pyrites	2 5 17	2 16 14
1622	Ironbarks (near)	Pyritous quartz	9 5 2	1 3 22
1760	"	Pyritous milky quartz	8 1 3	0 17 9
3449	"	Crushed sample	1 11 13	0 5 10
3670	"	Iron-stained quartz	0 9 19	0 3 6
3671	"	"	0 14 0	0 8 6
4409	"	Milky quartz	2 12 6	0 4 8
3261	Jack's Creek (6 miles from Canowindra).	White quartz	0 18 8	0 3 6
2446	Jerrara District	Iron-stained white quartz	0 11 20	0 3 6
1444	Jones' Creek, Gundagai	Crushed quartz	0 7 14	0 2 4
2678	"	Tailings	0 12 22	0 4 8
2706	" Abererombie Ranges.	Pyritous quartz	2 19 20	0 7 14
4011	Jones' Creek, Gundagai	Chloritic schist, with veins of quartz	1 6 2	0 4 8
4078	"	Tailings	1 10 11	0 3 6
302	Jugiong	Vitreous quartz, with a little greenish clay	1 2 20	0 12 22
591	Junce	Pyritous, white quartz traversing a granitic rock	20 2 21	0 7 14
592	"	Very pyritous quartz	6 10 16	0 8 17
2791	" (near)	Pyritous and ferruginous, white quartz	2 8 23	1 2 20
2792	"	Pyrites, with white quartz	0 15 2	0 6 12
3482	Junction Point	Ferruginous quartz	2 7 21	0 4 8
4324	Kangaroo Grounds (near Gundagai).	Ferruginous pyritous quartz		
		Concentrates 18.35 per cent. =	16 15 9	2 7 21
903	Kerr's Creek	Ferruginous quartz	0 6 12	1 1 18
43	Kino, (Parish of)	"	4 9 6	1 8 22
387	"	"	0 10 21	0 5 10
2832	King's Plains and Blayney, (between).	"	0 6 12	0 11 22
1754	Koorawatha, (14 miles S.E. of).	Pyritous ferruginous quartz	0 5 10	0 9 19
3396	"	Pyritous quartz, with native antimony	3 16 5	0 10 21
3767	Lake Cowal (near)	White quartz, with ochreous stains	0 10 21	0 4 8
653	Landlow (7 miles from)	Quartz	0 12 22	0 4 8
657	"	" pyritous	7 12 10	2 3 13
658	"	Grey quartz, with nests of mica	9 9 10	2 14 10
255	Little Billabong (" Old Tom Reef ").	Quartz, in part iron-stained and milky, in part grey and vitreous.	3 5 6	0 15 0
1108	Little Hartley	Coarsely crystallised galena in cellular quartz. (See 1,108 under Lead.)	1 6 2	37 13 12
3751	"	Ferruginous quartz	1 3 22	2 5 17
2208	Lionsville (Dixon's Claim)	"	1 2 20	0 5 10
2209	"	Crystallised quartz	2 2 11	0 7 14
1213	Lucknow (near)	Very ferruginous quartz	0 7 14	0 2 4
2320	"	Milky quartz, with arsenical pyrites	1 7 4	0 5 10
1757	Lunatic (7 miles from Fairfield).	White quartz, with carbonaceous shale	0 9 19	0 3 6
2536	Lucknow (2 miles from)	Iron pyrites, with peacock copper ore	31 3 21	8 17 11
2537	"	Cubical iron pyrites in a cream-coloured clayey matrix	0 8 17	0 2 4
21	Marengo	Sand containing much quartz and fragments of a black substance.	0 10 21	0 4 8
687	Macanally	Pyritous grey quartz, with a little slaty material	2 12 6	0 10 21
688	"	Tailings	1 17 0	0 8 2
4627	"	Ferruginous pyritous quartz, with a little slate	0 12 22	1 6 2
4628	"	" quartz, with slate	0 12 22	1 8 6
4029	"	"	2 2 11	0 14 0
4630	"	Copper pyrites and slate	0 12 22	2 16 14
765	Mandurama	Ferruginous pyritous quartz	1 0 13	0 5 10
1150	"	Quartz, with clay slate	2 3 13	0 8 17
2787	"	Lightly pyritous quartz	0 17 9	0 8 17
2920	" (" Woodcutter's " Claim).	Granular pyrites	3 18 9	0 15 2
2921	"	Crushed pyrites	0 5 10	0 4 8
3539	"	Arsenical pyrites and clay	0 6 12	0 2 4
1024	Mangala, Swamp Oak	Pyritous grey quartz	0 10 21	0 4 8
		Concentrates 20.8 per cent. =	2 9 0	0 9 19
1025	"	Grey quartz	0 2 4	0 6 12
		Concentrates 30.00 per cent. =	0 6 12	0 4 8
1026	"	Pyritous, grey quartz	0 15 2	1 8 6
		Concentrates 23.8 per cent.	2 15 12	3 2 1
1077	Major's Creek (" Eureka " Reef).	Tailings, rich in sulphides	1 8 6	3 0 16
1078	"	"	2 1 20	4 0 0
1619	Major's Creek	Granular iron pyrites	90 7 13	27 6 14
2100	"	Pyritous quartz (broken up)	50 12 14	10 13 9
2101	"	White quartz, with pyrites, blende, &c.	4 0 13	2 7 21
4268	"	Black sand	1 4 10	0 4 13
1862	Mann River	White quartz, containing galena	0 8 17	0 4 8
2766	"	Iron-stained cavernous quartz	2 18 18	0 19 11
2767	"	Iron-stained cavernous quartz	2 15 12	0 18 8
3637	" (Dora Reef)	Quartz, containing zinc blende	0 5 10	0 7 14
3639	" (Portion 903)	Concentrates	0 7 14	0 3 6
8907	"	White quartz, with pyrites and galena	1 18 2	0 7 14
3971	" (Little Dora Mine).	White quartz, with specks of zinc-blende	0 8 17	0 3 6

Official Number.	Locality—stated by the finder to be.	Description.	Per ton.	
			Copd.	Silver.
			oz. dwt.gr.	oz. dwt.gr.
4384	Mann River	Compact quartz, containing a few specks of pyrites	0 11 20	0 3 6
4498	"	Quartz, containing a very little galena and pyrites	3 7 12	0 6 12
4745	" (Dora Reef) ..	Quartz, containing pyrites and blende, associated with a metamorphic rock.	2 14 10	0 19 11
4746	" (Hawkey's Reef)	Concentrates (assay only approximate)	92 17 17	12 12 11
4803	"	Tailings	0 5 10	0 2 4
1918	Marulan (near)	Quartz (free gold present)	2 1 9	0 4 8
1940	" District	Ferruginous milky quartz	9 13 19	0 12 22
3857	Marble Hills (near Moonbi)	Volcanic rock (probably) with veins of crystalline quartz..	2 3 13	0 4 8
3860	"	" broken up	0 10 21	0 2 4
4004	Markdale ("New" Caladonia " Mine).	Crushed sample	2 16 14	0 6 12
4005	"	"	1 3 22	0 3 6
3045	Manning River	Quartz	0 14 0	0 3 6
3636	" ("Queen of Bulby" Mine).	" iron-stained	10 4 16	1 8 6
3718	Manning River	Iron-stained sandstone	2 3 13	0 4 8
3412	Macquarie (near Hill End)	Ferruginous quartz	0 11 20	0 3 6
2635	Melrose District	Quartz and white granite	3 12 22	3 19 11
3421	"	Quartz	20 9 9	1 14 20
3422	"	"	0 8 17	0 3 6
1232	Mitchell's Creek (7 miles from).	Concentrates	4 2 16	18 3 15
1283	"	A retort sample of amalgam	0 10 21	1 3 22
3673	Mitchell's Creek (near)	Quartz (crushed)	0 10 21	0 8 17
2485	Millthorpe (14 miles from)	Copper glance (see 2,495, under Copper)	1 10 11	3 7 12
4274	"	Pulverulent material, apparently resulting from the weathering of an igneous rock.	9 7 6	1 18 2
8814	Milparinka (20 miles from Little Bendigo).	White quartz	0 15 2	0 4 8
4081	"	" cellular in part	4 3 20	0 7 14
4082	"	" with chlorite	0 5 10	0 3 6
2521	Moruya	Iron-stained quartz	0 5 10	0 2 4
2976	"	Siliceous ore, rich in arsenical and iron pyrites	1 10 11	1 3 22
3492	"	Quartz	6 10 16	1 6 2
3512	"	" with mispickel	1 17 0	6 6 3
3559	" (near)	"	1 6 2	0 4 8
4311	"	White quartz	3 7 12	0 4 8
4363	"	Massive mispickel	10 11 5	0 19 11
110	" Mountains	Quartz, with mispickel	0 9 18	0 3 6
111	" District (Jenamaddra Gold-field).	Tailings	0 11 20	0 3 6
1030	Moruya	Quartz, with mispickel	7 3 17	2 12 6
3837	Mooney Gold-mine	Cavernous quartz, with bands of friable pyrites	0 6 12	2 12 6
3838	"	"	1 1 18	0 8 17
559	" Mt. (near)	Milky banded quartz	0 3 19	0 3 6
923	Moonambia	Tailings	0 19 14	0 6 12
924	"	Concentrates	25 13 10	5 18 16
1093	Molong District	Ironstone gossan	0 8 17	0 4 8
1777	"	Pink decomposed rock	0 10 21	0 6 12
2030	"	Quartz, with blue and green carbonates of copper	1 1 18	4 7 2
2189	" (2 miles from).	Ironstone	0 5 10	0 16 14
2190	"	" gossan	0 16 4	0 5 10
2386	"	Copper-stained quartz	1 10 11	2 16 14
3299	"	Quartz, with carbonate of copper (see 3,299, under Copper)	0 17 9	2 11 3
1918	Moosandrew (Stewart's Brook).	Calcareous quartz lodestuff	0 15 2	0 4 8
1990	Moosandrew	Pyritous white quartz, with slaty partings	8 7 15	1 6 2
2235	"	Pyritous tailings	10 3 18	2 1 19
2878	" and Stewart's Brook (between, "Athol Maid" Mine).	Quartz (free gold present)	11 4 6	3 11 20
4145	Monaro District	"	1 19 4	0 4 8
2532	Mongarlow (Braidwood) ..	" with ferruginous clay	2 16 14	0 12 23
3577	Mogo	"	0 16 4	0 3 6
3578	"	Ferruginous, cellular, and pyritous quartz	2 4 15	0 3 6
4017	Mt. Hope (near)	Green and pink slate, with bands of pyrites	2 12 6	0 12 22
4295	Mt. Clarendon (near Gundagai).	Greenish felsite, traversed by veins of white quartz and pyrites.	3 16 5	0 6 12
44	Mount Drysdale	Decomposing felspathic stone	35 7 18	52 16 5
142	"	Slaty rock	69 11 13	1,013 6 6
143	"	"	1 9 8	17 5 0
144	"	"	45 12 11	835 7 6
273	"	Quartz and slate	1 12 16	3 7 12
301	" District	Ferruginous slate	0 17 9	57 6 2
454	"	" and quartz	0 12 22	0 4 8
588	"	Pale-coloured sedimentary rock	0 8 17	0 12 22
761	"	Sedimentary rock	4 13 14	37 12 10
762	"	"	5 4 12	73 10 0
835	" (near)	Siliceous ironstone	0 17 9	0 4 8
842	"	Very ferruginous quartz	2 0 6	0 5 10
1370	"	Weathered slate and sandstone	0 7 14	0 3 6
1582	"	Ferruginous quartz	3 6 10	0 3 6
2630	" ("Just in Time" Mine).	Pink slate, traversed by veins of quartz	0 19 11	0 6 12
4125	"	Pink slate	2 7 21	0 4 8

Official Number.	Locality—stated by the finder to be.	Description.	Per ton.	
			Gold.	Silver.
595	Mount Victoria	Ferruginous quartz	oz. dwt. gr.	oz. dwt. gr.
628	Mount Pearce District ..	Iron-stained quartz, containing pyrites, galena, and a little blende.	1 17 0	1 14 20
1609	Mount Dromedary	Gossan	7 5 21	2 3 13
1631	" ..	" ..	0 15 2	2 18 18
1766	" ..	Felsite	0 5 10	0 2 4
2091	" ..	Apparently a rotten granite	3 5 8	1 1 18
2104	" ..	Ferruginous, cellular, pyritous quartz	1 2 20	2 19 20
1767	Mount Emily	Weathered material, possibly felsite	0 8 17	0 2 4
2396	Mount M'Donald	Very ferruginous cellular quartz	2 5 17	0 4 8
3582	" ..	Dark glassy quartz (course gold present)	22 17 7	4 7 2
4578	" ..	Quartz, containing magnetic pyrites, with slate	1 1 18	0 6 12
99	Murrumbidgee River	Pyritous, siliceous slate	1 8 6	0 8 17
4793	" ..	Sand, containing quartz, magnetite, &c.	4 1 0	0 10 11
189	Mudgee District	Sand	5 17 14	0 8 11
1067	" (near Lue)	Rubble	28 6 4	0 19 11
1068	" ..	Gossan	1 10 11	1 3 22
666	" ..	Ferruginous quartz breccia	0 15 2	2 2 13
1069	" ..	Gossan	1 12 16	0 19 11
2468	" District	Ferruginous, somewhat cellular quartz	1 12 16	3 16 5
2557	" ..	Ironstone gossan	0 19 11	0 6 12
2743	" ..	White quartz, with crystallised iron pyrites	1 11 13	0 7 14
3663	" (Rat's Castle)	Pyritous white quartz	1 17 0	1 0 3
4439	" (near)	Tailings	0 8 17	0 2 4
2205	Mulgum	Iron-stained quartz	0 7 14	0 3 6
2869	Muttama	Quartz, honey-combed in part	2 12 6	0 10 21
3510	" ..	Broken-up ironstone	0 5 10	1 5 0
4367	" ..	Ironstone gossan	2 3 13	1 1 18
3118	Muswellbrook District ..	Copper-stained quartz, with copper pyrites, blende, and galena.	0 9 18	0 3 6
4061	" ..	River sand	0 8 12	0 2 14
708	Myall	Iron-stained quartz, with partings of a talcose mineral, marked detritically in places, and coated with very fine gold.	1 7 4	0 7 14
1332	Nana Creek	Blanketings	21 15 13	2 14 10
1686	" ..	Quartz	0 19 11	0 4 8
1687	" ..	" ..	1 17 0	0 6 12
2120	Narruga	" ..	2 6 19	0 6 10
4398	Narrauder District	" ..	0 8 17	0 2 14
1076	Nerriga (about 10 miles from).	" honey-combed	1 19 4	0 6 12
1121	" ..	" ..	4 18 0	0 19 11
1122	" ..	Pyritous quartz, with green earth material and slate ..	0 5 10	0 2 4
1123	" ..	Quartz, honey-combed	2 18 18	0 6 12
1125	" ..	Ferruginous cellular quartz	0 9 19	0 3 6
1126	" ..	Pyritous quartz, with galena	0 5 10	0 2 4
2325	" ..	Ferruginous cellular quartz (free gold present) ..	14 19 9	0 5 10
2538	" ..	Pyritous quartz	12 16 22	2 5 17
2632	" ..	Ferruginous quartz	14 3 2	2 3 13
2785	" ..	Ferruginous slaty material	1 1 18	0 6 12
2786	" ..	" ..	7 16 18	2 12 6
3592	" (40 miles from) ..	Iron-stained, somewhat cellular quartz	1 18 2	0 3 6
2229	Newbridge (2 miles S. of)	Iron-stained quartz	3 0 22	1 14 20
2675	Newbridge (Hanlon's Claim).	Quartz rubble	3 0 22	0 12 22
3129	Newbridge	Cavernous quartz and weathered slate ..	0 5 10	0 3 6
4641	" (near) ..	Pyritous white quartz	0 8 18	0 6 12
1812	Nerrigundah	Ferruginous quartz in slate	1 2 20	0 3 6
4152	New England	" cavernous quartz	0 7 14	0 2 4
4266	Niangula ("Just in Time" Mine).	Concentrated pyrites	9 15 23	2 3 13
1641	Nundlo, 5 miles E. of	Sand, consisting largely of magnetic iron and zircon ..	45 5 20	6 1 19
1642	" ..	" ..	27 19 12	1 14 20
1991	" ..	Quartz	45 3 18	1 1 18
2602	" ..	Crushed pyritous quartz	16 3 8	2 6 19
2608	" ..	" ..	3 18 9	0 11 20
226	Nymagee District	Ferruginous cellular quartz	0 6 12	0 4 8
600	Nyngan, 30 miles from ("Budgery" Reef).	Ironstone	0 11 20	0 3 6
744	Nyngan	" ..	0 6 12	0 2 4
745	" ..	" ..	0 9 19	0 3 6
2900	" ..	White quartz and clay	0 19 11	0 6 12
2928	" (near)	Gossan	0 18 8	0 9 18
2929	" ..	Ferruginous quartz	0 10 21	5 8 21
2930	" ..	Weathered siliceous slaty material	1 8 6	0 6 12
3172	" ..	Ferruginous carbonate of lead. (See 3,172, under Lead)..	0 7 14	10 6 21
3518	" ..	Quartz and weathered felspathic rock	0 9 19	0 3 6
3889	" The Overflow	Much-weathered ferruginous slate	0 8 17	0 2 4
4722	" District	Crystallised white quartz	0 6 12	0 2 4
4723	" ..	Quartz	2 10 1	0 6 12
4724	" ..	" ..	0 9 19	0 3 6
4427	Oban	" ..	1 3 22	0 4 8
1818	Oberon (Molly's Reef) ..	Ferruginous cavernous quartz	0 8 17	0 4 8
2278	" ..	Compact ferruginous pyritous quartz	0 10 21	0 3 6
4638	" ..	Granular iron pyrites	1 6 2	53 7 2
4639	" ..	" with clay	1 10 11	16 4 11
4816	Old Junee	Ferruginous quartz	1 18 2	0 11 20

Official Number.	Locality—stated by the finder to be.	Description.	Per ton.	
			Gold.	Silver.
			oz. dwt. gr.	oz. dwt. gr.
1280	Orange	Black sand, consisting of titaniferous and magnetic iron ores, &c.	2 14 6	0 4 8
2924	" District.....	Ferruginous quartz	0 14 0	0 3 6
3051	" ".....	Tailings	0 15 2	0 3 6
3156	" ".....	Ferruginous quartz	0 7 14	0 3 6
2067	Pongee (near)	Ironstone	0 14 3	0 3 6
2068	" ".....	"	0 8 17	0 2 4
2070	" ".....	Ferruginous quartz	0 19 11	0 4 8
4095	Paddy's River, near Tumbarumba.	Iron-stained quartz.....	1 10 11	0 8 17
287A	Pambula (Mt. Gahan Mine)	Tailings	0 11 2	0 3 6
288	" ".....	"	0 7 19	0 3 6
650	" about 3 miles from	Crushed ore.....	1 7 4	0 6 12
		Concentrates, 9.4 per cent. =	5 4 12	0 12 22
822	"	Tailings	1 1 18	2 3 13
1394	" ("Diorite" Mine)	Crushed sample	0 11 21	0 2 4
1398	" (New Station) ...	Pyritous quartz, felsite, with a few specks of galena	2 3 13	0 19 11
1399	" (Hough's Mill) ...	Tailings	0 10 21	0 4 8
1400	" ".....	"	0 6 12	0 2 4
4687	"	Felsite	0 5 10	0 3 6
3490	Parkes	Pyritous quartz, with bands of chloritic material	4 4 22	0 12 22
4669	"	Ferruginous, copper-stained quartz	1 8 6	0 19 11
962	Peak Hill	"	0 5 10	0 3 6
1308	" ("Proprietary" Mine).	Tailings	0 6 12	0 4 8
8937	Peak Hill, 11 miles S. of...	Pyritous quartz	0 17 9	0 4 8
4423	" ("Monte Carlo")	Slimes	5 19 15	0 8 17
4424	" ".....	"	4 14 16	0 8 17
4425	" ".....	"	5 1 6	0 7 14
4757	" ".....	"	4 1 15	0 7 14
4768	" ".....	"	4 11 10	0 6 12
4604	Percydale	Pyritous white quartz, containing blende and galena	3 9 16	1 3 22
3672	Pinnacles (Croker's Reef)..	Iron-stained quartz.....	0 15 2	0 3 6
3673	" ".....	"	2 2 11	0 5 10
3674	" ".....	Tailings	0 8 17	0 2 4
2134	Port Macquarie, Cell's Ck.	"	0 12 22	0 1 23
		Concentrates, 11.3 per cent. =	1 15 22	0 9 19
2183	Povarty Point, Timbarra...	Claystone rubble	2 3 13	1 1 18
2184	" ".....	Very ferruginous quartz	1 14 20	0 8 17
1911	Queanbeyan, 4 miles from	Ferruginous cellular quartz	0 8 17	0 3 6
3322	"	Quartz in sandstone	1 14 20	0 8 17
4509	Queanbeyan (17 miles from).	Slightly copper-stained white quartz, with galena and a little copper pyrites.	1 3 22	4 18 0
4417	Red Hill (20 miles from Yass).	Friable siliceous ore—sandstone (?).....	24 3 10	1 1 18
1544	Rockton (16 miles from Temora).	White quartz, with greenish clay slate	25 8 5	1 8 6
1545	" ".....	"	15 0 11	0 17 9
1546	" ".....	Quartz	7 16 8	0 10 21
2842	" ".....	Milky quartz	0 18 8	0 7 14
3894	" ".....	Quartz and slate.....	0 8 17	0 3 6
3395	" ".....	Tailings	0 8 17	0 5 10
3470	" ".....	White quartz with white clay	15 0 11	0 8 17
3213	Richmond River (12 miles N. of).	Beach sand. (See 3,213, under Platinum)	0 14 0	.....
3664	Rockley (6 miles E. of) ...	Ferruginous quartz, coated with talcose material	0 19 11	79 15 4
4022	" (6 miles from) ..	Crystalline white quartz	1 13 18	0 5 10
1586	Rockvale	Crushed sample	0 10 21	0 4 8
246	Rye Park (near)	Ferruginous quartz in copper-tinted talcose schist. (Free gold present).	10 17 18	2 12 6
4432	Saucy Creek, Bombala District.	Quartz	1 10 11	0 6 12
4307	Scrub Yards.....	Silvery schistose rock.....	1 13 18	0 5 10
4308	"	Red quartz	3 9 16	0 4 8
3726	Sebastopol	Iron-stained quartz, with zinc-blende and copper pyrites...	0 8 17	1 14 20
3729	"	Tailings	0 5 20	0 3 21
3729	"	Blanketings	2 3 3	7 7 15
3730	"	Ferruginous cellular quartz and white quartz	4 15 19	1 6 2
121	Shoalhaven River	Black sand	13 13 1	0 14 8
776	Shoalhaven District.....	Chalcedonic quartz, &c.....	0 6 12	0 2 4
3138	" ".....	White quartz, carrying iron pyrites and galena	33 10 14	5 17 14
3508	" ".....	Quartz	0 7 14	0 2 4
3514	" ".....	Ferruginous cellular quartz, with a little mispickel	0 18 8	0 3 6
2404	Shellharbour	Beach sand (treated).....	8 3 14	0 11 22
4327	"	Concentrated beach sand. (See 4,327, under Tin and Platinum)	1 15 22	.....
1033	Singleton (near)	Cellular milky quartz	0 13 8	0 3 6
1541	Slattery's Creek (4 miles from).	" ferruginous stone, containing iron and copper pyrites.	5 8 21	4 9 6
1494	" ".....	Granular iron pyrites.....	0 5 10	0 2 4
1634	" " (near)	Ferruginous breccia	1 19 18	8 12 0
1686	" ".....	Copper-stained ferruginous pyritous lodestuff	7 1 13	6 19 8
3619	" ".....	Ferruginous cellular quartz	1 6 2	0 10 21
77	Sofala	Vitreous quartz in chlorite schist	4 11 10	0 8 17
260	"	Pyritous blanketings	6 16 2	0 16 6
261	"	"	1 12 16	0 5 10
1844	"	Quartz, highly charged with pyrites	3 9 17	0 8 17

Official Number.	Locality—stated by the finder to be.	Description.	Per ton.	
			Gold.	Silver.
			oz. dwt. gr.	oz. dwt. gr.
2302	Sofala	Crushed sample, purporting to represent a carefully taken average of a quantity of roasted ore.	1 12 6	0 3 6
1928	"	Milky quartz, with mispickel	4 7 2	0 6 12
1946	"	Average sample of quartz, with arsenical and iron pyrites...	0 17 9	0 4 8
4335	"	Quartz with chlorite	0 7 14	0 4 8
1045	Spring Brook ("Marvel Reef").	Blanketings	1 12 16	0 16 4
1256	Spring Creek, Sofala	Tailings	1 18 2	0 4 8
4121	Spring Vale (near Temora)	"	0 7 14	0 2 4
4122	"	Blanketings	0 16 4	0 3 6
153	Stuart Town	Mispickel	0 9 18	0 1 22
787	"	Concentrates	4 12 12	1 7 4
2099	" ("Canadian Mine).	Pyritous milky quartz, with partings of chloritic material. Concentrates, 17.5 per cent. =	1 2 20	0 3 10
1433	Staggy Creek, Inverell	Crystallised white quartz. (Free gold visible)	4 12 3	0 13 17
2740	Stuart's Brook ("The Jeweller's Shop").	Quartz	38 2 5	6 10 16
5770	Stockinbingal	"	0 6 12	0 5 10
2771	"	"	1 2 20	0 9 19
3399	Stone Creek	Ferruginous and pyritous white quartz	0 15 2	3 7 12
3400	"	White quartz	1 6 2	0 4 8
3401	"	"	0 7 14	0 3 6
4392	Stony Creek, near Albury	Quartz with iron and arsenical pyrites	0 7 14	0 3 6
2963	Sugarloaf, near Newbridge	Tailings	0 5 11	0 11 20
4309	" (Fraser & party's lease).	"	1 5 0	0 3 6
623	Sunny Corner	Pyritous white quartz	0 18 8	0 6 12
4595	Sutton, near (Bradley's Claim).	Pyritous ferruginous quartz, with chloritic partings	4 1 15	1 2 20
2961	Tarana (13 miles from)	Pyritous ferruginous quartz, with chloritic partings	0 19 11	0 4 8
4471	"	Massive iron pyrites	0 5 10	2 15 12
2744	Tanworth	Micaceous schistose rock, traversed by a vein of pyrites	0 10 21	0 4 8
3954	Tarrabandra, parish of (county of Wynyard).	Soapy white material, apparently a magnesium silicate	2 14 10	0 8 17
1653	Temora	Pyritous white quartz containing a little chloritic material	5 11 1	0 8 17
1874	" (14 miles S.E. of)	Quartz, with clay-slate	7 1 13	0 10 21
3041	"	Ferruginous cellular quartz in slate	5 17 14	0 6 12
3455	" (3 miles N. of)	Pyritous pink and white quartz	0 6 12	0 3 6
3654	"	Ferruginous cavernous quartz	2 14 10	0 6 12
3655	"	Quartz, with more or less slate	1 19 4	0 4 8
3656	"	"	0 8 17	0 2 4
3658	"	"	4 1 15	0 5 10
3731	" (7 miles from)	"	8 18 13	1 1 13
3777	" District	Broken up quartz	0 14 0	0 3 6
4904	The Bogie, near Windeyer	Ferruginous quartz	1 17 0	0 6 12
4143	The Overflow, Nynghan	Quartz charged with mispickel	1 12 16	0 10 21
203	Timbarra	Concentrates 41.80 per cent. =	5 4 12	0 12 22
215	"	Ferruginous quartz	2 14 10	3 5 8
220	"	Granite traversed by a quartz vein carrying molybdenite	0 18 8	0 3 6
715	" (5 miles W. of)	Cream-coloured, weathered, fine-grained granite	0 7 14	0 3 6
2251	Tilbuster ("Great Britain" Claim).	Fine-grained granite	2 12 6	0 15 2
2530	"	Friable rock, consisting principally of granular quartz and containing minute plates of specular iron-ore.	0 5 10	0 2 4
3575	Tindary	Tailings	3 11 20	8 1 8
523	Tonmingley	Iron-stained quartz	2 16 3	4 7 2
524	"	Crushed quartz	2 12 6	0 4 8
4751	Toongabbie, King's Plains	"	0 18 8	0 5 10
4752	"	Iron-stained glassy quartz	2 2 11	0 4 8
1351	Trunkey	Iron and copper-stained glassy quartz	9 11 14	1 6 2
2090	"	Broken up slate and quartz	12 1 16	1 3 22
3264	" ("Bathurst" Mine).	Ferruginous cavernous quartz	0 5 10	0 2 4
1496	" Creek	Quartz, with arsenical and iron pyrites	1 11 13	0 3 6
3452	" ("British Lion" Mine).	Pyritous chloritic schist, traversed by a vein of pyritous calcite carrying a little galena. Concentrates, 15.8 per cent. =	1 10 11	0 4 8
3865	"	Greenish quartz	38 2 5	4 7 2
1164	Tumbarumba	White quartz, with arsenical and iron pyrites	1 19 4	0 4 8
1605	" (M.L. 238)	Vein of cavernous white quartz traversing granite and slate	0 9 19	0 7 14
1606	"	Black sand (from old sluicing works)	6 6 3	2 16 14
1657	" (3 miles N. of)	"	8 15 15	0 5 18
2265	" (11 miles N.W. of).	Black sand (from old sluicing works)	0 19 14	0 2 4
3511	"	Black sand (from old sluicing works)	1 6 2	0 12 22
3874	" (3 miles N. of)	Black sand (from old sluicing works)	0 9 19	0 3 6
4097	"	Black sand (from old sluicing works)	2 10 1	0 4 8
1756	Turon District	White quartz	0 5 10	0 3 6
2106	Tuglamah Gold-field	Quartz and arsenical pyrites	2 2 11	0 7 14
2107	"	Ferruginous cellular quartz, surrounding a cone of oxidised pyrites.	2 19 19	0 13 1
2392	Tumut District	Blanketings	4 8 4	2 4 15
		Broken up ferruginous quartz	2 10 1	2 18 18
		Ferruginous cellular quartz	1 19 4	0 6 12
		Black sand. (See 2,892 under tin)		

Official Number.	Locality- stated by the finder to be.	Description.	Per ton.	
			Gold.	Silver.
			oz. dwt.gr.	oz. dwt.gr.
2931	Tuena ("Golden Dyke" Mine).	Siliceous slate.....	2 14 10	0 6 12
2032	" (" " ")	" "	0 7 14	0 3 6
2941	" (" " ")	" "	0 15 2	0 4 8
2943	" (" " ")	" "	1 12 16	0 6 12
3538	" (" " ")	Ferruginous quartz, containing free gold	19 18 12	0 4 8
3413	"	Pyritous and cellular quartz	0 5 10	9 14 21
3703	Turneil.....	Ferruginous quartz and slate	1 1 18	0 4 8
1819	Tweed and Richmond Rivers (between).	Beach sand	10 12 9	.....
		Platinum =	18 9 22	
		Osmicidium =	6 10 16	
4410	Ulladuila	Quartz	2 8 23	0 3 6
907	Uralla	Iron-stained vitreous white quartz	0 7 14	0 3 6
1635	" (7 miles W. of) ..	Siliceous pyritous material	4 7 2	24 9 22
1689	" " " " ..	Granular iron pyrites.....	2 18 18	27 15 4
2459	" " " " ..	Massive arsenical pyrites	0 15 2	4 13 14
3773	" (near)	Blue quartz	0 5 10	0 2 4
3997	" District	Tailings	0 19 11	0 6 12
4211	" (16 miles from) ..	Crushed quartz	1 8 6	0 15 2
4212	" " " " ..	" "	0 7 14	0 3 6
4302	" (4 miles from) ..	Crystallised quartz, in felspathic material	0 7 14	0 3 6
18	Walcha (18 miles from) ..	Partly crushed sample of ferruginous quartz.....	0 12 23	0 3 6
19	" " " " ..	Iron-stained quartz.....	4 2 17	0 4 8
1808	" " " " ..	Mispickel, with quartz	0 11 20	0 3 6
20	Wagga	Ferruginous cellular quartz	1 12 16	0 6 12
705	Walbundrie	Ferruginous quartz	1 12 16	0 10 21
1066	Wantiole (near Junee) ..	Highly pyritous quartz, with a little granite	1 8 6	0 4 8
		Concentrates, 43.6 per cent. =	3 3 3	0 4 8
4661	Warrell Creek (near Kempsey).	Mispickel, in quartz	0 7 14	0 5 10
4677	Wangat (county of Durham).	Quartz	3 0 22	0 19 11
4762	Wattle Flat	Slightly pyritous glassy quartz.....	0 8 17	0 2 4
2001	"	Iron pyrites, with a little calcite	1 8 22	0 8 17
2002	"	Iron pyrites.....	0 5 10	0 4 8
2008	"	Quartz, with a little chlorite and calcareous material ..	0 9 19	0 3 6
4564	"	White quartz, with flakes of mica	3 0 22	0 12 22
4785	Warratta (E. of Milparinka).	Milky quartz	0 7 14	0 3 6
4822	Walkin Hill (Overflow) ..	Ferruginous cellular quartz	0 6 12	0 2 4
2193	Walker's Hill (near Nymagee).	Massive ferruginous cerussite. (See 2,193, under "Lead")	0 8 17	6 12 19
2342	Washaway Ck. (Bungonia)	Siliceous ironstone	0 5 10	0 2 4
2343	" " " " ..	Quartz	1 3 22	0 4 8
8931	Warrambucca (near Braidwood).	Friable iron-stained quartz	0 14 0	0 3 6
3915	Wagonga	Quartz	1 14 20	0 8 17
3960	" North	" "	1 12 16	0 6 12
3245	Warrumbungle Mountains (Coonabarabran).	Ferruginous quartz	2 16 14	0 6 12
3246	" " " " ..	" "	6 1 19	0 10 21
3247	" " " " ..	" "	7 12 10	7 3 17
3248	" " " " ..	" "	1 17 0	1 12 16
463	Welcome Reef.....	Crushed sample	6 13 21	0 10 21
1843	Wellington	Quartz, with copper pyrites	0 19 11	0 12 22
4442	" and Gulgong (between).	Ferruginous copper-stained quartz, containing copper pyrites.	2 3 13	0 15 2
4364	" District	Ferruginous cellular and pyritous quartz	1 1 18	0 5 10
4365	" " " " ..	Ferruginous quartz.....	1 1 18	7 10 6
4366	" " " " ..	" "	1 10 11	0 8 17
3170	" " " " ..	White quartz	0 8 17	0 3 6
1733	Whipstick	Coarsely crushed pyritous quartz.....	1 9 22	1 0 3
446	Wiseman's Creek.....	Very ferruginous cavernous quartz	0 5 10	0 2 4
8048	Woolgoolga	Quartz	0 8 17	0 4 8
4652	"	Blanketings	1 1 18	0 12 22
4146	Wolumla Peak (E. of).....	Felsite, somewhat ferruginous and cellular.....	0 12 22	0 4 8
1501	Wyndham	Quartz, containing galena, copper pyrites, and much iron pyrites.	2 16 14	1 12 16
8586	"	Rock, containing iron and arsenical pyrites	3 16 5	6 3 23
3940	Wyangle (near Tamut) ..	Iron-stained quartz.....	16 17 10	1 19 4
3067	" (parish of)	Quartz and granite.....	0 17 9	0 6 12
3393	" " " " ..	Quartz, with a little galena	3 5 8	0 10 21
3383	" " " " ..	Quartz and slate.....	50 1 18	6 18 5
3384	" " " " ..	White quartz	1 11 13	0 9 19
90	Wyalong	Blanketings	0 10 21	0 6 12
172	"	Siliceous ironstone, showing specks of gold	32 14 10	6 9 10
345	Wyalong (Pine Ridge) ..	Iron-stained quartz	19 5 10	1 14 20
353	"	Ferruginous quartz	0 5 10	0 9 19
576	"	Tailings	0 15 2	0 2 4
577	"	Blanketings	2 14 10	0 5 10
1018	"	Pyritous translucent quartz	28 19 6	3 18 9
1540	" (Pine Ridge) ..	Quartz	3 18 8	0 4 8
1599	"	Very ferruginous cellular quartz.....	0 6 12	0 2 4

Official Number.	Locality—stated by the finder to be.	Description.	Per ton.	
			Gold	Silver.
			oz. dwt. gr.	oz. dwt. gr.
2062	Wynlong West (Glasson and party's Claim).	Quartz	3 7 12	0 9 19
2063	" " " "	Ferruginous pyritous quartz	7 3 17	3 5 8
2064	" " " "	Pyritous quartz	3 11 20	1 12 16
2197	" (Spy Hill)	Ferruginous quartz	1 12 6	0 6 12
2424	" (Sweetland's Claim). District	Brown jasperoid quartz	0 11 20	0 3 6
2495	" " " "	Iron-stained quartz	0 7 14	0 3 6
2496	" " " "	" " " "	1 10 11	0 6 12
2501	" West	Ferruginous quartz	15 4 20	2 1 9
2502	" " " "	Siliceous ironstone	0 18 8	1 11 13
2620	" 50 miles N.W. of	Ferruginous quartz	3 0 22	5 2 8
2648	" " " "	Siliceous pyritous ironstone	0 14 0	0 18 8
2669	" " " "	Pyritous quartz	0 12 22	0 4 8
2760	" " " "	Ferruginous quartz	1 8 6	0 6 12
2860	" West	Tailings	0 19 11	0 8 16
2861	" " " "	Blanketings	1 9 8	0 8 16
2863	" ("Mallee Bull" Claim). District	Pyritous and ferruginous quartz	0 17 9	0 10 21
2944	" (Hubel's Claim)	Cellular quartz	18 5 20	1 17 0
3015	" ("Mallee Calf" Claim). District	Pyritous red quartz	1 17 0	2 7 21
3020	" " " "	Highly pyritous quartz	15 4 20	4 2 17
3147	" ("Pine Hill" Claim). District	Blanketings	0 9 18	0 3 6
3192	" " " "	Ironstone, showing a very little free gold	10 14 11	0 14 0
3295	" " " "	Crushed pyritous quartz	0 6 12	2 12 6
3318	" " " "	Pyritous pink and white quartz	2 3 13	0 15 4
3345	" 5 miles S.W. of	Pink quartz, with a vein of white mica	0 11 22	0 3 6
3474	" ("No. 6 South Rybuck" Mine) District	Broken-up pyritous quartz	0 15 2	0 6 12
3476	" " " "	Ferruginous quartz	24 3 10	4 13 14
3477	" ("Rybuck" Mine). District	Pyritous quartz	1 12 6	0 10 21
3549	" West, 2½ miles from	Pyrites and quartz	1 2 20	0 5 10
3606	" " " "	Siliceous pyritous nodules, to a large extent oxidised	4 9 6	2 1 9
3609	" " " "	Ferruginous quartz, weathered	1 6 2	0 4 8
3629	" ("White Feather"). District	Quartz, with a few specks of galena	1 10 11	0 4 8
3630	" (Duncan's Mine) District	" " " "	6 10 16	1 3 22
3631	" " " "	Crushed sample	3 6 10	0 4 8
3644	" near—(Billy's Look-out). District	Quartz	1 10 11	0 4 8
2166	" near—(1 mile N. of Billy's Look-out). District	Crushed sample	1 1 18	0 5 10
3893	Wyalong	Ferruginous quartz, with a little pyrites	2 18 18	0 10 21
4256	" West	Concentrates	1 8 6	0 4 8
4275	" South of	White quartz, with a few pyritous kernels	1 14 20	0 6 12
4607	" West (¾ mile S.W. of). District	Pyritous quartz, with a little galena	3 0 22	0 12 22
4622	" " " "	Pyritous white quartz	0 17 9	0 6 12
4658	" 2 miles S.W. of	Very ferruginous pyritous quartz	10 19 4	3 0 22
4756	" 1 mile from	Quartz, heavily charged with pyrites	0 17 9	0 6 12
168	Yalwal	Crushed quartz	0 5 21	0 3 6
249	" (Grassy Gully)	White quartz, with a little slaty material	75 6 23	15 2 16
250	" (Back Creek)	Ferruginous crystallised quartz	0 12 22	0 4 8
2155	" "Pinnacle" Mine	Quartz, ferruginous	7 12 10	1 14 20
2595	" " " "	Iron-stained quartz	1 14 20	14 13 23
2917	" " " "	Pyritous quartz	0 10 21	0 2 4
4532	" " " "	Siliceous pyritous brecciated porphyry	0 15 2	0 6 12
4697	" " " "	Felsite	3 11 20	0 8 17
2017	" ("Pinnacle Mine")	Iron-stained quartz	2 3 13	1 0 13
4230	" ("Eclipse" Mine")	Crushed sample	1 1 18	0 4 8
2984	" ("Pinnacle" Mine) District	Tailings	0 15 2	0 3 6
930	Yalgogrin	Quartz	0 6 12	2 12 6
2023	" (Butcher's Lease)	Felspathic iodestuff	1 12 16	0 5 10
4497	" ("Southern Cross" Claim). District	Crushed sample, concentrates, 5 per cent. =	63 14 0	18 18 22
2477	" " " "	Honeycombed quartz, with a few specks of pyrites	8 3 7	0 15 2
2503	" " " "	Ferruginous cavernous quartz: by amalgamation =	2 3 3	0 5 6
		Not recovered by amalgamation, but by fire assay =	0 0 10	0 7 16
2504	" " " "	Ferruginous pyritous quartz: by amalgamation =	5 17 14	0 10 16
		Not recovered by amalgamation, but by fire assay =	0 7 21	0 0 16
2505	" " " "	Pyritous quartz: by amalgamation =	3 15 15	1 12 6
		Not recovered by amalgamation, but by fire assay =	1 2 9	0 17 9
3206	Yarrangobilly	Ferruginous quartz	8 1 17	0 3 6
3207	" " " "	" saccheroidal quartz	2 1 9	1 3 22
4093	Yass (Red Hill Reef)	Quartz	16 13 4	1 1 18
4558	" District	Gossany ironstone	2 1 9	0 10 21
2478	Young	Ferruginous quartz, with a little galena	3 0 22	1 17 0
2479	" " " "	White quartz	0 7 14	0 3 6

COAL.

The output of coal for 1895, as compared with the previous year, shows an increase of 66,513 tons, but a decrease in the value of £60,246. The coal-mining industry of the Colony has during the year been in a most depressed state. No doubt the lamentable labour disputes which have unfortunately existed in this very important industry have materially helped to bring about this result. It is gratifying to notice, however, that our growing export trade, which received a severe check in 1890 from this cause, is improving. This Colony has now to face a strong competition from the mines being opened up in Japan, and it behoves both owners and men to use every effort to prevent a recurrence of strikes if the trade is to be preserved to the Colony. As will be seen from the following table the average total value of the whole output was only 5s. 10 3/4d. per ton, which is the lowest price recorded since the opening of our coal fields. The Sydney Collieries Company have not yet started operations to sink at Cremorne, near Sydney, negotiations for a suitable site for wharfage not having been completed by the Company. The total number of collieries under inspection throughout the Colony at the 31st December, 1895, was 99 coal and 7 shale mines, an increase on 1894 of 2 coal and 2 shale mines.

QUANTITY and Value of Coal raised from the opening of the Coal-seams to 1857, inclusive :—

Year.	Quantity.	Average per ton.	Value.	Year.	Quantity.	Average per ton.	Value.
Prior to		£ s. d.	£			£ s. d.	£
1829	50,000	0 10 0 00	25,000	1844	23,118	0 10 8 34	12,363
1829	780	0 10 1 23	394	1845	22,324	0 7 10 27	8,769
1830	4,000	0 9 0 00	1,800	1846	38,965	0 7 0 46	13,714
1831	5,000	0 8 0 00	2,000	1847	40,782	0 6 9 01	13,750
1832	7,143	0 7 0 00	2,502	1848	45,447	0 6 3 38	14,275
1833	6,812	0 7 6 73	2,575	1849	48,516	0 6 0 45	14,641
1834	8,490	0 8 10 00	3,750	1850	71,216	0 6 6 77	23,375
1835	12,392	0 8 10 19	5,483	1851	67,610	0 7 6 51	25,546
1836	12,046	0 9 1 06	5,747	1852	67,404	0 10 11 33	36,885
1837	16,088	0 9 8 81	5,828	1853	96,809	0 16 1 51	78,059
1838	17,220	0 9 9 05	8,399	1854	116,642	1 0 5 63	119,380
1839	21,283	0 9 9 73	10,441	1855	137,076	0 12 11 96	89,082
1840	30,256	0 10 10 86	16,498	1856	189,960	0 12 4 00	117,906
1841	34,841	0 12 0 00	20,905	1857	210,434	0 14 0 97	148,158
1842	39,900	0 12 0 00	23,940				
1843	25,802	0 12 6 54	16,222				
					1,468,961	0 11 10 72	869,391

TABLE showing the Quantities and Average Value per ton of Coal exported to Intercolonial and Foreign Ports respectively, the Quantity of Coal consumed in this Colony, and the Average Price per ton of the total output of the Collieries, from 1858 to 1895 inclusive.

Year.	Exports to Intercolonial Ports.			Exports to Foreign Ports.			Total Exports.			Home consumption.	Total Output and Value.		
	Quantity.	Average per ton.	Value.	Quantity.	Average per ton.	Value.	Quantity.	Average per ton.	Value.		Quantity.	Average per ton.	Value.
	Tons.	£ s. d.	£	Tons.	£ s. d.	£	Tons.	£ s. d.	£	Tons.	Tons.	£ s. d.	£
1858	101,488	0 15 1 67	70,824	12,030	1 0 1 85	12,132	113,627	0 15 8 05	88,456	102,870	216,267	0 14 11 84	169,162
1859	120,586	0 14 6 47	94,312	44,349	0 17 5 27	38,672	173,935	0 15 3 49	132,984	134,278	308,213	0 13 3 14	204,371
1860	140,183	0 14 10 55	104,471	91,694	0 16 11 10	79,290	233,877	0 15 8 37	183,704	134,985	368,392	0 12 3 30	279,403
1861	167,273	0 15 2 26	110,438	50,502	0 16 5 37	41,632	207,780	0 15 6 92	160,966	134,287	342,067	0 12 9 62	218,820
1862	195,427	0 15 0 66	147,019	113,555	0 17 4 34	93,405	308,782	0 15 10 75	215,422	167,740	476,522	0 12 9 73	308,234
1863	213,909	0 13 8 40	146,532	84,129	0 17 6 10	73,649	298,038	0 14 9 30	220,181	135,851	433,889	0 10 10 66	236,230
1864	238,539	0 10 3 74	146,109	88,927	0 11 10 90	66,289	327,466	0 11 4 91	212,488	170,546	549,012	0 9 10 10	270,171
1865	292,694	0 9 11 83	149,129	90,394	0 15 0 79	68,029	382,063	0 11 2 20	214,158	202,560	555,625	0 8 4 43	274,308
1866	344,194	0 9 2 98	159,175	199,711	0 14 4 33	141,413	540,905	0 11 1 37	300,388	233,323	774,238	0 8 4 44	324,049
1867	312,101	0 9 4 35	149,111	161,256	0 13 3 47	107,148	473,357	0 10 8 40	253,230	290,655	770,012	0 8 10 79	342,055
1868	320,052	0 9 5 76	155,976	218,934	0 12 5 29	136,226	548,036	0 16 7 96	292,201	400,195	654,231	0 8 9 69	417,600
1869	340,466	0 8 9 07	149,059	255,067	0 11 8 31	149,136	595,533	0 10 0 16	298,185	324,221	919,774	0 7 0 32	346,146
1870	335,564	0 8 0 02	142,056	242,825	0 10 8 57	125,925	578,380	0 9 3 07	267,681	290,175	868,564	0 7 3 54	316,826
1871	378,891	0 8 6 01	162,470	186,538	0 10 1 22	91,220	566,429	0 9 0 95	256,690	333,356	895,784	0 7 0 47	316,940
1872	394,052	0 8 8 11	170,947	275,058	0 9 11 46	136,914	639,110	0 9 2 42	307,891	343,316	1,012,426	0 7 9 32	396,198
1873	425,937	0 12 9 32	272,110	347,142	0 14 7 39	233,979	773,079	0 13 7 32	526,689	419,783	1,192,862	0 11 1 94	666,747
1874	467,583	0 18 8 30	320,119	405,442	0 15 4 76	312,128	873,025	0 14 5 81	634,247	431,587	1,304,012	0 12 1 37	790,224
1875	513,553	0 13 7 77	354,974	408,154	0 15 6 04	317,493	927,007	0 14 5 84	671,483	492,722	1,329,729	0 12 3 89	819,429
1876	512,052	0 13 8 45	372,045	325,865	0 15 6 45	253,160	898,817	0 14 4 70	625,211	451,101	1,310,918	0 12 2 06	808,300
1877	623,757	0 13 8 64	386,740	351,970	0 14 10 81	292,237	915,727	0 14 2 08	648,977	528,544	1,444,271	0 11 10 74	858,098
1878	623,323	0 13 5 77	427,954	383,097	0 14 7 09	231,452	1,006,429	0 14 6 93	708,406	609,077	1,575,497	0 11 8 28	929,898
1879	621,957	0 13 6 75	421,108	374,062	0 14 6 13	273,509	998,049	0 13 11 65	694,707	585,382	1,583,381	0 12 0 12	959,878
1880	650,672	0 11 2 47	300,004	292,634	0 11 6 70	116,235	783,356	0 11 3 48	425,299	712,824	1,496,180	0 8 0 36	615,336
1881	687,135	0 7 9 34	255,572	373,700	0 8 8 29	161,058	1,029,844	0 8 1 39	417,450	739,733	1,769,597	0 6 9 35	603,248
1882	700,226	0 9 6 34	272,334	501,319	0 10 11 50	274,699	1,261,543	0 10 3 09	647,033	847,737	2,109,282	0 8 11 97	943,965
1883	856,704	0 10 5 75	448,356	656,741	0 11 7 34	331,906	1,312,443	0 10 11 63	829,692	1,009,012	2,317,457	0 9 6 40	1,201,941
1884	924,057	0 10 8 06	532,988	696,076	0 11 5 14	398,107	1,690,793	0 11 0 13	931,043	1,038,840	2,749,109	0 9 6 71	1,308,076
1885	991,924	0 10 7 13	525,443	761,432	0 11 6 52	441,220	1,756,356	0 11 0 99	906,603	1,122,567	2,878,863	0 9 3 72	1,340,212
1886	1,027,775	0 10 7 22	644,824	708,090	0 11 4 31	402,178	1,735,865	0 10 10 93	947,002	1,091,310	2,830,175	0 9 2 53	1,303,164
1887	1,077,270	0 10 5 89	565,954	713,172	0 11 1 08	395,456	1,790,442	0 10 8 75	960,539	1,132,055	2,922,497	0 9 2 57	1,346,440
1888	1,039,764	0 10 10 23	561,293	834,108	0 11 3 77	500,179	1,923,372	0 11 0 78	1,061,472	1,279,572	3,203,444	0 9 1 02	1,456,198
1889	1,310,223	0 10 4 24	678,200	1,077,474	0 11 1 88	601,071	2,387,702	0 10 8 58	1,279,271	1,267,030	3,655,632	0 8 11 20	1,632,848
1890	1,149,344	0 10 6 96	603,168	672,330	0 11 5 31	379,965	1,821,871	0 10 10 04	987,173	1,239,002	3,060,876	0 8 4 29	1,279,088
1891	1,397,256	0 10 0 30	700,389	547,473	0 10 10 43	460,585	2,244,729	0 10 4 12	1,169,985	1,793,209	4,037,939	0 8 7 58	1,742,705
1892	1,318,008	0 8 10 89	537,016	675,697	0 10 1 24	441,379	2,191,705	0 9 4 01	1,028,336	1,580,263	3,780,968	0 7 8 52	1,462,388
1893	1,169,235	0 8 6 05	493,372	674,852	0 9 6 35	321,567	1,836,090	0 8 10 57	814,929	1,443,238	3,278,328	0 7 1 78	1,171,722
1894	1,175,972	0 7 1 73	419,751	950,653	0 8 1 26	385,018	2,125,123	0 7 6 83	801,769	1,546,351	3,672,076	0 6 3 53	1,156,573
1895	1,196,504	0 6 0 60	467,271	969,720	0 7 6 75	396,683	2,166,210	0 7 1 74	773,954	1,572,350	3,738,689	0 5 10 31	1,095,327
	24,373,293	0 10 4 40	12,633,493	16,277,926	0 11 5 82	9,347,722	40,661,210	0 10 9 68	21,971,211	26,252,682	60,993,778	0 8 10 98	20,823,600

The following statement shows that the output of coal in the Northern District was 26,079 tons in excess of 1894 although there is a decrease in value of £69,947. In the Western District there was a decrease of 9,005 tons in the output and of £5,202 in the value. The Southern and South-Western Districts, however, show an increase of 49,439 tons, but an increase of only £14,903 in the value.

COMPARATIVE Statement of Output of Coal in the Northern, Western, and Southern Districts.

	1887.		1888.		1889.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
Output, Northern District.....	2,243,792 0 0	£ 1,096,720 0 7	2,067,042 4 3	£ 1,022,022 8 10	2,624,347 3 0	£ 1,261,224 16 5
Increase as compared with previous year	65,676 0 0	12,165 3 6	.....	.....	557,304 18 1	239,202 7 7
Decrease do do	.....	.....	176,749 15 1	74,697 11 9	.....	.....
Output, Western District	802,137 0 0	79,036 0 2	339,594 9 0	95,136 3 0	329,713 8 0	81,459 1 1
Increase as compared with previous year	20,908 0 0	10,420 5 2	37,457 9 0	16,100 2 10	.....	.....
Decrease do do	.....	.....	.....	.....	9,881 6 0	13,677 1 11
Output, Southern District	376,568 0 0	170,684 1 10	796,806 10 0	338,039 12 3	701,572 0 0	290,164 18 0
Increase as compared with previous year	5,738 0 0	20,690 9 10	420,238 10 0	167,355 10 5	.....	.....
Decrease do do	.....	.....	.....	.....	95,234 10 0	47,874 14 3

	1890.		1891.		1892.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
Output, Northern District	2,120,046 6 1	£ 995,931 2 6	2,853,251 13 1	£ 1,354,028 12 8	2,611,731 13 0	£ 1,102,694 14 5
Increase as compared with previous year	.....	.....	733,205 7 0	358,097 10 2	.....	.....
Decrease do do	501,300 16 3	265,293 13 11	.....	.....	241,520 0 1	251,333 18 3
Output, Western District	343,232 3 2	65,095 3 0	346,804 13 0	74,104 17 10	236,363 1 6	57,414 13 8
Increase as compared with previous year	13,510 0 2	.....	3,572 9 2	8,109 14 10	.....	.....
Decrease do do	.....	15,463 18 1	.....	.....	110,441 12 0	16,689 4 2
Output, Southern District	597,598 0 0	217,162 13 11	837,873 0 0	314,662 2 0	932,873 0 1	302,279 1 8
Increase as compared with previous year	.....	.....	240,275 0 0	97,499 8 1	95,000 0 1	.....
Decrease do do	103,974 0 0	73,002 4 1	.....	.....	.....	12,383 0 9

	1893.		1894.		1895.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
Output, Northern District	2,203,480 10 0	£ 880,218 4 3	2,605,142 13 1	£ 833,174 14 7	2,631,221 11 0	£ 813,227 15 6
Increase as compared with previous year	.....	.....	491,662 3 1	2,956 10 4	26,078 17 3	.....
Decrease do do	408,251 3 0	222,476 10 2	.....	.....	.....	69,946 19 1
Output, Western District	190,377 19 1	43,241 14 5	199,869 12 0	45,463 0 7	190,864 14 1	40,260 15 3
Increase as compared with previous year	.....	.....	9,491 12 3	2,221 6 2	.....	.....
Decrease do do	45,985 1 3	14,172 19 3	.....	.....	9,004 17 3	5,202 5 4
Output, Southern and South-western Districts.	884,469 18 0	248,262 5 10	867,063 19 0	226,935 12 8	916,502 15 0	241,838 10 3
Increase as compared with previous year	.....	.....	17,405 19 0	21,326 13 2	49,438 16 0	14,902 17 7
Decrease do do	48,403 2 1	54,016 15 5	.....	.....	.....	.....

The average price of Coal in the several districts was as follows :—

	1894.	1895.	
	s. d.	s. d.	s. d.
Northern	6 9 36	6 2 17	a decrease of 0 7 19 per ton.
Western.....	4 6 59	4 2 62	a decrease of 0 3 97 „
Southern and South-western ...	5 2 82	5 3 32	an increase of 0 0 50 „

OUTPUT OF COAL.

Colliery.	District.	Men employed.			Quantity.	Value.
		Above ground.	Under ground.	Total.		
<i>Northern District.</i>						
Australian Agricultural Coy.'s No. 2 pit.	Newcastle.....	85	264	349	154,517 0 0	£ 51,178 12 9
Australian Agricultural Coy.'s New Winning.	"	20	118	138	55,521 0 0	18,397 9 0
Bayley's Reward.....	Lambton	1	1	2	89 0 0	22 5 0
Burwood	"	36	216	252	99,968 0 0	30,578 17 6
Burwood Extended	Dudley	3	2	5	1,437 0 0	502 19 0
Brown's	Minmi	75	360	435	139,570 0 0	36,072 0 0
Bloomfield	East Maitland	2	7	9	2,600 0 0	1,040 0 0
Bells	Lambton	1	2	3	256 0 0	37 12 0
Co-Operative	Plattsburg	54	288	342	141,332 0 0	44,705 0 0
Centenary	Curlewis	7	20	27	8,500 0 0	3,400 0 0
Dulwich	Singleton	2	8	10	2,345 0 0	809 2 0
Dudley	Dudley	2	3	5	.....	.....
Denton Park	West Maitland.....	6	25	31	26,000 0 0	7,150 0 0
Duckenfield	Minmi	60	310	370	110,436 0 0	28,697 0 0
Ebbw Vale	New Lambton	5	25	30	10,576 0 0	2,027 19 0
East Greta	West Maitland	33	152	185	73,199 0 0	22,499 0 0
Elliott's	Rix's Creek, Singleton.	2	2	4	590 0 0	339 0 0
Elmore Vale	Wallsend	3	16	19	9,755 0 0	1,575 15 7
Font Hill.....	Farley, West Maitland.	6	20	26	3,500 0 0	1,130 0 0
Gunnedah	Gunnedah.....	3	9	12	3,934 1 0	983 10 0
Gladstone	"	3	3	6	1,916 4 0	776 9 6
Greta	Greta	41	173	214	72,262 10 0	27,098 8 9
Gartlee.....	Teraiba	7	30	37	19,550 0 0	4,376 0 0
Green's.....	Lambton .....	.....	.....	.....	.....	.....
Hetton	Carrington	48	374	422	207,222 0 0	59,802 0 0
Hillside	Waratah	1	2	3	1,273 0 0	254 0 0
Jackson's	Lambton	1	3	4	150 0 0	37 10 0
Kyuga	Muswellbrook	1	1	2	602 10 0	175 19 0
Lambton	Lambton	40	264	304	112,368 0 0	35,092 16 0
Liddles	Waratah	1	2	3	996 0 0	323 14 0
Louisvale	East Maitland	1	2	3	400 0 0	92 10 0
Marshall's .....	" .....	.....	1	1	403 0 0	94 4 0
Morrissett	Lake Macquarie	2	4	6	3,170 0 0	792 10 0
Morley	Gunnedah	1	3	4	292 6 0	133 15 11
Maryland.....	Plattsburg	5	30	35	26,250 0 0	7,647 0 0
Mercedith's	Lambton	1	1	2	23 0 0	5 15 0
Newcastle-Wallsend	Wallsend	131	719	850	369,131 0 0	123,272 6 0
Newcastle Coal Co., A.B.	Merawether	126	577	703	237,142 0 0	73,446 14 9
New Lambton	New Lambton	30	80	110	15,607 0 0	4,994 6 0
New Anvil Creek	Greta.....	6	25	31	10,680 0 0	3,560 0 0
New Park	Singleton	10	20	30	9,651 14 0	3,144 17 6
Northumberland.....	Fassifern	1	2	3	2,510 0 0	589 0 0
Oakvale	Singleton	2	1	3	150 0 0	65 10 0
Pacific	Teraiba	28	148	176	102,409 0 0	32,149 7 0
Quarry.....	North Lambton	1	1	2	295 0 0	88 0 0
Rosedale	Singleton	1	5	6	1,183 0 0	363 6 0
Rose Hill.....	North Lambton .....	.....	1	1	350 0 0	70 0 0
Reay's	Lambton	1	1	2	40 0 0	12 0 0
Stockton	Stockton	60	260	320	119,360 0 0	46,830 2 6
South Wallsend	Cardiff	10	60	70	29,135 0 0	6,938 0 0
South Hetton	Toronto	1	2	3	831 0 0	290 17 0
Seaham	West Wallsend.....	60	180	230	43,656 0 0	14,328 0 0
Sunderland	East Maitland	2	1	3	20 0 0	5 0 0
Sunlight	Lambton .....	.....	.....	.....	.....	.....
Surprise	"	1	1	2	383 0 0	89 14 0
Side	Waratah	1	2	3	308 0 0	61 16 6
Sunnyside	New Lambton .....	.....	.....	.....	.....	.....
South Waratah	Charlestown	38	187	225	81,239 0 0	23,097 0 0
Seaton's	East Maitland	1	1	2	36 0 0	7 6 0
Thornley's	"	3	4	7	1,844 0 0	414 18 0
Wickham and Bullock Island	Carrington	45	263	313	162,476 6 0	43,743 16 0
West Wallsend	West Wallsend.....	30	209	230	78,411 0 0	24,893 0 0
Wallarah	Swansea.....	34	116	150	73,273 0 0	18,890 14 3
Wright's	Waratah .....	.....	2	2	98 0 0	24 10 0
		1,172	5,605	6,777	2,631,221 11 0	813,247 15 6

Colliery.	District.	Men employed.			Quantity.	Value
		Above ground.	Under ground.	Total.		
<i>Southern District.</i>						
Austinmeer	North Bulli	16	62	78	16,842 0 0	5,894 14 0
Bulli	Bulli	10	25	35	5,000 0 0	1,500 0 0
Bulli Steam Coal	"	6	20	26	3,900 0 0	840 0 0
Bellambi	Bellambi	14	70	84	9,824 0 0	2,766 3 0
Coalcliff	Clifton	10	32	42	18,100 0 0	4,006 4 3
Corrimal	Corrimal	29	154	183	111,583 0 0	33,474 18 0
Mount Pleasant	Wollongong	61	124	185	69,253 0 0	20,830 15 0
Mount Kembla	Mount Kembla	50	219	269	151,258 0 0	39,028 1 0
Metropolitan	Helensburgh	59	344	403	228,341 15 0	64,255 0 0
Osborne Wallsend	Wollongong	45	168	213	78,652 0 0	18,573 9 0
South Bulli	Bellambi	42	220	262	167,370 0 0	36,966 3 0
South Clifton	South Clifton	8	92	100	50,000 0 0	10,900 0 0
		350	1,530	1,880	910,123 15 0	239,035 7 3

South-western District.

Australian Kerosene Oil & Mineral Company.	Joadga	8	49	57	3,853 0 0	1,931 0 0
Box Vale	Mittagong	2	3	5	1,100 0 0	330 0 0
Great Southern	Moss Vale	3	4	7	1,426 0 0	542 3 0
		13	56	69	6,379 0 0	2,503 3 0

Western District.

Coerwull	Bowenfels	1	1	2	415 0 0	111 5 0
Cullen Bullen	Cullen Bullen	6	40	46	14,074 12 0	3,342 15 0
Eskbank	Eskbank	5	24	29	20,815 0 0	4,113 0 0
Folly	Lidsdale	1	1	2	70 0 0	21 10 0
Hermitage	Lithgow	2	25	27	22,612 19 0	4,354 12 0
Irondale	Piper's Flat .....	....	2	2	1,091 0 0	200 0 0
Ivanhoe	"	1	7	8	6,724 0 0	1,344 16 0
Lithgow Valley	Lithgow	2	25	27	21,124 16 0	4,170 6 1
Old Tunnel	Eskbank	1	10	11	9,415 0 0	1,833 0 0
Oakey Park	Lithgow	4	20	24	21,673 0 0	4,733 18 0
Rawdon	Rylstone .....	....	2	2	376 18 0	106 16 3
Retort	Hartley Vale	1	8	9	6,521 0 0	978 12 0
Vale of Clwydd	Lithgow	5	32	37	22,559 9 0	5,632 5 11
Vale	"	17	30	47	29,136 0 0	4,635 0 0
Zig-zag	"	4	20	24	23,000 0 0	4,680 0 0
		49	247	296	150,864 14 0	40,260 15 3

South and Western Districts (Output of Shale).

SHALE.						
Australian Kerosene Oil & Mineral Company.	Joadga	8	49	57	5,054 0 0	6,318 0 0
Australian Kerosene Oil & Mineral Company (Nellie's Glen).	Katoomba	9	31	40	8,225 0 0	10,231 0 0
Australian Kerosene Oil & Mineral Company (Rummed Castle).	"	14	60	74	6,233 0 0	7,791 0 0
Australian Kerosene Oil & Mineral Company.	Genowlan	5	32	37	8,030 0 0	10,036 15 0
New South Wales Shale and Oil Company.	Hartley	71	72	143	*31,613 0 0	40,422 5 0
King's	Genowlan	1	2	3	241 5 0	369 18 8
		103	246	354	59,426 5 0	75,218 18 8

* This includes—1st class, 18,578 tons, valued at £37,156; 2nd class, 13,063 tons, valued at £3,266.

The number of men employed in and about the coal and shale mines of the Colony during 1895 were 9,376, which includes 354 men employed in shale-mines and 5 men employed sinking at the Dudley Mine not actually engaged in the raising of coal. The total number of men employed during 1894 was 9,428, so that there is only a decrease of 52 on the previous year. The total number of accidents in coal-mines recorded during the year were 10 fatal and 47 non-fatal. In the Northern district there were 9 fatal and 38 non-fatal accidents; in the Southern district, 1 fatal and 7 non-fatal; and in the Western district there were no fatal and only 2 non-fatal accidents. These figures unfortunately show an increase of 3 fatal and 7 non-fatal accidents, as compared with 1894.

The following table is intended to show that the safety of our mines can bear comparison with the coal-mines in the United Kingdom:—

SUMMARY of persons employed, number of fatal accidents (deaths), and ratios of the number of persons employed, and the number of fatal accidents in and about the "United Kingdom" and "New South Wales" Coal-mines, since 1874.

Year.	United Kingdom.				New South Wales.			
	Persons employ ed.	Lives lost by accident.	Persons employed per life lost.	Death-rate from accidents per 1,000 persons employ ed.	Persons employ ed.	Lives lost by accident.	Persons employ ed per life lost.	Death-rate from accidents per 1,000 persons employ ed.
1874	538,820	1,056	510	1.959	.....	5	.....	.....
1875	535,845	1,244	430	2.321	3,308	8	413	2.418
1876	514,532	933	551	1.813	4,084	4	1,021	0.979
1877	494,391	1,208	409	2.443	4,637	7	665	1.503
1878	475,329	1,413	336	2.972	4,792	8	590	1.669
1879	476,810	973	490	2.040	5,035	5	1,007	0.993
1880	484,933	1,318	368	2.718	4,676	8	584	1.710
1881	495,477	954	519	1.925	4,098	2	2,019	0.488
1882	503,987	1,126	447	2.234	4,487	12	373	2.674
1883	514,933	1,054	488	2.046	5,481	15	365	2.736
1884	520,376	942	552	1.810	6,227	14	444	2.248
1885	520,632	1,150	453	2.207	7,097	11	645	1.549
1886	519,070	953	545	1.833	7,847	20	270	3.694*
1887	526,277	995	529	1.890	7,998	94	85	11.752†
1888	534,945	888	601	1.666	9,301	15	620	1.612
1889	563,735	1,064	530	1.887	10,277	41	250	3.989‡
1890	613,233	1,160	529	1.891	10,315	13	793	1.260
1891	648,450	979	662	1.509	10,820	21	515	1.940
1892	664,300	982	676	1.478	10,910	8	1,364	0.733
1893	683,098	1,000	644	1.551	9,971	13	767	1.303
1894	703,240	1,127	626	1.598	9,126	7	1,303	0.767
1895	.....	.....	.....	.....	9,022	10	902	1.108

* Excessive number of falls of coal and Lithgow disaster caused this high death-rate.

† Bulli catastrophe and excessive falls of coal caused this high death-rate

‡ Hamilton pit crush, excessive falls of coal, and over-winding of four men at South Barwood sinking pit caused this high death rate.

During the year twenty-three analyses were made of coal in the laboratory of the Geological Survey Branch of this Department, sixteen of which resulted as follows:—

Official Number.	Locality—Stated by the finder to be.	Analysis in 100·00 parts.					Specific Gravity.	Remarks.
		Hygroscopic Moisture	Volatile Hydrocarbons, &c	Fixed Carbon.	Ash.	Sulphur.		
4359	Ashford seam	·90	21·55	67·50	10·05	·453	1·374	Coke, 77·55 per cent., fairly well swollen, hard and lustrous. 1 lb. of this coal will convert 13·86 lb. of water into steam. Ash—light gray in colour, granular.
4360	„	·75	23·25	68·90	7·10	·357	1·349	Coke, 76·00 per cent., well swollen up, hard and lustrous. 1 lb. of this coal will convert 13·86 lb. of water into steam. Ash—light gray in colour, granular.
4361	„	·55	24·65	67·80	7·00	·357	1·342	Coke, 74·80 per cent., fairly well swollen, firm and lustrous. 1 lb. of this coal will convert 14·08 lb. of water into steam. Ash—light gray in colour, granular.
4362	„	·65	22·15	71·65	5·55	·480	1·328	Coke, 77·20 per cent., fairly well swollen, firm and lustrous. 1 lb. of this coal will convert 13·53 lb. of water into steam. Ash—light gray in colour, granular.
4559	Avondale	1·51	21·81	60·12	16·56	·521	1·468	Coke, brittle, dull lustre—not a good description of coke. 1 lb. of this coal will convert 11·88 lb. of water into steam. Ash—reddish tinge, flocculent.
3184	Bulli	1·87	22·60	64·08	11·45	·617	1·387	Coke, 75·53 per cent. 1 lb. of this coal will convert 13·1 lb. of water into steam. Ash—nearly white in colour, flocculent.
3185	„	1·19	23·84	58·56	16·41	·56	1·433	Coke, 74·95 per cent. 1 lb. of this coal will convert 12·6 lb. of water into steam. Ash—nearly white in colour, flocculent.
3186	„	1·31	23·38	62·70	12·61	·56	1·395	Coke, 75·31 per cent. 1 lb. of this coal will convert 13·1 lb. of water into steam. Ash—nearly white in colour, flocculent.
3669	Gunnedah	2·05	39·91	53·46	3·58	·412	1·291	Coke, 57·04 per cent., well swollen, lustrous and firm, excellent for metallurgical purposes. 1 lb. of this coal will convert 13·8 lb. of water into steam. Ash—gray and flocculent.
4586	„ (Gladstone C.M. Syndicate).	1·94	40·99	53·14	3·93	·535	1·295	Coke, 57·07 per cent., well swollen up, with cauliflower-like excrescences, firm and lustrous, excellent for metallurgical purposes. 1 lb. of this coal will convert 13·64 lb. of water into steam. Ash—nearly white in colour, granular.
4587	„ „	1·68	30·71	61·48	6·13	·576	1·362	Coke, 67·61 per cent., not much swollen up, fairly firm, dull in lustre. 1 lb. of this coal will convert 13·09 lb. of water into steam. Ash—gray in colour, granular.
3803	Humewood	1·57	34·91	55·06	8·46	·562	1·320	Coke, 63·62 per cent., fairly firm and lustrous. 1 lb. of this coal will convert 13·4 lb. of water into steam. Ash—gray in colour, and flocculent.
379	Rossville, near Taralga	17·80	32·15	33·65	16·40	3·92	1·412	Ash—red and granular.
3047	South Clifton (coke)	·43	·15	87·04	12·13	·25	...	Ash—12·13 per cent. <i>Chemical composition</i> —Silica, 56·05; alumina, 33·98; ferric oxide, 5·64; manganous oxide, trace; lime, ·84; magnesia, ·59; potash, 1·07; soda, nil; phosphoric acid, ·69; sulphuric acid, ·34; total, 99·80. Coke—blackish-gray in colour, fairly bright, very dense; will readily stand handling without much breakage, and bear the weight of a heavy burden of ore or flux.
3693	„ „	·65	·33	86·90	11·44	·50	1·836	Coke, very dense, firm, and of good lustre. The coke can be handled without much breakages, and is a good coke for metallurgical purposes. Ash—reddish tinge, flocculent.
2888	West Narrabri	3·25	46·50	40·75	9·50	·755	1·265	Coke, 50·25 per cent., not much swollen, hard and bright. 1 lb. of this coal will convert 11·45 lb. of water into steam. Ash—reddish, granular.

TABLE showing the quantity and Value of Coke made in the Colony of New South Wales.

Year.	Quantity.				Total Value.
	Northern District.		Southern and Western Districts.		
	tons	cwt.	tons	cwt.	£ s. d.
1890	15,886	2	15,211	0	41,147 3 7
1891	9,474	2	20,836	5	34,473 5 10
1892	5,245	0	2,654	0	8,852 8 6
1893	12,262	0	5,596	0	20,233 2 0
1894	13,602	5	20,855	19	33,209 5 7
1895	11,326	8	16,304	0	24,683 5 0
Totals	67,795	17	51,457	4	162,553 10 6

The foregoing table shows that the quantity of coke manufactured during the year was 4,551 tons less in quantity and £8,526 less in value than the previous year. In the Southern District the Australian Coke Company at Unanderra is still the principal makers, and the output for the year was 13,357 tons, valued at £10,017, and in the Northern District the Purified Coal and Coke Co. at Wallsend turned out 8,520 tons, valued at £10,650, and 1,050 tons of nut coal washed from slack, valued at £420. Continued efforts on the part of the manufacturers to produce a clean hard coke, which is necessary for the proper treatment of some of our silver-bearing ores, will no doubt ultimately put them in a position to successfully compete with the English article, large quantities of which are still imported by some of the Broken Hill Silver-mining companies.

The following table shows the quantity and value of Kerosene Shale produced during the years 1865 to 1895:—

Year.	Quantity.	Average price per ton.	Total Value.	Year.	Quantity.	Average price per ton.	Total Value.
	tons.	£ s. d.	£ s. d.		tons.	£ s. d.	£ s. d.
1865	570	4 2 5·47	2,350 0 0	1882	48,065	1 15 0·00	84,114 0 0
1866	2,770	2 18 10·48	8,150 0 0	1883	49,250	1 16 10·77	90,861 10 0
1867	4,079	3 14 9·21	15,249 0 0	1884	31,618	2 5 7·86	72,176 0 0
1868	16,952	2 17 7·11	48,816 0 0	1885	27,462	2 8 11·62	67,239 0 0
1869	7,500	2 10 0·00	18,750 0 0	1886	43,563	2 5 10·79	99,976 0 0
1870	8,580	3 4 3·18	27,570 0 0	1887	40,010	2 3 10·43	87,761 0 0
1871	14,700	2 6 3·91	34,050 0 0	1888	34,869	2 2 2·66	73,612 0 0
1872	11,040	2 11 11·91	28,700 0 0	1889	40,561	1 18 3·55	77,666 15 0
1873	17,850	2 16 6·55	50,475 0 0	1890	56,010	1 17 2·07	104,103 7 6
1874	12,100	2 5 1·48	27,300 0 0	1891	40,349	1 18 8·77	78,160 0 0
1875	6,197	2 10 2·22	15,500 0 0	1892	74,197	1 16 8·16	136,079 6 0
1876	15,998	3 0 0·00	47,994 0 0	1893	55,660	1 16 4·44	101,220 10 0
1877	18,963	2 9 0·81	46,524 0 0	1894	21,171	1 10 0·28	31,781 5 0
1878	24,371	2 6 11·40	57,211 0 0	1895	59,426	1 5 3·78	75,218 18 8
1879	32,519	2 1 1·96	66,930 10 0				
1880	19,201	2 6 7·03	44,724 15 0		863,405	2 0 9·44	1,761,011 17 2
1881	27,894	1 9 2·59	40,748 0 0				

As will be seen from the foregoing table, there is a very satisfactory increase in the output of shale, otherwise known as Petroleum Oil Cannel Coal, or Boghead mineral. This mineral is worked at the present time principally in the Katoomba, Joadja, Hartley, and Capertee districts, and the number of men employed during the year was 354. A large quantity of the higher-grade shale is shipped to England, where it finds a ready market. The average price, however, was about 4s. 8½d. per ton lower than the average price for 1894, and lower than reached during any year since the opening of the mines, and would show that the depression which existed in the coal trade during the past year has extended to this industry.

During the year twenty-three analyses were made of kerosene shale in the laboratory of the Geological Survey Branch of this Department, nineteen of which resulted as follows:—

Official Number.	Locality— Stated by the finder to be.	Analysis in 100·00 parts.					Sulphur.	Specific Gravity.	Remarks.
		Hygroscopic Moisture.	Volatile Hydrocarbons.	Fixed Carbon.	Ash.				
4246	Blue Mountains	·29	60·44	23·88	15·39	...	...	Ash, gray in colour, granular.
541	Capertee (Glen Alice)	·15	67·05	12·20	20·60	·782	1·157	,, reddish tinge, ,,	
542	,,	·20	67·15	12·35	20·30	·672	1·162	,, gray, ,,	
543	,,	·20	68·45	12·75	18·60	·658	1·148	,, ,, ,,	
579	,, (near)	·15	68·40	13·40	18·05	1·318	1·147	,, reddish tinge, ,,	
2138	,, (Capertee Mine)	·97	64·37	13·84	20·82	...	...	,, gray in colour, ,,
2139	,,	·69	55·17	15·83	23·31	...	...	,, ,, ,,
2304	,,	·43	66·95	12·59	20·03	·233	1·165	,, ,, ,,	
2832	,, .....	...	64·90	13·35	21·20	·713	1·174	,, light gray in colour, ,,
2946	,, Valley (Corbett's Lease).	·59	67·07	11·69	20·65	·604	1·167	,, gray in colour, ,,	
3272	,,	1·40	59·45	22·95	16·20	·64	1·223	,, light gray in colour, granular and heavy.	
3547	,, (near)	·30	67·83	9·15	22·72	...	...	,, gray in colour, granular.
3548	,,	1·47	57·60	18·99	21·94	...	...	,, ,, ,,
2291	Gunnedah (7 miles from)	·76	55·41	19·04	24·79	...	...	,, ,, ,,
3217	Megalong, parish of—county of Cook.	·21	78·65	11·80	9·34	·398	1·068	,, ,, ,,	
4318	Mittagong and Picton (between).	·33	66·23	21·35	12·09	...	...	,, ,, ,,
4645	Eyestone (7 miles from)	·38	78·86	6·44	19·32	·37	1·138	,, ,, ,,	
4649	,,	·85	62·89	8·29	27·97	·37	1·249	,, ,, ,,	
4207	Layar, parish of—county of Roxburgh.	·60	69·08	20·54	9·78	...	...	,, reddish tinge, ,,

SILVER AND LEAD.

The following table shows a large decrease in the output of silver and silver-lead, the amount of the decrease being £634,526. It is, however, confidently anticipated that the coming year will see a very large increase in the returns. Owing to the success attending the efforts of the Broken Hill Companies to treat their low grade ores, some of the mines long shut down have been reopened, and expect, under the new system of treatment, to be able to work at a profit. Attention is also being directed to the silver lodes in the Northern District. When the large works now being erected on the shores of Lake Illawarra for the treatment of these ores are completed, it is hoped that these large lodes can be profitably worked. In other districts where silver-bearing lodes exist there are indications of a revival, when all hopes of such had virtually been abandoned.

QUANTITY and Value of Silver, and Silver-lead, and Ore exported.

Year.	Silver.		Silver-lead and Ore.				Total Value.
	Quantity.	Value.	Quantity.		Value.		
			Ore.	Metal.			
Up to	oz	£ s. d.	tons cwt. qr. lb.	tons cwt	£ s. d.	£	
1881	726,779 14	178,405 0 0	191 13 0 0	.....	5,025 0 0	183,130
1882	38,618 00	9,024 0 0	11 19 0 0	.....	360 0 0	9,384
1883	77,065 18	16,488 0 0	136 4 0 0	.....	2,075 0 0	18,563
1884	93,660 25	19,780 0 0	9 167 11 1 7	.....	241,940 0 0	261,720
1885	794,173 80	158,187 0 0	2,095 16 0 0	190 8	107,626 0 0	266,813	
1886	1,015 433 10	197,544 0 0	4,802 2 0 0	.....	291,185 0 0	492,029
1887	177,307 75	32,453 0 0	12 52 3 2 0	.....	611,952 0 0	574,410
1888	375,063 70	66,668 0 0	11,739 7 0 0	18,102 5	1,075,737 0 0	*1,142,405	
1889	416,895 35	72,001 0 0	45,985 9 0 0	34,579 17	1,899,197 0 0	1,971,198	
1890	496,552 80	95,410 0 0	89,719 15 0 0	41,319 18	2,667,144 0 0	2,762,554	
1891	729,590 05	134,850 0 0	92,883 11 0 0	55,396 3	3,484,739 0 0	3,619,589	
1892	350,631 50	56,884 0 0	57,504 15 0 0	45,850 4	2,420,952 0 0	2,477,836	
1893	531,972 00	78,131 0 0	155,859 1 0 0	58,401 3	2,953,589 0 0	3,031,720	
1894	846,822 00	94,150 0 0	137,813 8 0 0	42,513 2	2,195,339 0 0	2,289,489	
1895	550,142 00	81,858 0 0	120,192 19 0 0	29,687 7	1,560,813 0 0	1,642,671	
	7,220,736 02	1,292,838 0 0	811,112 13 3 7	326,040 7	19,450,973 0 0	20,743,811	

*Note.—In the Annual Report for 1888, 11,739 tons 7 cwt. of silver ore, valued at £164,620, was omitted from the table. The bulk of the silver is exported in the form of silver-lead.

The following information relating to the silver-mining industry within the Colony is taken from the reports sent in by the Wardens and Mining Registrars:—

THE ALBERT MINING DISTRICT.

Broken Hill Division.

About the beginning of the year mining matters were very depressed in this very important Division, but a revival is now apparent owing to the great advancement made in the efforts to profitably treat the large bodies of sulphide ore found in all the mines on the Barrier. The effect of this is that many of the mines which were compelled to shut down when their oxidised ore was exhausted are now in full work and able to make a small return to the shareholders. The companies have spent large sums in carrying out experiments to solve the difficulty, and it is impossible to over-estimate the benefits to the district from the successful result of their experiments. The supply of sulphide ore, of a payable character, is practically unlimited, and fresh developments of a similar grade are frequently taking place. The principal mine on the field is The Broken Hill Proprietary Company (Limited), which employed during the year, on an average, 2,409 men, and the value of their mining and metallurgical plant is about £200,000. The quantity of ore raised was 517,565 tons, and the company exported 24,625 tons of silver lead bullion, assaying on an average 276 oz. per ton, the total value of which is £363,294. They also sold ore assaying 26 oz. of silver and 14 per cent. of lead to the value of £189,900; 4,650 oz. of gold were also saved and 443 tons of copper in matte. The large reduction in the number of men employed as compared with 1894 is due to the disastrous fire in the mine, which threw a large number of men out of employment and cost the company a very large sum of money to extinguish it. A large number of the men who were temporarily thrown out of work left for other fields. The Companies at work on the lode are The North Broken Hill, The Broken Hill Junction North, The British Broken Hill Proprietary, The Broken Hill, Proprietary Block 10, Block 14, The Central, and Broken Hill South.

The total quantity and value of the minerals exported from the field during 1895 were as follows:—

		Value.
Silver lead bullion	29,684 tons	£939,562
Silver lead ore	189,133 „	587,255
Silver ingots (pure)	472,449 oz.	57,804
Copper ore	23 tons	112
Copper matte	1,004 „	21,230
Gold	4,650 oz.	18,600
		£1,644,563

As compared with 1894 there is a reduction of over £600,000 in the yield from this Division. In view of the success attending the experiments with the sulphide ore, combined with the fact that ground known to contain this ore is being pegged out with a view to being worked, a substantial increase in the yield may confidently be anticipated during the coming year. The number of men in and about the mines at the end of the year was 4,297. There is a difficulty in arriving at a correct estimate of the exact quantity of pure silver won from this field, as it is exported chiefly in the form of silver lead bullion and silver ore, but the amount may be put down approximately at not less than 8,669,012 oz.

THE BATHURST MINING DISTRICT.

Mitchell Division.

The Sunny Corner Silver-mining Company's mine is still working on tribute, and during the year gave employment to 100 men on an average. The amount of ore treated was 14,941 tons, which yielded 355 tons of argentiferous and auriferous copper matte, valued at £21,300.

No work has been done during the year at the Mount Costigan and Cordillera Mines, but there is some prospect of the property being taken over by a syndicate during the forthcoming year.

THE MUDGEE MINING DISTRICT.

Denison Town Division.

The Mount Stewart Silver-mine has been idle all the year, and there is no immediate prospect of the mine being reopened. The owners of the Mount Scott lease have, however, been doing a little work on their lode, which is a very nice gossan, assaying very fairly. Negotiations are being carried on with a Melbourne syndicate regarding the silver properties in this locality, but at the end of the year no arrangement had been arrived at.

THE NEW ENGLAND MINING DISTRICT.

Fairfield Division.

There is every prospect of a revival in silver-mining in this Division during the incoming year. An English syndicate has acquired the White Rock property, and has also leased a large area of land at the old Boorook Silver-mine. It is believed to be the intention of the syndicate to work these properties in connection with the Illawarra Smelting Company. The Adeline Milling Co. has entered into an arrangement with the Mascotte Co. at Drake, and if the large parcel of ore sent for treatment proves profitable there is a probability that the Mascotte Mine will again be worked on a large scale.

Emmaville Division.

About 2,000 tons of ore were raised from Webb's Mine, and 211 tons of concentrates were sent by rail to Maryborough, Queensland, for treatment, and the value of the silver won was £3,899. Some activity was displayed during the close of the year by parties retaking various of the abandoned silver-bearing portions east and west of Emmaville, but the boom appears to have been almost entirely speculative in view of the proposed erection of smelting works at Illawarra, for the treatment of refractory ores. There is no doubt, however, that the successful establishment of those works will cause a revival of silver-mining in this district, as the argentiferous ores are abundant and easily accessible over good roads to the railway station.

Wilson's Downfall Division.

Silver-mining in this Division is at a very low ebb. The leases which are only partially at work are the Central Mine and Messrs. Reid and party. The Proprietary Company's works have been leased to Mr. Edgar Hall, the experiments in connection with the ore having fallen through. The mill has been at work at intervals only during the year, and is now closed owing to the want of ore to keep it going. The capacity of the crushing mill is 45 tons per day, and of the roasting plant 15 tons per day. The quantity of ore purchased from the mines and treated during the year was 280 tons, for which the sum of £1,640 was paid, equal to £5 17s. 2d. per ton. This ore was taken from 15 different claims. The present lessees have no intention of again starting the mill. A few parcels of picked ore were sent to the Queensland Company's works at Aldershot for treatment, the results averaging from 65 to 110 oz. of silver per ton. About 20 men are at work in the locality, and the total output for the year was 516 tons, valued at £2,184. The following report by Mr. Joseph Benjamin, a well-known mine manager, at Rivertree, will show some further light on the condition and prospects of silver-mining in the Rivertree district:—

"Rivertree Central Mine, Rivertree, 5 January, 1896.

"In furnishing you with the annual statement of the quantity of silver ore raised by me, and its value, from the Rivertree Central Mine for the year ending 31st December, 1895, with particulars and value of plant, I am desirous of pointing out to you many things in connection with this field which, while embarrassing the mining population that are here, causes their disabilities to be so great that where there should be working room for a large number of men, with their families, opening up a large and permanent industry, employing some thousands of hands, there is simply, from the want of change being made in the present condition of things, a few just struggling along, and kept alive by their uphill exertions, and as it is possible it may be in the power of the Department of Mines to make such inquiry as may lead to the alleviation of our existing troubles, I am desirous that this report may be forwarded on to the Under Secretary for Mines, together with the annual return.

"In explaining our difficulties, and in order that our position may be understood, it will be necessary to describe the Rivertree field, the character of the lodes, and the grades of the ore obtained from them; also the methods that have been attempted for their treatment, with the results of such attempts, with the cost of raising and treatment. This having been done, I think I can show that up to the present time, without any exception, all work has been carried on at a loss, and that until such method or process is introduced to treat our low-grade ores of from 30 oz. silver to the ton upwards at a reasonable cost, such working loss will continue.

"The Rivertree silver field is situated on the Clarence River, being portions of the parishes of Clarence, Reil, Strathspay, and Cataract, county of Buller, starting from (say) the junction of the Maryland and Boonoo Boonoo Rivers; thence running the Boonoo Boonoo River down to the junction with Koreelah Creek, at which point it becomes the Clarence; thence running the Clarence River down for about 3 miles, taking in upon the north about 4 miles back, and upon the south about 2 miles back, such country, mostly being included in the extended gold-field reserves of Tooloom and Boorook, the whole covering an area of about 35 square miles.

"The country on the northern side consists of altered and carboniferous slates, with Devonian and diorite belts running through, with granite intrusive. The lodes then, in running between slate and granite and slate and diorite walls, are clean, true, and defined.

"On the southern side the country is principally granite, the lodes, there running between granite, or granite and diorite walls, and, as in the north, are clean, true, and defined also, while some little greisen crops out, and more southerly the slate country comes in again, the deepest shafts being tested to a depth of 200 feet. The lodes are very numerous, in fact, portions of the country being traversed by networks of veins, their bearing being N. and S. from 15° to 20° west of south. They are in character lenticular, both in their course, and in going down and ranging in thickness from 1 inch to 18 inches or 2 feet, the ore going in value from a few to 200 and 300 oz. silver to the ton. The bulges of ore are uncertain both in size and value, while the blanks are often of greater extent, thus entailing a large amount of dead work before one can win any quantity of ore fit for treatment. The country generally appears much broken, the lodes at the east end underlying to the east, while those at the west end underly to the west. Of the ore itself, the gossans or oxides consist of arsenical iron gossans, containing carbonate of lead, with silver either in arsenical or chloride form; in some traces of antimony are met with, while in others the surface outcrops are chiefly quartz, containing iron (argentiferous). Upon sinking, when the sulphides are struck, which varies from 10 to 30 feet, the sulphides usually appear in one of the following forms:—Galena, mixed with pyrites and zinc blende, black ore, showing some galena and arsenic, arsenical pyrites, arsenical red silver, and Fahlerz. Most of the sulphide ores are base, and generally carry with them zinc blende. Throughout the lodes, is also about an equal amount of copper as there may be silver. The lodes are all silicious, the average in lead being about 8 or 9 per cent.

"The treatments that have been attempted have been smelting by the water-jacket furnace, leaching by the Russel process, using the White-Howell roasting furnace for chloridising, and in a smaller way raw-leaching. The first from the high silicious character of the ore, and having to import fluxes (ironstone and lime), as also coke, caused the result to be both expensive and unsatisfactory. With leaching, its high tariff of charges makes this also prohibitive, except for the treatment of the rich grade ores, leaving all the poorer ores useless, which in some cases have been stacked with a hope of future cheap means of treatment, while by many others it has either been thrown over the tip, or has been returned into the mine to fill up stopes.

"In

" In the return of silver won from the Rivertree Central Mine you may notice that out of the 60 tons of ore only 37 tons were good enough to be sent for treatment, the remaining 23 tons being seconds of too low grade to bear expense of treatment, or the ore left from 37 tons after dressing, which was also too low. The charge for treatment at the works on the field is £3 per ton, together with 20 per cent. deducted of its value, thus making on the 37 tons of ore, of 166 oz. silver per ton, the value of which, at 2s. 6d. per oz.—£746—the following charges, viz. :—

37 tons treatment, at 60s. per ton	£111 0 0
20 per cent of silver (value of £746) deducted	149 5 0
	£260 5 0
Which, together with carriage of 37 tons to works.....	9 10 0 = £269 15 0

making the cost of treatment 36 per cent. of its entire value, and even this, it is stated by the mill-owner, to be under what it cost and to incur a loss. You will also notice that the labour, stores, and rent incurred during the twelve months to raise this 60 tons of ore, amounting to £647 4s., is entailing a loss, after everything is paid, of £170 19s. for the year's run. This clearly points to the fact that to make the Rivertree field a successful industry, and one that can be made so, and which by so doing opens up a field to support a large number of men and their families, other efforts will have to be made, either in addition or in lieu of these that have already been tried by those who have struggled to keep the field going to the present time.

" A large amount of money, something between £60,000 and £70,000, has already been laid out upon development and machinery, that spent upon the former being, to a great extent, surface work, and small portion only having been expended in deep mining, which at the greatest depth is now only a shade over 200 feet; while the money that has been sunk in machinery for treatment has nearly all been absorbed by the large leaching plant which has lately been running, but which, from the high tariff already referred to, has caused it to be a failure, by making it prohibitory to the miners, except for their high-grade ores, and which they can realise upon with almost equal results by sending to the Queensland Smelting Works, Aldershot, at which place they are paid for their lead, while here they are not, beyond the fact that the local works, even at their high tariff, are working at a loss.

" These facts in themselves prove that the method of treatment is not that which is required for the well-doing of the field, and that other process of treatment is necessary before the place can be worked with profit to those concerned. The raw-leaching that was tried on a small scale was so far as it went fairly successful and could be improved upon, but in this case oxide ores only were treated, and the difficulty of the sulphides still remains a vexed question. Amalgamation may possibly be a solution to the difficulty, more particularly if ore amalgamation could be used, there appearing to be a difficulty in any process by which the ore has to be chloridised by roasting with salt in consequence of the volatile character of the Rivertree ores.

" Under these circumstances we are naturally at a standstill to know what is best to be done. We have a large field, a quantity of ore, much of it rich, however much it may be scattered, and a larger quantity of lower grade; to get the rich ore we must mine the poor also, and our difficulty is to find a process by which we can, at a reasonable and remunerative cost, treat and realise with profit on high and low grade ores, treating in bulk without dressing. Numerous experts and metallurgists have ventilated schemes, but all have more or less proved faulty and unworkable; but we think it is possible that if the Department of Mines instructed the Government Metallurgist to visit the field, and by his carefully getting together all evidence, by examination of the character of the ore, by analysis, and by other data, he may be able to put forward such views as may lead to the solution of our present trouble as to the treatment of the ore.

" All the particulars I am writing I am sure, upon inquiry, will be endorsed by all the miners now working and raising ore on the field.

" To sum the matter up, it means we have a large and extensive field only half prospected; numerous lodes, carrying silver from a few to hundreds and more ounces to the ton; the lodes although numerous are small and patchy (that is, lenticular), having often long blanks of poor ore, and consequently the cost of raising becomes heavy.

" Up to the present time all methods of treatment, on the field, have either been impracticable from the character of the ore, or the cost of treatment has been so high as to prohibit any but rich ores of (say) 100 oz. and upwards, or ore dressed to that standard, being treated, leaving on the hands of the miner all ore from 40 oz. downwards, which, although in some cases it may have been stacked, in most has been thrown over the tip or returned to the mine. In order to make the field what its resources should make it, to carry a good and prosperous population, a process for treating our low-grade ores of from 30 oz. upwards is necessary. By so doing the ore which is now obliged to be dressed up to a certain standard to make it remunerative would then be treated in bulk, and the labour which is now lost in raising ore, which at the end is valueless, would in its turn become payable to the miner. This also means that (firstly) the output of the present number of miners would be increased at least three-fold, while the fact of the ore being of value in bulk would (secondly) bring on to the field a number of miners who are waiting the solution of this difficulty and anxious to come, and (lastly) the leaseholders who are working on a partial suspension of labour would, from force of circumstances, have to throw up their leases if their labour conditions were pressed, as being heavy losers now by the present hands they employ, this loss would only be made greater (*pro rata*) by the number they might further employ, while the reason of this state of things is simply the inability to realise on the low-grade ores won by such labour.

" I have, &c.,
" JOSEPH BENJAMIN."

THE PEEL AND URALLA MINING DISTRICT.

Hillgrove Division.

Messrs. Wade, Baker, and Party are working a very promising silver lode on Mr. Finlayson's Points Field Estate, and so far are very well satisfied with the results obtained. They have bagged and sent away for treatment 100½ tons, valued at £3,756. This mine promises to be both permanent and profitable. There are several other parties opening up silver-bearing veins in the vicinity of the above, but so far nothing permanent has been discovered. At the Old Della Mine, Coakley and Party are bagging a trial lot, and appear satisfied with their prospects. There are undoubtedly rich silver veins in this locality, which careful prospecting would prove payable to small working parties.

Inverell Division.

Nothing has been done during the year in silver-mining in this Division owing to the low price of silver, but now that the treatment of refractory ores is in a fair way to being solved, anxious inquiries are being made about the best of the lodes taken up some years ago, but afterwards abandoned owing to the difficulty in treating the ores. There are several silver lodes in this district well worth developing, although the local miners take very little interest in the industry, devoting all their energies to tin-mining.

THE SOUTHERN MINING DISTRICT.

Rye Park Division.

The Walla-Walla Company's claim is situated about 18 miles south-east of Burrowa, near Rye Park. Very little work was done during the year, but it is stated that the mine is to be reopened shortly, when the lode will be thoroughly proved.

Captain's Flat Division.

The Lake George United Mining and Smelting Company employs 150 men, and raised during the year 18,563 tons of ore, which produced 1,104 tons of matte and lead bullion, containing 2,164 oz. of gold, 137,951 oz. of silver, 350 tons of copper, and 64 tons of lead, of a total value of £42,604. Since the recent important developments in this mine, the number of men employed has been greatly increased, and should the diamond drill bores now being put down equal expectations, the number will be added to.

Moruya

Moruya Division.

The only silver-mining operations being carried on in this Division are purely of a prospecting nature. Several shafts have been sunk, the deepest being 47 feet. From one of these shafts 10 tons of ore were raised, which assayed from 15 to 40 oz. of silver per ton, with a small percentage of gold. O'Neill and Party, working the adjoining ground, have been aided from the Prospecting Vote to continue their shaft to a total depth of 100 feet. Should the lode prove payable at that depth, extra employment will be found for a number of miners.

Pambula Division.

In the neighbourhood of Wyndham, there are about forty men prospecting for silver lodes, and some very good-looking gossan ore has been raised. Several parcels have been sent to Europe and elsewhere for treatment, and should the results prove satisfactory, development work will be vigorously proceeded with. All the old abandoned ground has been taken up, and new and heavier machinery is being erected on the old shafts to clear them of water.

During the year 4,285 samples were assayed for silver in the laboratory of the Geological Survey Branch of this Department.

2,261 yielded nil.

1,900 „ under 15 oz. per ton.

124 „ as follows:—

Official Number.	Locality—stated by the finder to be.	Description.	Per Ton.	
			Silver.	Gold.
			oz. dwt. gr.	oz. dwt. gr.
108	Armidale, 10 miles north of	Cubical galena.....	33 19 10	nil.
157	„	„	34 12 12	„
554	„	„	31 18 0	„
558	„ District	Zinc-blende.....	91 1 13	0 12 22
3290	„	Arsenical pyrites with much proustite.....	1,885 10 9	trace.
3291	„	Arsenical pyrites.....	778 15 11	„
3292	„	Arsenical pyrites with zinc-blende.....	862 8 0	„
3293	„	Arsenical pyrites with pyrargyrite.....	2,340 17 20	„
4615	„ 8 miles from	Zinc-blende.....	56 16 19	0 19 11
4039	Bald Hills, Forbes	Quartz.....	22 4 6	44 15 0
1610	Back Creek	Ferruginous cellular quartz in much weathered rock	20 8 7	nil.
2925	Berthong	Galena. (See 2925 under lead)	17 3 22	trace.
145	Billagoe.....	Quartz in slaty rock.....	39 6 4	6 6 3
146	„	„	90 18 10	1 12 6
147	„	„	138 16 14	4 7 2
303	„ Mine (Old).....	Ferruginous quartz with a little slaty material.....	527 2 13	53 7 2
1407	Billagoe.....	Argentiferous breccia; silver present as chloride, bromide, and iodide.	290 14 13	14 14 0
1473	„ (Old).....	Silicified slate, containing native silver, &c.....	130 6 18	2 18 18
1286	Black Bullock Mountain, near Oberon.	Gossan.....	34 19 1	0 10 21
3894	„	Friable iron pyrites.....	121 0 12	1 3 22
4895	„	„	102 12 11	0 16 4
4042	„	Crushed sample.....	23 6 0	1 3 22
4043	„	„	25 5 4	1 0 13
4525	„	„	16 3 8	0 3 6
3680	„	„	57 8 2	1 11 0
3682	„	„ (highly pyritous).....	33 18 8	0 16 4
3683	„	„	16 16 8	1 6 2
4106	„	Rubble.....	16 15 9	1 1 18
2773	Blue Mountains.....	Ferruginous pyritous quartz, with galena.....	17 6 3	0 12 22
3162	Blyth, parish of, county of Clarke.	Crushed sample.....	70 12 10	trace.
1106	Broken Hill.....	Sulphide ore. (See 1106 under lead and zinc).....	32 4 14	„
1340	„ District	Ironstone. (Chloride of silver present).....	80 7 4	„
1341	„	„	2 15 13	„
2	Cangi ("Walter Scott" Mine).	Concentrates.....	33 3 18	12 6 21
3249	Carcoar District.....	White quartz (very fine gold present).....	84 3 8	354 7 5
251	Cobar.....	Ferruginous quartz in red slate (free gold and chloride of silver present).	308 17 17	83 18 11
252	„	Ferruginous quartz in red slate (chloride of silver present)	293 15 14	13 16 12
4529	„ near.....	Conglomerate.....	53 7 2	3 0 22
3919	Cotter and Paddy's River, junction of.	Copper pyrites and galena in a chloritic rock. (Copper 3.63 per cent.)	16 6 16	trace.
900	Cox River.....	Galena in quartz. (See 900 under lead)	98 0 0	„
911	„ 12 miles from Hartley.	Ferruginous and cellular quartz, with galena. (See 911 under lead.)	62 18 16	0 10 21
3177	„	Cavernous and cellular quartz, carrying galena.....	21 19 21	2 14 10
3428	Deepwater.....	Arsenical pyrites.....	21 2 11	trace.
3196	Diamond Heads, Manning River.	Iron pyrites.....	23 16 22	„
3197	„	„	23 1 15	„
4290	„	Crystallised pyrites in a tale matrix.....	18 3 16	„
4300	„	„	20 11 14	„
4482	„	„	23 10 9	nil.
2769	Drake.....	Silver ore. This sample contains a considerable quantity of galena, and the silver present is probably in the form of sulphide.	19 16 8	trace.
2889	„	Quartz.....	92 2 10	27 13 3
4072	„	Ferruginous friable quartz, with blue and green carbonates of copper. (See 4072 under copper.)	35 18 16	trace.

Official N number.	Locality—stated by the finder to be.	Description.	Per ton.	
			Silver.	Gold.
			oz. dwt. gr.	oz. dwt. gr.
2795	Elsinore ("Newstead" Mine).	Crushed sample, rich in sulphides, principally galena. (See 2795 under lead, copper, and zinc.)	104 8 9	nil.
2796	" "	Crushed sample, rich in sulphides, principally galena. (See 2796 under copper and zinc.)	54 18 4	"
962	Eurongilly	Ferruginous quartz, with copper pyrites (concentrates) ...	22 17 6	trace.
3721	Fish River, near	Highly pyritous, crushed sample	62 18 16	1 10 11
3723	" "	" " "	34 2 16	0 14 0
3724	" "	" " "	17 6 3	1 7 4
1908	Glen Innes, near	Siliceous, pyritous ore	16 13 4	trace.
3532	Gulgong, abt. 3 miles from Gundagai District	Ferruginous copper ore—oxidised. (See 3532 under copper)	18 15 15	0 8 17
181	Harden, 6 miles E. of.....	White quartz	33 4 18	34 19 2
4797	" "	Quartz, with much galena and arsenical pyrites, and a little copper pyrites.	17 8 10	4 18 0
2839	Hartley, near	Iron-stained quartz, with galena (lead, 9.91 per cent.).....	23 10 9	trace.
3436	Hazelgrar	Apparently much weathered mica-schist	15 0 11	0 6 12
1776	Hazelgrove	Honeycombed gossan	21 15 13	1 3 22
2862	" "	Massive and granular iron pyrites	46 7 16	0 15 2
3065	" " 3 miles from	Average sample	26 13 18	1 15 22
3066	" "	Pyrites	18 11 7	0 9 19
4755	Iford, near	Rubble, quartz, and galena	86 17 19	nil.
3909	" "	Galena and quartz	87 8 17	trace.
2008	Leadville, 6 miles N.E. of	Galena in quartz	35 7 18	nil.
2009	" "	Galena, with pyrites in quartz.....	19 12 0	"
948	Liliwa, Cudjgong	Sulphide of copper, somewhat oxidised. (See 948 under copper.)	23 16 22	trace.
1108	Little Hartley	Coarsely crystallised galena in cellular quartz. (See 1108 under lead.)	37 13 12	1 6 2
2300	Macleay District	Blue and green carbonates of copper. (See 2300 under copper.)	77 1 17	nil.
1619	Major's Creek	Granular iron pyrites	27 6 14	90 7 13
3154	Meryula	Ferruginous quartz, with galena. (See 3154 under lead)...	16 6 16	nil.
4390	" River	Quartz, carrying much galena	22 12 19	"
2937	Mooneba, Macleay River...	Massive iron and arsenical pyrites	37 11 8	trace.
2958	" "	" " "	17 8 10	"
2959	" "	" " "	20 2 21	"
2960	" "	" " "	30 1 0	"
44	Mount Drysdale	Decomposing felspathic stone	52 15 5	35 7 18
142	" "	Slaty rock	1,013 6 6	69 11 13
143	" "	"	17 5 0	1 9 8
144	" "	"	885 7 6	45 12 11
391	" District	Ferruginous slate	50 6 2	0 17 9
761	" "	Sedimentary rock	37 12 10	4 13 14
762	" "	" " "	73 10 0	5 4 12
3740	Mount Opperaby	Siliceous brown ironstone	103 4 11	0 4 8
883	Mt. Tinda, near Melrose...	Galena, with iron pyrites. (See 883 under lead)	29 14 11	nil.
2681	Mt. Victoria	Galena	114 11 1	trace.
1282	Mitchell's Creek	Concentrates	18 3 15	4 2 16
3288	Mudgee, near	Massive iron pyrites	27 6 14	trace.
4682	New England	Cubical galena	176 4 21	"
2153	Oberon, near	Galena, and a little copper pyrites in quartz. (See 2153 under lead.)	98 6 11	nil.
4638	"	Granular iron pyrites	53 7 2	1 6 2
4639	" "	" " with clay	16 4 11	1 10 11
1782	Orange District	Crushed carbonate of copper. (See 1782 under copper) ..	29 13 10	trace.
4692	Pictou, near	Galena. (See 4692 under lead)	185 4 17	"
3664	Rockley, 6 miles east of ...	Ferruginous quartz coated with talcose material	79 15 4	0 19 11
371	Rockvale	Quartz	324 14 22	trace.
372	"	"	43 1 6	0 1 2
373	"	"	109 7 0	0 1 15
4288	"	Quartz containing pyrites, and apparently antimonite ..	30 18 11	nil.
3399	Rylstone, 10 miles from...	Copper ore, partly superficially converted into carbonate. (See 3399 under copper.)	21 15 13	"
4305	Snowey, parish of, county of Clarke.	Quartz	68 3 5	trace.
1432	Staggy Creek, Inverell ...	Quartz, with galena and copper pyrites	56 3 17	nil.
3554	Thackaringa	Crushed granite, apparently	55 12 19	"
3795	Tinda, near Melrose	Galena, with a little iron and copper pyrites	17 14 22	"
3865	Tingha	Copper gossan. (See 3865 under copper)	32 6 18	trace.
3321	Trankey (R. Bourke's claim).	Ferruginous, copper-stained quartz, with a little pyrites...	27 9 20	nil.
1635	Uralla, 7 miles west of ...	Siliceous, pyritous material	24 9 22	4 7 2
1689	" "	Granular iron pyrites	27 15 4	2 18 18
3958	Uriana	Zinc-blende and galena finely disseminated through a greenish, earthy stone.	22 12 19	nil.
1249	Wagga Wagga, near	Vitreous gray quartz, rich in arsenical and iron pyrites ...	17 1 18	"
2453	Wagga Wagga	White quartz (crushed)	15 2 3	"
1557	Willie Willie, Macleay R.	Blue & green carbonates of copper. (See 1557 under copper)	81 2 10	trace.
1560	" "	" " " (" 1560 ")	103 8 21	"
1675	" "	Copper gossan. (See 1675 under copper)	256 6 20	nil.
3758	" "	Green carbonate of copper. (See 3758 under copper).....	20 18 2	trace.
374	Wollumumbo ("Della" Mine).	Quartz	245 1 16	"
1561	Yalgogran	Ferruginous cellular quartz	16 2 6	0 4 8
4197	" ("Southern Cross" Mine).	Crushed sample (concentrates, 5 per cent.).....	18 18 22	63 14 0
249	Yalwal (Grassy Gully) ...	White quartz, with a little slaty material, free gold present	15 2 16	75 6 23

During the year thirty-two assays were made for lead in the laboratory of the Geological Survey Branch of this Department, the following yielding over 10 per cent. :—

Official Number.	Locality—Stated by the finder to be.	Description.	Per cent. Metallic Lead.
4717	Barrier District	Crystallised galena, with a little granular quartz. (Silver, 6 oz. 6 dwt. 3 gr. per ton.)	70
2925	Berthong	Galena. (See 2925 under silver.)	83.21
782	Braidwood	Earthy pyromorphite	47.44
1804	Clyde River, 30 miles from Braidwood	Barytes, with finely disseminated galena	17.65
1805	" " " "	Pyromorphite	72.45
900	Cox River.....	Galena in quartz. (See 900 under silver.)	55.40
911	Cox River, 12 miles from Hartley	Ferruginous and cellular quartz, with galena. (See 911 under silver.)	36.17
2795	Elsmore ("Newstead Mine")	Crushed sample, rich in sulphides, principally galena. (See 2795 under silver, copper, and zinc.)	30.44
1107	Gininderra	Quartz, with fine-grained galena and copper pyrites. (Silver, 1 oz. 14 dwt. 20 gr. per ton; copper, 1.12 per cent.)	32.21
1168	Little Hartley	Coarsely crystallised galena in cellular quartz. (See 1108 under gold and silver.)	24.42
500	Lake George	Earthy carbonate of lead. Carbonate of lead.....	87.94
2966	Meryula Station, near Nyngan	Pyritous and ferruginous quartz, &c. (Gold, a trace; silver, 1 oz. 6 dwt. 2 gr. per ton.)	9.29
3151	" " " "	Ferruginous quartz, with galena. (See 3151 under silver.)	20.76
3155	" " " "	Pyromorphite. (Gold, a trace; silver, 10 dwt. 21 gr. per ton.)	16.77
883	Mt. Tinda, near Melrose	Galena, with iron pyrites. (See 883 under silver.)	59.54
3172	Nyngan, near	Ferruginous carbonate of lead. (See 3172 under gold.)	55.10
2153	Oberon, near	Galena, and a little copper pyrites in quartz. (See 2153 under silver.)	40.00
4692	Picton, near	Galena. (See 4692 under silver.)	68.60
2806	Queanbeyan	Galena, with a little quartz and iron and copper pyrites. (Silver, 3 oz. 9 dwt. 16 gr. per ton.)	29.38
2193	Walker Hill, near Nymagee	Principally massive ferruginous cerussite. (See 2193 under gold.)	30.23

TIN.

The following information relating to the Tin-mining industry during last year within the Colony is taken from the reports sent in by the Wardens and Mining Registrars:—

THE NORTHERN DISTRICT.

Tingha and Inverell Divisions.

There is a large decrease to report in the output of tin from the Tingha and Inverell Divisions, the quantity being 469 tons 15 cwt., valued at £15,498, or at the rate of about £33 per ton on the ground. The output during 1894 was 742 tons, valued at £27,454. The recent drought had a great effect in creating this large decrease, as the alluvial tin-miners could not treat their wash-dirt, and at the end of the year it was estimated that 20,000 loads were at grass awaiting water, the whole being valued at £7,600. Although the price has been low and the production small, the miners seem to be fairly well off, and can always make rations. There is nothing in particular to note this year in new finds, and it is becoming apparent that the shallow tin leads around Tingha are nearly worked out. Prospecting is still going on in the vicinity for the deep leads supposed to exist there, but as the water is troublesome capital is required to carry the work to a successful issue. The deep leads are being worked at Elsmore, and the wash-dirt stacked in anticipation of rain. At Aubury Vale a little work is being carried on, chiefly on private property. Wilton and party are said to be raising payable wash-dirt on Mr. Cooper's estate, but owing to the long and continuous drought they have been unable to wash. The same may be said of the localities of Gilgai, Ponds, Stannifer, Newstead, and Middle Creek, where stacks of wash-dirt are to be found awaiting water, some of it having been stacked for about twelve months. About 400 men, including 150 Chinese, are employed tin-mining in this Division.

Glen Innes Division.

There is a slight increase in the output of tin from this Division, the quantity being 165 tons, valued at £5,445. The Mann River, on whose banks the tin is mainly found, affords an abundant supply of water during all seasons. Many of the miners in this locality are also farmers, and they combine the two avocations with profit. It is thought that payable tin will ultimately be found under the basalt range bounding the course of the Mann River, and should such prove the case a large avenue for employment will be opened up. There were 41 Europeans and 18 Chinese tin-mining in this Division at the end of the year.

Emmaville Division.

This is the largest tin-producing mining Division in New South Wales, and during the year 350 Europeans and 260 Chinamen were employed in the work. The quantity won was 900 tons, valued at £29,700, which is a large decrease as compared with the output in 1894, which was 1,108½ tons, valued at £44,386. Of the year's yield 115 tons were won from the deep leads, 286 tons from the lode, and the balance, 499 tons, from the various shallow workings extending over the whole field. The Ottery tin-mine at Tent Hill is the only mine where systematic work on the lode is being carried on, and from this source 181 tons 6 cwt. of dressed ore were obtained. This Company employed 76 miners during the year, and has two batteries at work of ten and fifteen head of stamps respectively. The lode being worked varies from 3 to 25 feet wide, and carries about 3 per cent. of tin. But little development work has been done at the "Butler's" mine during the year, on account, it is alleged, of the low price of the ore. Small lots of lode tin, also came from various lodes and leaders at the Gulf, Torrington, the Table-land, and vicinity. Should the forthcoming season provide an ample supply of water, the returns from this Division will be largely increased.

Deerwater Division.

There were 200 tons of tin won in this Division during the past year, valued at £6,400, which is just about half the quantity produced the previous year. The Cliff Tin-mining Company's is the only mine of any note being worked for tin in this Division at the present time. This Company is working a lode, and there are a number of other parties working on the same line, who occasionally discover shoots of tin, which, however, cut out again in a few days. There are a great number of alluvial claims at work, but it is questionable if the men have been able to make more than rations, owing to the drought.

Wilson's

Wilson's Downfall Division.

There is a decrease of about 50 per cent. in the output of tin from this Division as compared with 1894, the quantity being 98 tons, valued at £3,234. This result may be partly due to the recent drought and to the fact that some of the old payable claims are now worked out. No fresh discoveries have been made during the year, and the work done has been more of a fossicking nature than otherwise.

Kempsey Division.

Work is still being carried on at the Gundle Tin Mine, but the returns for the year were not available. Prospecting work is still being carried on for payable tin lodes in this locality, and very promising indications are met with.

Bendemeer Division.

Murray and party are still working their stream tin deposit, and won during the year 11 tons 17 cwt., valued at £448, which is the total yield of this Division.

SOUTHERN DISTRICT.

Germanton Division.

There are 20 men employed tin-mining in this Division, but the work carried out has been principally of a prospecting or developing nature, and the quantity won amounted only to a few tons. The Champion Company's operations have been at a standstill for want of water, and the work of the other parties in the locality has been carried on under great difficulties. The local miners are confident that payable wash-dirt will yet be struck in the neighbourhood of Spring Creek and other localities in the Upper Murray District.

Wagga Wagga Division.

Prospecting was very active for a time around Wagga Wagga, the result so far not being satisfactory. At Pullitop the tin lodes are not sufficiently developed to prove their value, and more capital is required for the work than can be got locally. The deposits of stream tin to be found near Pullitop would, it is thought, prove payable if sufficient water could be had for sluicing purposes, but at present it is difficult to see how the want is to be supplied. There is a large area on this field that would probably pay well if water could be got from some near source. There are a large number prospecting in this locality, and the coming year may see some fresh and important developments.

TABLE showing the quantity and value of Tin exported from, and the product of, the Colony of New South Wales, since the opening of the Tin-fields in 1872.

Year	Ingots.				Ore.				Total.			
	Quantity.		Value.		Quantity.		Value.		Quantity.		Value.	
	tons	cwt.	£	s. d.	tons	cwt.	£	s. d.	tons	cwt.	£	s. d.
1872	47	0	6,482	0 0	849	0	41,337	0 0	896	0	47,819	0 0
1873	911	0	107,795	0 0	3,660	0	226,641	0 0	4,571	0	334,436	0 0
1874	4,101	0	366,189	0 0	2,118	0	118,133	0 0	6,219	0	484,322	0 0
1875	6,058	0	475,168	0 0	2,022	0	86,143	0 0	8,080	0	561,311	0 0
1876	5,449	0	379,318	0 0	1,509	0	60,320	0 0	6,958	0	439,638	0 0
1877	7,230	0	477,952	0 0	824	0	30,588	0 0	8,054	0	508,540	0 0
1878	6,085	0	362,072	0 0	1,125	0	33,750	0 0	7,210	0	395,822	0 0
1879	5,107	2	343,075	0 0	813	15	29,274	0 0	5,920	17	372,349	0 0
1880	5,476	6	440,615	0 0	682	6	30,722	9 0	6,158	12	471,337	9 0
1881	7,590	17½	636,5	0 0	609	6	37,492	0 0	8,200	3½	724,003	0 0
1882	8,059	0	800,571	0 0	611	0	32,890	0 0	8,670	0	833,461	0 0
1883	8,680	1	802,867	0 0	445	4	21,685	0 0	9,125	5	824,552	0 0
1884	6,315	16	506,726	0 0	349	13	14,861	0 0	6,665	9	521,587	0 0
1885	4,657	18	390,458	0 0	534	18	25,168	0 0	5,192	16	415,626	0 0
1886	4,640	18	449,303	0 0	326	18	18,350	0 0	4,967	16	467,653	0 0
1887	4,669	8	509,039	0 0	291	13	16,411	0 0	4,961	1	525,420	0 0
1888	4,562	2	560,182	0 0	247	8	13,314	0 0	4,809	10	572,496	0 0
1889	4,408	13	403,111	0 0	241	15	12,060	0 0	4,650	8	415,171	0 0
1890	3,409	11	317,117	0 0	259	4	12,724	0 0	3,668	15	329,841	0 0
1891	2,941	5½	261,769	0 0	203	5	9,643	0 0	3,441	10½	271,412	0 0
1892	3,253	0	301,541	0 0	239	2	12,573	0 0	3,492	2	314,114	0 0
1893	2,636	17	223,139	0 0	148	1	6,604	0 0	2,784	18	229,743	0 0
1894	2,611	5	179,445	0 0	190	7	7,752	0 0	2,801	12	187,197	0 0
1895	2,199	11	136,080	0 0	77	4	2,543	0 0	2,276	15	138,623	0 0
Total...	111,100	3	9,495,495	0 0	18,377	19	900,978	9 0	129,775	10	10,396,473	9 0

DURING the year eighty-seven assays were made for Tin in the laboratory of the Geological Survey Branch of this Department, the following yielding over 2 per cent. :—

Official number.	Locality—stated by the finder to be.	Description.	Per cent. metallic tin.
1810	Armidale District	Stream tin	73·45
229	Ballina, between Cape Byron and	Concentrated beach sand. (Platinum, iridium, and osmiridium present, a few ounces per ton.)	16·48
230	" " "	Beach sand. (Platinum, iridium, and osmiridium present, a few ounces per ton.)	5·18
1633	" near	Beach sand. (Platinum-trace under 2 dwt. per ton; osmiridium 1 oz. 5 dwt. 5 gr., per ton; iridium, 3 oz. 6 dwt. 15 gr., per ton; gold 21 gr., per ton.)	4·28
4585	Bates, parish of (Block 117)	Stream tin	71·82
1434	Boorolong.....	Black sand, consisting of zircons, &c. (Gold 4 dwt. 8 gr., silver 2 dwt. 4 gr., per ton.)	11·30
4765	Clarence River District	Stream tin	71·30
2772	Cudgeon Creek, between Richmond River Heads and	Beach sand (See 2772 under "Gold" and "Platinum.") ..	35·08
3591	Deepwater	Siliceous metamorphic rock with a great development of chlorite	9·75
1607	Dora Dora Run	Stream tin	70·90
3330	Dundee, 6 miles from—(Hogg's Creek)	Lode tin ore	10·48
3331	" " "	" " "	3·78
4133	Esk River	Concentrates (See 4139 under "Gold.")	5·12
4269	" (McAuley's Lead).....	Concentrated beach sand, first treated with boiling washing soda and then passed over copper plates three times (See 4269 under "Gold.")	38·52
2258	Grenfell, north of	Alluvial tin. (See 2258 under "Gold.")	47·20
1049	Gulf, New England	Lode tin ore.....	48·4
1050	" "	Slaty material containing copper pyrites. (Silver 1 oz. 10 dwt. 11 gr., per ton.)	4·4
1051	" "	Pannings	62·70
1718	Inverell District	Stream tin	73·47
422	Pullitop, Parish of	Rubble, consisting chiefly of tinstone and quartz fragments. (Gold a trace, silver 12 dwt. 22 gr., per ton)	55·54
4327	Shellharbour	Concentrated beach sand (See 4327 under "Gold.")	49·10
370	Strathbogie	Ironstone	54·78
2892	Tumut District	Black sand (See 2892 under "Gold.")	7·34

COPPER.

The following table will show that the quantity of copper exported during the year was largely in excess of that in 1894—an increase of 1,715 tons, and £67,404 in value. The restarting of the Great Cobar Company's mine at Cobar is responsible for the increase, as that Company produced 1,703 tons of smelted copper, valued at £68,120, from 37,845 tons of ore raised. To further increase its production, the company has added another 60-ton water-jacket furnace, and now employs, on an average, 415 men. The Nymagee Copper Mine is being worked on tribute, and the ore raised was 5,845 tons, which produced 485 tons of smelted copper, valued at £21,825. About 150 men are employed in and about this mine. The New Mount Hope Copper Company at Mount Hope employs 38 men, and raised 858 tons of ore for 143½ tons of smelted copper, valued at £5,456. This company's shaft is now down 340 feet, and the ore is being raised from that level, the lode being about 58 feet wide. The Great Central Mine is at South Mount Hope, and employs over 40 men. The shaft is down 242 feet, but work is being carried on at the 192-ft. level, where the lode is 3 feet wide. The Company raised 900 tons of ore, which yielded 134 tons of copper, valued at £5,093. The Burruga Copper Mine, at Burruga, was worked all the year round with the exception of a couple of weeks in June last, when the lode ran out. It was, however, picked up again, but, unfortunately, did not prove so rich as the old lode. This fact, combined with a wages dispute with the men, helped to reduce the output, which was only 331 tons, valued at £14,895, from 3,311 tons of ore. Two furnaces are kept going, and the number of men employed is about 150. The May Field Copper Company have started work at Rye Park, situated about 17 miles south-east of Burrowa, and during the year raised 50 tons, which returned 9 tons of smelted copper, valued at £360. The lode is 2 ft. 6 in. wide, and the deepest shaft is now 125 feet. At Captain's Flat, the Lake George United Mining and Smelting Company obtained 350 tons of smelted copper. This company raised 18,563 tons of ore, and besides the copper given above, got 2,164 oz. of gold, 137,951 oz. of silver, and 64 tons of lead, the total yield being valued at £12,604. About 300 men are now employed in and about this mine, and should the diamond drill boring operations prove successful, the number is likely to be increased. A well-defined lode, carrying copper and silver, has been discovered by Thomas Coyle near the Cotter River in the Queanbeyan Division, from which 60 tons were raised, yielding copper to the value of £150 and silver £105. This lode is being further developed. At Broken Hill, the Proprietary Company saved in connection with their silver mining operations 23 tons of copper and 1,004 tons of copper matte, valued at £21,312.

TABLE

Official Number.	Locality—Stated by the finder to be.	Description.	Per cent. Metallic Copper.
31	Drake	Cavernous quartz, with blue carbonate of copper. (Silver, 5 oz. 2 dwt. 8 gr. per ton.)	17-51
137	"	Siliceous felspathic lodestuff, containing blue carbonate of copper and copper pyrites. (See No. 137 under gold.)	19-07
4072	"	Ferruginous friable quartz, with blue and green carbonates of copper. (See 4072 under silver.)	10-07
4073	"	Sulphide and carbonate of copper. (Gold, a trace; silver, 5 oz. 8 dwt. 21 gr. per ton.)	46-97
2795	Elsmore (Newstead Mine).....	Crushed sample, rich in sulphides, principally galena. (See 2795 under silver, lead, and zinc.)	7-15
2726	"	Crushed sample, rich in sulphides, principally galena. (See 2796 under sulphur and zinc.)	7-29
3531	Gulgong (about 3 miles from)	Very ferruginous copper ore. (Silver, 13 oz. 12 dwt. 4 gr. per ton)...	32-67
3532	"	Ferruginous copper ore. (See 3532 under gold and silver.)	25-05
564	Gundagai (12 miles from)	Green carbonate of copper.....	12-36
728	" (near)	Dark coloured stone, containing blue and green carbonates of copper. (Gold, a trace; silver, 2 oz. 3 dwt. 13 gr. per ton.)	17-71
1729	Kiandra	Copper gossan.....	36-70
2731	"	Mainly various sulphides of iron and copper. (Gold, a trace; silver, 8 dwt. 17 gr. per ton.)	13-36
2732	"	Similar to preceding. (Gold, a trace; silver, 10 dwt. 21 gr. per ton)	12-36
948	Liliwa, Cudgong	Sulphide of copper, somewhat oxidised. (See 948, under silver.)	31-16
2300	Macleay District	Blue and green carbonates of copper. (See 2300 under silver.)	11-81
941	Milburn Creek	Copper pyrites. (Gold, a trace; silver, 4 oz. 0 dwt. 13 gr. per ton)	8-89
2185	Millthorpe (18 miles from)	Copper glance. (See 2485 under gold)	13-32
120	Molong, Copper Hill	Copper ore. (Gold, 1 dwt. 15 gr.; silver, 8 dwt. 3 gr. per ton)	7-39
2672	"	Copper glance. (Gold, a trace; silver, 1 oz. 3 dwt. 22 gr. per ton)	62-80
3299	"	Quartz, with carbonate of copper. (See 3299 under gold)	6-66
2742	Mount Drysdale (30 miles from)....	Copper glance.	22-14
4078	Mount Hope	Carbonate of copper in white clay. (Gold, 3 dwt. 6 gr.; silver, 2 oz. 0 dwt. 6 gr. per ton.)	33-10
4812	Mount Stromboli (near).....	Broken up copper-stained ore	32-45
4813	"	"	21-23
1102	Mulloon (E. P. Scott Mine)	Copper pyrites, with zinc blende. (Gold, 4 dwt. 8 gr.; silver, 3 oz. 16 dwt. 5 gr. per ton.)	5-70
4163	Narrandera	Massive copper glance, superficially converted into oxide and green carbonate. (Gold, a trace; silver, 1 oz. 3 dwt. 22 gr. per ton.)	56-24
1782	Orange District	Crushed copper ore—carbonate. (See 1782 under silver)	33-61
1783	"	"	10-20
2275	Orange	Cupriferos gossan. (Silver, 1 oz. 1 dwt. 18 gr. per ton)	13-56
2276	"	"	14-96
4234	" (7 miles from)	Copper glance and copper pyrites. (Gold, a trace; silver, 2 oz. 12 dwt. 6 gr. per ton.)	23-78
278	Peak Hill	Copper glance and iron pyrites, with quartz, in a matrix consisting of silvery micaceous mineral. (Gold, 4 dwt. 8 gr.; silver, 1 oz. 3 dwt. 22 gr. per ton.)	45-68
608	Queanbeyan (about 2 miles N.E. of)	Lodestuff, containing blue and green carbonate of copper. (Silver, 3 oz. 0 dwt. 22 gr. per ton.)	5-98
3388	Rylstone (10 miles from)	Ferruginous copper ore—carbonate and sulphide. (Silver, 7 oz. 18 dwt. 22 gr. per ton.)	34-95
3389	"	Copper ore—bornite, partly superficially converted into carbonate. (See 3389 under silver.)	36-26
3865	Tingha	Copper gossan. (See 3265 under silver)	10-17
768	Tooloom	Ironstone, with a little red oxide and green carbonate of copper. (Silver, 1 oz. 6 dwt. 2 gr. per ton.)	19-31
503	Wandsworth.....	Quartz, with copper pyrites and a little calcareous material. (Gold, a trace; silver, 3 oz. 14 dwt. 1 gr. per ton.)	14-52
3634	Wee Jasper (20 miles from Yass)....	Copper pyrites and carbonates in a dark-coloured quartz.....	6-06
727	Willie Willie (Macleay River)	Copper ore, containing blue and green carbonates. (Gold, a trace; silver, 7 oz. 12 dwt. 10 gr. per ton)	26-17
1556	"	Copper ore—blue and green carbonates. (Gold, a trace; silver, 6 oz. 6 dwt. 3 gr. per ton)	18-12
1557	"	Copper ore—blue and green carbonates. (See 1557 under silver)	48-16
1560	"	"	40-09
1675	"	Copper gossan. (See 1675 under silver)	42-44
2642	"	White quartz, with clay, coloured green by carbonate of copper ..	5-78
2952	"	Copper gossan. (Gold, a trace; silver, 14 oz. 0 dwt. 21 gr. per ton.)	35-55
3758	"	Green carbonate of copper. (See 3758 under silver)	32-84
3801	"	Ferruginous carbonate of copper ore. (Silver, 5 oz. 17 dwt. 14 gr. per ton.)	27-80
4259	"	Ferruginous copper ore—sulphides with carbonates. (Gold, a trace; silver, 13 oz. 10 dwt. per ton.)	22-28
4418	Wyalong	Quartz and chloritic schist, with iron and copper pyrites	9-02
2187	Wyangle, county of Buccleuch	Cupriferos ironstone.....	20-15

IRON.

Several men were at work during the year prospecting for payable deposits of hematite ore on the Bulli Ranges, in the Wollongong District. Extensive deposits of clay-band ironstone have been found to exist in these ranges, and indications of the presence of hematite ore have been discovered. The men were being paid from the Prospecting Vote, and the leader of the party was Mr. Charles Morton, C.E., of Bulli, the work being carried out under the supervision of Mr. James Rowan, Inspector of Collieries for the district, who took sections of the seams and strata where the men were at work. The first opening was

was made at a point about half-a-mile north-west of Corrimal Colliery, 1,170 feet above sea-level, and 630 feet above the top seam of coal; and No. 2 opening about 2½ chains north from No. 1; No. 3 opening is situated between Mount Keira and Mount Pleasant; No. 4 opening at Garden Gully, Mount Keira. At this place large blocks of hematite were found cropping out, and small pieces scattered over a portion of the ground. This place was well tried by sinking and trenching, but failed to prove more than could be seen on the surface. On Stafford's farm, Mount Kembla, and near the Mount Kembla Colliery air-shaft, hematite could be seen outcropping, but no well-defined deposit could be traced. A large number of samples taken by Mr. Inspector Rowan were sent to this Department for examination and analysis. Mr. Pittman, the Government Geologist, on submitting the results of the analysis of the samples, stated that "a very large proportion of the specimens forwarded for analysis consisted of shales and tuffs, which were quite worthless as ores of iron." It will be seen from the foregoing that the existence of payable deposits of hematite ore in this district still remains to be proved, which for this district, as a whole, is unfortunate. The manufactory of finished iron castings and galvanised iron, from scrap-iron, is still being carried on at the Eskbank Iron and Steel Rolling Mills by Mr. W. Sandford. During the year the quantity of iron put through was 2,403 tons, the manufactured price of which is £15,620 8s. 9d. On an average Mr. Sandford employs 130 men and 40 boys, his establishment being of much benefit to the district generally.

During the year fifty-two assays were made for iron in the laboratory of the Geological Survey Branch of this Department, the best results being as follows:—

Official Number.	Locality—Stated by the finder to be.	Description.	Per cent Metallic Iron.
2146	Bathurst	Earthy red oxide of iron	53.15
2679	Bulli	Ironstone	12.18
2680	"	"	50.40
2963	"	"	50.86
2969	"	"	20.23
2970	"	"	20.28
3312	" near	Sandstone, showing a few ferruginous concentric bands	4.83
1880	Barrowa	Siliceous red iron ore	58.66
3370	Mount Kembla	Brown iron ore	44.14
2722	Mudgee	Pillets of ironstone in a ferruginous clayey matrix.	82.39
1215	Orange	Paint material, purple; ferric oxide, 51.91 per cent; grit, 43.00.	
920	Quedong	Dark-brown clayey material	13.17
1184	Sandy Creek, near	Yellow ochre (silver, 8 dwt. 17 gr. per ton); ferric oxide, 49.34.	
3759	Shoalhaven	Magnetic iron ore (silver, 8 dwt. 17 gr. per ton)	53.37
1839	Trundle, near	Ironstone	52.82
1840	"	"	53.81
3928	Wallerawang (Piper's Flat)	Brown iron ore	30.52
2135	Wollongong	Siliceous brown iron ore	49.91
4181	Illawarra District	Limonite	*39.76
4182	"	"	*30.96
4186	"	"	*46.56
4189	"	"	*31.29
4191	"	"	*40.01
4192	"	"	*36.51
4193	"	"	*41.31
4194	"	"	*40.35
4195	"	"	*38.06
4196	"	"	*51.53
4197	"	"	*41.58
4198	"	"	*38.86
4199	"	"	*53.70
4200	"	"	*53.53

* A large number of samples of shales, tuffs, limonite, &c., &c. of which thirty-two (4171-4202) were subjected to analysis. Of these only fourteen contained less than 60 per cent. of gangue. The above yielded over 30 per cent. of metallic iron.

Gangue.—Insoluble in boiling muriatic acid, and consists of sand and silicates of alumina, also some organic matter.

ANTIMONY.

The bulk of the antimony won in New South Wales comes from the Hillgrove District, where it is won in conjunction with the extensive gold-mining operations carried on there. The low price for this class of ore prevailing during the past year has been the means of greatly reducing the output, which was only about 400 tons, valued at £1,000, as compared with 632 tons, valued at £9,480, the product of 1894. The Eleanora Gold-mining Company sent away 167 tons of the smelted metal, which is valued at £1,908, and the Hillgrove Freehold 20 tons, the balance coming from the other smaller mines in the Division. Very little work has been done during the year on the antimony lodes at Bowraville, the total quantity raised being 50 tons, valued at £500. Until the price of antimony increases there will be little done towards extending the output.

During

During the year twenty-four assays were made for antimony in the laboratory of the Geological Survey Branch of this Department, the following yielding over 40 per cent. :—

Official Number	Locality—Stated by the finder to be.	Description.	Per cent. Metallic Antimony.
4539	Bowra, 7 miles from—Nambucca Heads (Geo. Lowe's antimony mine.)	Stibnite.....	62.55
3024	Cobar, 40 miles from	Siliceous antimony ore—sulphide. (See 3024 under gold.)	59.98
2823	Golden Gate, 8 miles from Bingara	Sulphide of antimony ore, superficially oxidised, contains a large quantity of cervantite as well as some antimonite and metallic antimony.	72.86

BISMUTH.

The only place in this Colony where bismuth is being mined for at the present time is at the King's Gate mine, in the Glen Innes District. The output of this metal is controlled by the demand in the London market, which is very limited. In consequence, only 2 tons 9 cwt. were forwarded during the year, but the selling price could not be ascertained. Very promising indications of the existence of payable deposits of bismuth have been met with in the Nymagee District, but no steps have been taken to prove the deposits so far.

During the year ten assays were made for bismuth in the laboratory of the Geological Branch of this Department, the following giving the best results :—

Official Number.	Locality—Stated by the finder to be.	Description.	Per cent. Metallic Bismuth.
1019	Glen Innes	Quartz. (See 1019 under gold	7.87
1020	"	" " 1020	13.17
1769	Mount Emily, near—south of Quambi...	Weathered granite containing bismuth ores. (Gold, 4 dwt. 8 gr.; silver, 2 oz. 1 dwt. 9 gr. per ton.)	6.39

PLATINUM.

The quantity of platinum won at Fifield and Platina has been greatly restricted owing to the very dry weather prevailing last year—the figures being 413 oz., valued at 23s. per oz., as compared with 1,000 oz. won in 1894. This metal is saved in connection with the alluvial gold-mining operations carried on, and at the end of the year it was estimated that there were 6,000 loads of wash-dirt at grass awaiting a supply of water. A little platinum is still being got on the beaches on the northern coast by the miners working the black sand for gold, but the exact quantity saved could not be ascertained.

During the year twenty-six assays were made for platinum in the laboratory of the Geological Survey Branch of this Department, the following yielding the most favourable results :—

Official Number.	Locality—Stated by the finder to be.	Description.	Platinum per ton.
2772	Cudgeon Creek and Richmond River Heads (between).	Beach sand. (See 2772 under gold and tin.)	oz. dwt. gr. 270 17 2
		Iridosmine..... =	79 1 13
		Other platinoid metals	4 4 22
4139	Esk River beach deposits.....	Concentrates—Iridosmine under 15 gr. per ton. (See 4139 under gold and tin.)	0 18 17
4269	Esk River (M'Auley's Lead)	Concentrated beach sand, first treated with boiling washing soda and then passed over copper plates three times. (See 4269 under gold and tin.)	2 18 3
		Iridosmine..... =	0 17 7
3213	Richmond River (12 miles north of) ..	Beach sand. (See 3213 under gold.)	23 3 20
		Iridosmine..... =	3 19 23
3515	" "	The small sample of sand contains a few ounces of platinum, also a very small amount of gold. There is a fair amount of osmiridium present, also a good percentage of tin.	
4327	Shellharbour	Concentrated beach sand. (See 4327 under gold and tin.)	30 10 18
1819	Tweed and Richmond Rivers (between)	Beach sand. (See 1819 under gold)	18 9 22
		Osmiridium	6 10 16

CHROMIUM.

Gundagai is the only district in the Colony that is producing chrome iron to any extent at the present time, the quantity raised during the year being 5,500 tons, valued at about £20,000. This is rapidly becoming a valuable industry for the district, looking at the large amount of labour employed, which averages over fifty men. Mr. Geological-Surveyor Carne reports fully on these deposits on pages 125-8 of this volume.

MANGANESE, NICKEL, AND COBALT.

No serious attempt has yet been made to mine for these minerals to any extent; and although small parcels have been brought to Sydney for treatment, and fairly satisfactory results obtained, the matter has ended there. Large deposits of manganese ore are to be found at Back Creek, in the Rockley District, and it is also reported to be abundant in the broken country east of Glen Innes; but none of the lodes have been worked to any great extent. The cobalt deposits in the Carcoar District have not been worked during the year.

DURING the year forty assays were made for manganese, four for nickel, eight for cobalt, in the laboratory of the Geological Survey Branch of this Department, the following yielding the best results:—

Official Number.	Locality—stated by the finder to be.	Description.	Per cent. Binoxide of Manganese.	Per cent. Metallic Manganese.
1071	Bathurst and Rockley, between ...	Manganese oxide.....	90.81	57.41
3946	„ District	Black oxide of manganese.....	76.63	48.45
4358	„ „	Oxide of manganese	86.16	54.47
572	Bendemecr	„ „	95.82	60.58
		„ „ Metallic iron..... =	.36	.....
		„ „ Silica .....	.94	.....
		„ „ Phosphorus .....	.029	.....
952	„ „	„ „	79.20	50.07
704	Brawlin	„ „ (black).....	78.63	49.71
241	Canowindra.....	Psilomelane	85.65	54.15
53	Cooma	Siliceous manganese ore	77.44	48.95
1064	Cootamundra	Oxide of manganese	73.55	46.60
377	Cowra	„ „	78.07	49.36
559	Farkinson Sidling, 4 miles from ..	„ „	80.60	50.96
4330	Nerriga, near	Massive arsenical pyrites. Metallic cobalt.....	0.15	.....
		„ „ Equal to cobalt protoxide	11.63	.....
		„ „ Nickel protoxide .....	.85	.....
		(Gold 4 dwt. 8 gr., Silver 2 dwt. 4 gr. per ton.)		
1958	Queanbeyan, 3 miles N. of	Quartz, with pyrolusite	89.21	56.40
1559	Willie Willie, Upper Macleay River.	Black oxide of manganese.....	68.39	43.24

TUNGSTEN.

Nothing has been done during the year with the lodes of wolfram in the Emunville Divison, but should the season prove favourable there is a probability that they will be tried. Margoehis and party had aid from the Prospecting Vote to test a wolfram lode at Berridale, but the work has been abandoned without anything of importance being struck.

During the year fourteen assays were made for tungstic acid in the laboratory of the Geological Survey Branch of this Department, the following yielding over 50 per cent:—

Official Number.	Locality—stated by the finder to be.	Description.	Tungstic Acid. Per cent.
2354	Casino District	Scheelite	75.20
4001	Cobar	Wolfram in quartz	53.70
3226	Elsmore	„ „	67.20
2089	Frogmore (5 miles from)	Scheelite	71.90
231	Guyra	„ „	75.62
1814	Inverell (15 miles south of)	Wolfram	73.40
669	Wagga	„ with quartz	64.00

MERCURY.

During the year twenty-three assays were made for mercury in the laboratory of the Geological Survey Branch of this Department, the following being the best results:—

Official Number.	Locality—stated by the finder to be.	Description.	Per cent. Metallic Mercury.
3964	Bingara District	Cinnabar, bearing iodestuff.....	1.20
1342	Naggrega Creek, county of Drake	„ in quartz	19.15
1009	Solferino, near	Quartz, traversed by veins of cinnabar. (Traces of gold and silver.)	1.60
1359	„ (Ogilvie's run)	Cinnabar, in quartz	15.22
2762	Yulgilbar	„ with blue carbonate of copper in quartz. (Silver 6 oz. 10 dwt. 15 gr. per ton; gold a trace.)	60.70
4056	„ (Cinnabar Mine).....	Cinnabar ore. (A minute trace of copper present)..	1.58
4057	„ „	„ „ „	0.48
4058	„ „	„ „ „	0.58

ZINC.

During the year eight assays were made for zinc in the laboratory of the Geological Survey Branch of this Department, the results being as follows:—

Official Number.	Locality—Stated by the finder to be.	Description.	Per cent. Metallic Zinc.
2327	Broken Hill.....	Sulphide ore. (See 2327 under iron)	29.73
2328	"	" (See 2328 under iron)	26.21
4321	Cudjagong (near)	Zinc blende.....	8.75
2795	Elsmore ("Newstead Mine")	Crushed sample, rich in sulphides, principally galena. (See 2795 under silver, copper, and lead.)	23.65
2796	"	Crushed sample, rich in sulphides, principally galena. (See 2796 under silver and copper.)	9.15

DIAMONDS.

The diamond mining industry at Bingara has been very quiet during the year. Captain Rogers has lately sunk a new shaft to test the low-levels of the Monte Christo Mine. A very large area of land has been taken up by various syndicates for diamond mining purposes who seem prepared to give the ground a good trial, judging from the preparatory works started. A revival has taken place at the Boggy Camp Diamond Field, which is situated 16 miles west of Tingha, and about 12 miles south-west of Inverell. The diamondiferous land comprises some 300 acres, all of which is taken up. Eight different parties are working the ground, and at the end of the year three of the parties were raising payable wash-dirt. The total yield for the year from this field, as far as can be ascertained, was 4,100 diamonds, which weighed in the aggregate 1,313 carats, principally got from the claims worked by Daisey and Party and Foreman Bros. The former party, in six months ending 31st December, 1895, from 50 loads of wash-dirt obtained 3,000 diamonds, valued at £280, and the latter party, during three months ending the same period, got 1,100 diamonds, valued at £120, from 110 loads of wash. The gem-stones are found under the basalt hills, in wash underlying a strata of clay and sand. The stones are not large, going about three to the carat, but some larger ones are occasionally met with. One stone was found recently which weighed 2 carats, and was almost perfectly round. There is a large deposit of diamond bearing ground in this locality which could be profitably worked if capital was introduced to erect the necessary machinery and work the claims in a systematic manner.

Operations are still being carried on in the Mittagong District in search of diamonds. The Kangaloon Diamond Mining Company are in receipt of Government assistance to continue their shaft to a total distance of 100 ft. Diamonds have been picked up from time to time in this locality, but the drift or matrix has not yet been traced from which they came.

OPALS.

The principal seat of opal-mining in this Colony is at White Cliffs, in the Wilcannia District, where over 300 men find constant employment. The most important development on the field during the year is the finding of good stone at a depth of 50 feet from the surface—a much greater depth than previously worked. At that depth the country shows no sign of changing, and it has yet to be proved at what depth payable stone can be found. It is also encouraging to learn that the patches of opal met with appear to improve in quality with depth and to become more regular and frequent than that met with in the higher levels. On Block 5 the shaft is down 50 feet in first-class country, and splendid opal is showing in the drives. On Block 7 a patch of stone was found which realised over £3,000, and good stone is still being got. In one of the shafts on this block there are three distinct veins of opal—one at 10 feet, another at 20 feet, and a third at the 30 feet level. The work done on Block 8 has proved very satisfactory, the quality of the opal obtained being very good. In a shaft on this block large pieces of petrified wood and opalised shells were obtained at a depth of 30 feet. Block 6 is on the brow of a hill, where the country is much harder and the opal-bearing veins dip into the hill. Some valuable patches of opal have been taken from this block. A large amount of work has been done on Block 1, and payable veins of opal have been opened up in several of the drives. From Grant's shaft on this block a patch of stone was taken about the end of the year which brought £1,200, and driving is still being done along the vein. The shallow shafts on Block 3 are being deepened with satisfactory results. The other blocks on the field have been worked well and profitably during the year, and show every sign of improving as depth is reached. From the above notes on the prospects of the field, this industry is showing signs of a permanency not considered probable a few years ago, and is likely to find employment for a larger number of men during the coming year. It is a very difficult matter to obtain from the miners the value of the opal won by them, owing to the very loose manner in which they keep their accounts, if any at all; but as far as could

be ascertained the value of the stone sold on the field during the past year was over £6,000, which is probably a very low estimate. It was, however, pretty clearly shown, from rough books kept by the owners of seven different blocks, that during the past three years they had sold stone to the value of £23,000. The price of the stone per ounce is by no means of a uniform character, some being sold as low as 10s. per oz., while some of the best quality brings as much as £42 per oz. The main market at present seems to be Germany, as the majority of the buyers come from that country direct, or are connected with firms there. There is a ready sale for opal, more especially for first-class gems.

EMERALDS.

The mines at the Glen, in the Emmaville District, still remain closed down in consequence of the difficulties of extraction, and the low price of the gems in the London market.

TURQUOISE.

Work was carried on during the year by means of aid from the Prospecting Vote to test the value of the discovery of turquoise made at Mount Lorigan, in the Wogonga Division. A lot of work was done, but although very promising indications of payable stone being met with were present, no fresh find of any importance was made.

TOPAZES.

These gems were got during the year, near Oban, in the Glen Innes Division, in considerable quantity, but the only sale that could be traced was one where a small parcel was bought for a sum of £20, at a very low rate per pound.

MARBLE.

A very fine collection of different varieties of marble has been made by the Government Architect, chiefly from the Bathurst and Orange Districts. The samples have been polished, and some of them are extremely attractive in appearance, and would compare favourably with the better varieties of imported ornamental marble. If the deposits from which these samples were taken should prove to be extensive, there is every reason to hope that the marble will be extensively used for ornamental work in the future.

LIMESTONE FLUX.

The quantity of limestone flux brought in from Tarrawingie to Broken Hill during the year was 104,194 tons, valued at £68,160. This is slightly less than the quantity used during the previous year, which is accounted for by the partial stoppage of work at the Proprietary Company's mine during the disastrous fire underground. With a revival of mining at Broken Hill, owing to the solution of the "sulphide ore" difficulty, the output from these quarries will be largely increased.

ALUNITE.

The Australian Alum Company are still raising stone at Bulladelah, and shipping it to England, the quantity so shipped during the year being 826 tons, valued at £826 at the mine. The Company's works at Bulladelah still remain closed, as it is found the stone can be treated in England at a cheaper rate. This is the only place in New South Wales where this mineral is worked. There is a very extensive deposit, and the stone can be taken out very cheaply.

PLUMBAGO.

A lease to mine for this mineral has been taken up by Messrs. Smith and Party in the Wilson's Downfall Division, and they have a shaft down on the deposit to a depth of 60 feet. About 20 tons of ore from this shaft, valued at about £80, which has been forwarded to various firms for trial. The adjoining land has been taken up, and prospecting operations are being carried on from the deposit being worked by the prospectors.

TRIPOLITE.

A lease has been taken up to work a deposit of this mineral, commonly known as "infusorial earth," at Wyrallah, in the Lismore District, and a quantity has been forwarded to Sydney for examination, and to be experimented upon. A quantity from even a larger deposit, in the same Division, has been sent on to Sydney and London for a like purpose. Although deposits of the mineral are to be found about 8 miles from Barraba, a few miles out from Cooma, and in the Warrambungle Ranges, 50 miles north from Mudgee, no serious attempt has been made, so far, to open up the deposits and find a market for it.

MISCELLANEOUS

MISCELLANEOUS ANALYSES.

During the year 97 miscellaneous analyses were made in the laboratory of the Geological Survey Branch of this Department, of which the following are the most interesting :—

LOCALITY—BARNEDMAN BATTERY.

(2314) Water.

The water gave a slight alkaline reaction to litmus paper, and a strong saline taste, somewhat resembling sea-water.

On evaporation it yielded :—

	Grains per gal.	In 1,000 parts.
Total solid matter	1660·736	23·7248
Chlorine in combination.....	854·840	12·212
Sulphuric acid	144·249	2·060
Magnesia	148·953	2·127
Lime.....	55·188	0·788

The total solid matter consists mainly of soda, magnesia, and lime, combined with chlorine, sulphuric acid, and carbonic acid. There is also present a small amount of potash, ferric oxide, alumina, silica, and phosphoric acid.

The sample may be described as a strong saline water, so concentrated that chemical treatment cannot be recommended as a means of rendering the water suitable for battery purposes, for which it is highly undesirable, on account of its high density, which would tend to cause loss of gold. For boiler purposes it is a most unsuitable water.

LOCALITY—BERTHONG ESTATE, WALLENBURN.

(3046) Rock, yielding :—

	per cent.
Moisture at 100° C.	2·87
Combined water.....	10·11
Silica	40·80
Alumina	2·54
Ferric oxide	6·20
Ferrous oxide.....	·48
Manganous oxide	trace.
Cobalt and nickel oxides	·25
Chromium sesquioxide	·20
Lime	absent.
Magnesia.....	35·82
Soda.....	·27
Potash.....	absent.
	99·63

Specific gravity, 2·521.

LOCALITY—BROKEN HILL.

(304) Sulpho-carbonate of lead, yielding :—

	per cent.
Water	nil.
Oxide of lead	74·11
Sulphuric oxide	22·27
Carbonic oxide	3·32
	99·70

LOCALITY—BROKEN HILL.

(645) Sulpho-carbonate of lead, yielding :—

	per cent.
Lead protoxide	74·11
Sulphuric oxide	25·00
Carbonic oxide	1·34
Water	nil.
	100·45

LOCALITY—BROKEN HILL (ROCKWELL Paddock).

(1743) Micaceous mineral, yielding :—

	per cent.
Moisture and water of combination	4·30
Silica	45·90
Alumina and ferric oxide.....	36·70
Lime	absent.
Magnesia.....	2·77
Potash.....	10·41
Soda.....	nil.
	100·08

LOCALITY—BRAIDWOOD (LITTLE RIVER, NEAR).

(1761) Pyromorphite, yielding :—

	per cent.
Lead oxide (PbO)	69·40
Metallic lead (Pb)	6·67
Phosphoric acid (P ₂ O ₅)	15·22
Vanadic oxide (V ₂ O ₅)	trace.
Chlorine (Cl)	2·26
Ferric oxide (Fe ₂ O ₃)	·62
Lime (CaO)	trace.
Insoluble in acids (sand)	4·67
Moisture	·86
	99·60

No gold or silver detected.

LOCALITY—DERRAWANG, CONDOBOLIN.

(1003) Water, yielding :—

	Grs. per gal.	In 1,000 pts.
Total solid matter (dried at 200° F.)	410·358	5·8622
Soluble saline matter	372·538	5·3219
Insoluble mineral matter	37·816	·5403
	410·354	5·8622
Chlorine in combination	167·66	2·3951
Sulphuric acid combination	43·55	·6221

The soluble saline matter consists mainly of soda, magnesia, with lesser amounts of lime, potash, &c., combined with chlorine, sulphuric acid, and carbonic acid.

The insoluble matter consists of carbonate of magnesia, carbonate of lime, silica, and a trace of alumina, oxide of iron, &c.

A strong saline water unfit for man or beast. If used for irrigation purposes will in time destroy all useful vegetation.

LOCALITY—DRYSDALE.

(1406) Residues after washing a small quantity of Drysdale auriferous slate, yielding :—

The portion soluble in acid (nitric) consisted chiefly of copper with a little silver, ferric oxide, and alumina, and traces of bismuth.

The portion insoluble in acid (nitric) consisted chiefly of silica and ferric oxide (present probably as silicate of iron), with a small quantity of antimony and traces of copper and manganese.

There is some sulphur present in combination, but not enough to combine with the copper, silver, and antimony found.

A few specks of gold present.

LOCALITY—THIRTY MILES S. E. OF DUBBO.

(135) Kaolin, yielding :—

	per cent.
Moisture at 100° C.	1·09
Combined water.....	13·38
Silica (SiO ₂)	46·27
Alumina (Al ₂ O ₃)	39·05
Ferric oxide (Fe ₂ O ₃)	1·08
Ferrous oxide (FeO)	nil.
Manganous oxide (MnO)	"
Lime (CaO).....	"
Magnesia (MgO)	·22
Potash (K ₂ O)	·32
Soda (Na ₂ O).....	nil.
Phosphoric acid (P ₂ O ₅)	minute trace.
Sulphuric acid (SO ₃).....	nil.
Titanic acid (TiO ₂)	strong trace.
	100·41

LOCALITY—EDEN (WEST OF THE LIGHTHOUSE).

(2384) Weathered rock, yielding :—

	per cent.
Moisture at 100° C.	3·73
Combined water	9·92
Silica (SiO ₂)	43·22
Alumina (Al ₂ O ₃)	28·16
Ferric oxide (Fe ₂ O ₃)	12·85
Ferrous oxide (FeO)	·42
Lime (CaO)	trace.
Magnesia (MgO)	·58
Potash (K ₂ O)	·77
Soda (Na ₂ O)	·20
Phosphoric anhydride (P ₂ O ₅)	·31
Sulphuric " (SO ₃)	·25
	100·41

This mineral is decomposed by boiling hydrochloric acid.

LOCALITY—FAIRFIELD (NEAR).

(3289) Graphite, yielding—proximate analysis :—

	per cent.
Moisture and combined water.....	6·61
Carbon	47·12
Ash	46·27
	100·00

Ash—reddish tinge, flocculent.

LOCALITY—GALONG.

(945) Water, yielding :—
Chemical composition.

	Grains per gallon.
Silica and silicates.....	1·624
Calcium chloride	3·429
Magnesium chloride	30·140
Sodium chloride.....	15·408
Carbonate of lime	7·000
Oxide of iron and trace of alumina.....	·756
Sodium sulphate	16·250
Potassium sulphate	3·170
Organic matter	2·105
	<hr/>
	79·882

Free ammonia, nil per one million parts.

Albuminoid ammonia, 1·80 parts per one million parts.

Remarks.—The large amount of albuminoid ammonia present shows the water to be seriously contaminated with organic matter, in fact it may be classed as diluted sewerage. On no account should the water be used for human consumption, nor in washing the various apparatus in every day use in a butter factory. It is not by any means a suitable water for steam purposes, and if other is obtainable I should strongly recommend its use to be discontinued. The magnesium chloride present will be decomposed at a high temperature into oxychloride and hydrochloric acid, the latter escaping with the steam, and thus acting on the steam-pipes, valves, &c.

LOCALITY—GALONG.

(946) Sediment and solution taken from steam boiler.
This sample consisted of a solution and a copious sediment, which occupied about one-fifth the space of the whole sample. The sediment consisted of carbonates of lime and magnesia, oxide of iron, silica, clayey matter, organic matter, &c. The solution consisted of the various salts present in the water in a highly concentrated form.

LOCALITY—A BATTERY DAM AT GARANGULA.

(3071) Water, yielding :—
Total solid matter (dried at 225° F.), 100·80 grains per gallon.

Chemical Composition.

	Grains per gallon.
Chloride of sodium.....	15·064
Chloride of potassium.....	5·184
Carbonate of potash	3·030
Carbonate of lime	2·800
Carbonate of magnesia	3·528
Alumina and ferric oxide	2·240
Silica and clay (very finely divided)	62·860
Organic matter	7·560
Manganous oxide	trace.
Sulphuric trioxide	trace.
	<hr/>
Total solid matter	102·266

Total matters held in suspension, 76·370 grains per gallon, consisting mainly of finely-divided clay and organic matter.

Water neutral to test paper.

No nitrates present.

The presence of so much finely-divided clay and organic matter would tend to cause "priming," and in its present state it is a very undesirable water for steam purposes. An addition of 1½ oz. of alum per 10,000 gallons of water is recommended. The alum should be finely powdered, and the proper quantity dissolved in water and added to the water, the whole being well stirred and allowed to settle, the clear water being drawn off for use. This will necessitate the use of settling-pits, and it is not recommended that the alum be added to the water in the storage dam, for a large amount of fine silt will be deposited which will frequently require removal.

LOCALITY—GUY FAWKES (NEAR).

(480) Carbonaceous mineral, resembling jet, yielding :—
Proximate analysis.

Hygroscopic moisture	17·55
Volatile hydrocarbons, &c.	44·70
Fixed carbon.....	31·80
Ash.....	5·95
	<hr/>
	100·00

Specific gravity

Sulphur

Ash—Buff colour, granular. No coke formed. A loose mass left after ignition.

LOCALITY—HILLGROVE DISTRICT.

(2245) Plumbago disseminated through a soft rock. Proximate analysis :—

Moisture.....	per cent.
Carbonaceous matter.....	9·51
Ash.....	12·02
	<hr/>
	78·47
	<hr/>
	100·00

Ash—Reddish tinge.
A carbonaceous earth of no commercial value.
The above result was obtained from material which had been crushed coarse and washed.

LOCALITY—HILLGROVE DISTRICT.

(2246) Plumbago disseminated through a soft rock. Proximate analysis :—

Moisture.....	per cent.
Carbonaceous matter.....	11·88
Ash.....	12·24
	<hr/>
	75·58
	<hr/>
	100·00

The above result was obtained from material which had been crushed fine and washed.

LOCALITY—MOUNT ALLEN MINE, MOUNT ALLEN.

(3553) Water, yielding :—

	Grains per gallon.	In 1,000 parts.
Total solid matter (dried at 220° F)	216·440	3·092
Chlorine in combination	83·538	1·1934
Sulphuric oxide in combination	23·880	·3411
Free ammonia ..	nil per 100,000 parts.	
Albuminoid ammonia	·005	" "

The total solid matter consists mainly of soda and magnesia with lesser amounts of lime and potash, combined with chlorine, sulphuric, and carbonic acids. A trace of ferric oxide and a small quantity of silica present.

The large amount of total solid matter present in this water renders it a very unsuitable one for human consumption. The maximum amount present in a potable water should not exceed 40 to 50 grains per gallon.

LOCALITY—MUDGE DISTRICT (LIMESTONE).

(1103) Alluvial gold, yielding :—

	In 1,000 parts.
Fine gold	932·08
" silver	58·12
Base metals.....	9·80
	<hr/>
	1000·00

Colour excellent.

The sample too small to permit of the determination of the base metals present, which, however, were in very small proportion.

LOCALITY—NYNGAN (NEAR).

(2460) Magnesite, yielding :—

Carbonate of magnesia	per cent.
	98·70

LOCALITY—PERA BOBE—NEAR.

(677) Soil, yielding :—

Soluble saline matter	per cent.
Re-action—slightly alkaline.	·888

A very small quantity of the alkali present exists as carbonate, the carbonic acid found being only ·05 per cent. The soluble saline matter consists largely of organic matter, sodium chloride, and a considerable amount of nitrates. The amount of saline matter present in this soil is small. The sample sent was insufficient for a more detailed analysis.

LOCALITY—SHOALHAVEN.

(3022) Alum, yielding —	per cent.
Moisture and water of combination (by difference)	42.37
Insoluble in acids (sand, &c.)	1.74
Alumina	10.91
Ferric oxide	.21
Lime	.30
Magnesia	4.68
Potash	1.06
Soda	trace.
Manganous oxide	.59
Copper, nickel, and cobalt oxides	traces.
Sulphuric tri-oxide	38.14
Chlorine	trace.
	<hr/> 100.00

LOCALITY—SILVERTON TO LAKE COBHAM ROAD. SANDY CREEK BORE.

(4378) Boiler incrustation:—	per cent.
Chemical composition.	
Moisture at 100° C.	.35
Combined water	2.44
Silica (SiO ₂)	5.10
Ferric oxide (Fe ₂ O ₃)	3.30
Manganous oxide (MnO)	trace.
Alumina (Al ₂ O ₃)	3.90
Calcic sulphate (CaSO ₄)	80.27
Potassium sulphate (K ₂ SO ₄)	.27
Magnesia (MgO)	3.02
Potassium chloride	.78
Prophoric acid	trace.
Organic matter, loss, etc.	.56
	<hr/> 100.00

LOCALITY—TALBRAGAR.

(1682) Finely stratified sedimentary material, yielding:—	per cent.
Combined water	1.04
Moisture at 100° C.	.40
Silica	97.01
Alumina and trace of ferric oxide	1.70
Magnesia	.18
Soda	trace.
	<hr/> 100.34

LOCALITY—WALLEDBEEN.

(3133) Crystalline rock (unaltered), yielding:—	per cent.
Moisture at 100° C.	.26
Combined water	.79
Silica	49.30
Alumina	10.2
Ferric oxide	2.20
Ferrous oxide	3.83
Manganous oxide	nil.
Chromium sesquioxide	trace.
Nickel oxide	"
Lime	11.82
Magnesia	19.36
Potash	.50
Soda	1.14
	<hr/> 99.62

LOCALITY—WALLERAWANG.

(3469) Some small pieces of crystalline substance were subjected to a qualitative analysis, and proved to be magnesia sulphate (epsomite) of good quality.

LOCALITY—WALGETT, 12 MILES N. OF DUNGLEAR RUN.

(1179) Water, yielding —
Total solid matter, 2609.60 grains per gallon, consisting of a large quantity of sodium chloride, with large quantities of lime and magnesia present as chlorides and sulphates. Small quantities of organic matter and ferrous sulphide present. Unfit for human consumption and stock purposes.

LOCALITY—WYRALLA, RICHMOND RIVER.

(368) Tripolite, yielding:—	per cent.
Moisture at 100° C.	2.69
Combined water	2.79
Silica	90.94
Alumina	2.38
Ferric oxide	.49
Ferrous oxide	.33
Manganous oxide	trace.
Magnesia	trace.
Sodium chloride	.32
	<hr/> 99.94

LOCALITY—WYRALLA, RICHMOND RIVER.

(2493) Tripolite, yielding:—	per cent.
Moisture, at 100° C.	6.02
Combined water	3.64
Silica	88.14
Alumina	1.42
Ferric oxide	.59
Potash soda	.43
Phosphoric anhydride	minute trace.
Organic matter	trace.
	<hr/> 100.23

LOCALITY—WYRALLA—GEO. DIXON'S PROPERTY, NORTH COBRINGTON, ABOUT 2½ MILES FROM—RICHMOND RIVER.

(4546) Tripolite, yielding:—	per cent.
Moisture at 100° C.	5.41
Combined water	4.42
Silica (SiO ₂)	67.71
Alumina (Al ₂ O ₃)	15.47
Ferric oxide (Fe ₂ O ₃)	2.31
Ferrous oxide (FeO)	trace.
Manganous oxide (MnO)	trace.
Lime (CaO)	.72
Magnesia (MgO)	.93
Potash (K ₂ O)	2.52
Soda (Na ₂ O)	.98
	<hr/> 100.47

LOCALITY—WYALONG.

(1824) Boiler incrustation, yielding:—	per cent.
Calcium carbonate	.18
Calcium sulphate	22.03
Magnesium oxide	2.91
Sodium chloride	49.89
Potassium chloride	6.35
Ferric oxide, alumina, and traces of calcium phosphate	2.54
Moisture at 100° C.	2.80
Organic matter and water given off over 100° C.	1.54
Insoluble matter (silica and clay)	11.76
	<hr/> 100.00

LOCALITY—WYALONG, PINE RIDGE.

(2986) Water:—
Appearance in 2-foot tube—pale yellow; odour when heated to 100° F., metallic.
Free ammonia, .012 parts per 100,000 parts.
Albuminoid ammonia, .026 parts per 100,000 parts.
Nitrogen as nitrates, minute trace, " "
" nitrites, nil " "
Oxygen absorbed in 15 minutes, .028 parts per 100,000 parts.
" " 4 hours, .067 " "
Phosphoric acid as phosphates, trace " "
Poisonous metals, nil " "

Chemical composition of total solid matter:—	Grains per gallon.	In 1,000 parts.
Silica and silicates	5.264	.0752
Alumina and ferric oxide	.504	.0072
Carbonate of lime	8.749	.1249
" magnesia	14.597	.2085
" soda	10.980	.1568
Sulphate of potash	1.229	.0175
Chloride of sodium	10.220	.1460
Total solid matter	61.543	.7361

Matter in suspension, 4.928 grains per gallon.
" " .0704 in 1,000 parts.
The water gave an alkaline reaction to litmus paper, and contained a fair amount of suspended matter.
The large amount of free and albuminoid ammonia found in the water proves it to be contaminated with organic impurities, rendering it a very suspicious water, not by any means suitable for human consumption.
Should no other water be obtained, it is recommended that it be well boiled before use.

LOCALITY—YULGILBAR.

	per cent.
(4651) Mercury ore, yielding :—	43·68
Metallic mercury	6·87
" copper	4·44
" antimony	trace.
" arsenic	·45
" iron	trace.
Alumina	1·26
Lime	·21
Magnesia	30·46
Gangue	11·46
Sulphur	·44
Carbonic acid	·25
Moisture at 100° C.	
	<hr/>
	99·52

LOCALITY—THE BOURKE LOCK AND WHIR, THE SITE OF.

	per cent.
(3266) Indurated black clay, yielding :—	4·01
Moisture at 100° C.	8·29
Combined water	52·52
Silica	25·79
Alumina	7·48
Ferric oxide	trace.
Manganous oxide	·68
Lime	·54
Magnesia	·58
Potash	nil.
Soda	minute trace.
Phosphoric acid	trace.
Organic matter	
	<hr/>
	99·89

LOCALITY—BALD HILLS, BATHURST.

(3942) Sandy clay.

A brick was made from this clay and carefully dried. It was afterwards submitted to an intense heat in a coke assay furnace, with the result that fusion took place.

It appears to be a very poor quality of clay, and is useless for the manufacture of fire-bricks.

LOCALITY—CARLINGFORD.

	per cent.
(864) Pipe-clay, yielding :—	2·610
Moisture at 100° C.	10·660
Combined water	43·940
Silica	34·170
Alumina	·800
Ferric oxide	minute trace.
Lime	·341
Magnesia	1·360
Potash	·004
Soda	5·810
Titanic acid	trace.
Organic matter	
	<hr/>
	99·695

LOCALITY—DON DORRIGO.

(3613) White clay.

A portion of the clay was moulded into the shape of a small brick, also a second brick was made with the addition of half its weight of sand. After careful drying they were placed in a covered crucible, and submitted to the highest heat obtainable in a coke assay furnace for some 4 hours. The bricks on cooling showed no fusion had taken place, the sharp edges and original shape being retained.

LOCALITY—KING'S PLAINS, BLAYNEY.

	per cent.
(2385) Fine white clay, yielding —	·50
Moisture at 100° C.	3·56
Combined water	74·40
Silica	16·88
Alumina	1·11
Ferric oxide	·11
Ferrous "	trace.
Manganous oxide	nil.
Lime	·29
Magnesia	2·79
Potash	·03
Soda	trace.
Phosphoric acid	
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	99·67

Free silica present in this sample.

24—K

LOCALITY—MUDGER.

	per cent.
(3687) White clay, yielding :—	·34
Moisture at 100° C.	3·71
Combined water	73·28
Silica	18·00
Alumina	·54
Ferric oxide	·37
Lime	·33
Magnesia	·07
Potash	3·73
Soda	trace
Organic matter	
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	100·37

From the analysis and freedom of the clay from ferric oxide it was thought that it would be a suitable one for the manufacture of porcelain.

Several small utensils were made from the clay, and carefully dried and burnt. These models, when taken from the furnace, were of a good colour, and resembled porcelain ware in appearance.

LOCALITY—NORTH SHORE.

	per cent.
(3498) Clay, yielding :—	1·25
Moisture at 100° C.	5·47
Combined water	65·04
Silica	23·06
Alumina	1·48
Ferric oxide	·35
Lime	·65
Magnesia	2·14
Potash	·01
Soda	·04
Sulphuric oxide	trace
Phosphoric acid	·93
Organic matter	
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	100·42

From experiments made as to the refractory nature of this clay, it does not appear that it is suitable for the manufacture of a high-class fire-brick.

LOCALITY—ULLADULLA.

	per cent.
(856) White clay, yielding :—	1·42
Moisture at 100° C.	12·86
Combined water	43·86
Silica	33·77
Alumina	·74
Ferric oxide	·70
Lime	·14
Magnesia	·84
Potash	nil.
Soda	·89
Titanic acid	trace
Sulphuric oxide	
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	100·22

LOCALITY—WYANGLE, PARISH OF—TEMUT DISTRICT.

	per cent.
(171) White clay, yielding :—	6·70
Moisture at 100° C.	11·70
Combined water	41·24
Silica	35·10
Alumina	·68
Ferric oxide	nil.
Ferrous oxide	trace
Manganous oxide	1·80
Lime	1·33
Magnesia	1·96
Potash	nil.
Soda	nil.
Phosphoric acid	nil.
Sulphuric "	
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	100·51

SUMMARY.

The total value of the mineral products of this Colony to the end of 1895, is £113,888,865 9s. 7d., details of which are given in the following table:—

	Quantity.	Value.	Total values.
Quantity and value of coal raised prior to 1st January, 1895	61,582,116·16 tons	£ 29,598,724 12 7	£ s. d.
Quantity and value of coal raised in 1895	3,738,589·00 „	1,095,327 1 0	
Totals	68,320,705·16 tons	30,694,051 13 7	30,694,051 13 7
Quantity and value of shale raised prior to 1st January, 1895	804,069·45 tons	1,685,797 8 6	
Quantity and value of shale raised in 1895	59,426·25 „	75,218 18 8	
Totals	863,495·70 tons	1,761,016 7 2	1,761,016 7 2
Quantity and value of coke made prior to 1st January, 1895	121,622·70 tons	137,915 5 6	
Quantity and value of coke made in 1895	27,630·40 „	24,683 5 0	
Totals	149,253·10 tons	162,598 10 6	162,598 10 6
Quantity and value of gold won prior to 1st January, 1895	11,034,397·91 oz.	41,010,658 18 5	
Quantity and value of gold won in 1895	360,165·45 „	1,315,929 5 4	
Totals	11,394,563·36 oz.	42,326,588 3 9	42,326,588 3 9
Quantity and value of silver, silver lead, and ore exported prior to 1st January, 1895	Ingots	6 670,594·02 oz.	19,101,110 0 0
	Silver lead.....	346,380·77 tons	
	Ore	600,893 10 „	
Quantity and value of silver, silver lead, and ore exported in 1895	Ingots.....	550,142·00 oz.	81,858 4 0
	Silver lead..	29,687 00 tons	959,736 0 0
	Ore	190,192·95 „	604,077 0 0
Totals			20,743,811 0 0
Quantity and value of copper exported prior to 1st January, 1895	Ingots	100,068·50 tons	6,343,044 0 0
	Ore and regulus..	8,212·95 „	
Quantity and value of copper exported in 1895	Ingots	2,630·15 „	112,885 0 0
	Ore and regulus..	1,221·00 „	28,000 0 0
Totals			6,483,929 0 0
Quantity and value of tin exported prior to 1st January, 1895	Ingots	108,900·86 tons	10,257,850 0 0
	Ore and regulus..	18,300·20 „	
Quantity and value of tin exported in 1895	Ingots.....	2,199 00 „	136,080 0 0
	Ore and regulus..	77·20 „	2,543 0 0
Totals			10,396,473 0 0
Quantity and value of iron made prior to 1st January, 1895	56,992·45 tons	438,127 6 11	
Quantity and value of iron made during 1895	2,403·15 „	15,620 8 9	
Totals	59,395·60 tons	453,747 15 8	453,747 15 8
Quantity and value of antimony exported prior to 1st January, 1895	9,709·60 tons	174,314 8 6	
Quantity and value of antimony raised in 1895	478·08 „	7,251 0 0	
Totals	10,277·68 tons	181,565 8 6	181,565 8 6
Quantity and value of lead (pig) exported prior to 1st January, 1895	1,367·10 tons	15,514 0 0	
Quantity and value of lead (pig) exported during 1895	19 80 „	197 0 0	
Totals	1,386·90 tons	15,711 0 0	15,711 0 0
Quantity and value of bismuth exported prior to 1st January, 1895	182·65 tons	37,721 14 0	
Quantity and value of bismuth exported in 1895			
Totals	182·65 tons	37,721 14 0	37,721 14 0
Quantity and value of oxide of iron and pig-iron exported prior to 1st January, 1895	3,319 15 tons	5,712 0 0	
Quantity and value of oxide of iron and pig-iron exported in 1895	152 35 „	348 0 0	
Totals	3,471·50 tons	6,060 0 0	6,060 0 0
Quantity and value of zinc-spelter exported prior to 1st January, 1895	970·45 tons	11,043 0 0	
Quantity and value of zinc-spelter exported in 1895			
Totals	970·45 tons	11,043 0 0	11,043 0 0

	Quantity.	Value.		Total values.	
		£	s. d.	£	s. d.
Quantity and value of limestone flux raised prior to 1st January, 1895	439,486·80 tons	380,708	9 11		
Quantity and value of limestone flux raised in 1895	104,194·00 „	68,160	0 0		
Totals.....	543,680·80 tons	448,868	9 11	448,868	9 11
Quantity and value of alunite exported prior to 1st January, 1895	3,428·00 tons	14,904	0 0		
Quantity and value of alunite exported in 1895	832·00 „	3,328	0 0		
Totals.....	4,260·00 tons	18,232	0 0	18,232	0 0
Quantity and value of manganese ore exported prior to 1st January, 1895.....	267·50 tons	756	0 0		
Quantity and value of manganese ore exported in 1895	3·35 „	10	0 0		
Totals.....	270·85 tons	766	0 0	766	0 0
Quantity and value of opals raised prior to 1st January, 1895.....	884·02 lb.	35,599	6 6		
Quantity and value of opals raised in 1895	333·00 „	6,000	0 0		
Totals.....	1,217·02 lb.	41,599	6 6	41,599	6 6
Quantity and value of cobalt exported prior to 1st January, 1895	105·65 tons	1,895	0 0		
Quantity and value of cobalt exported in 1895.....	5·50 „	26	0 0		
Totals.....	111·15 tons	1,921	0 0	1,921	0 0
Quantity and value of fire-clay exported prior to 1st January, 1895	96·70 tons	241	0 0		
Quantity and value of fire-clay exported in 1895.....	19·60 „	55	0 0		
Totals.....	116·20 „	296	0 0	296	0 0
Quantity and value of lime exported prior to 1st January, 1895	813·00 tons	1,780	0 0		
Quantity and value of lime exported in 1895 .....	.....	.....	.....
Totals.....	813·00 tons	1,780	0 0	1,780	0 0
Quantity and value of marble exported prior to 1st January, 1895	643 pkgs.	2,657	0 0		
Quantity and value of marble exported in 1895.....	.....	.....	.....
Totals	643 pkgs.	2,657	0 0	2,657	0 0
Quantity and value of building stone exported prior to 1st January, 1895	8,063 No.	8,898	0 0		
Quantity and value of building stone exported in 1895 .....	.....	.....	.....
Totals	8,063 No.	8,898	0 0	8,898	0
Quantity and value of ballast stone exported prior to 1st January, 1895	975 tons.	1,155	0 0		
Quantity and value of ballast stone exported in 1895 .....	.....	.....	.....
Totals	975 tons.	1,155	0 0	1,155	0
Quantity and value of grindstones exported prior to 1st January, 1895	473 No.	314	0 0		
Quantity and value of grindstones exported in 1895 .....	.....	.....	.....
Totals	473 No.	314	0 0	314	0 0
Quantity and value of slates exported prior to 1st January, 1895	31,234 No.	351	0 0		
Quantity and value of slates exported in 1895 .....	.....	.....	.....
Totals.....	31,234 No.	351	0 0	351	0 0
Quantity and value of chrome exported prior to 1st January, 1895	3,034·30 tons.	12,336	0 0		
Quantity and value of chrome exported in 1895.....	4,299·45 „	13,048	0 0		
Totals	7,333·70 tons.	25,384	0 0	25,384	0 0
Value of sundry minerals exported prior to 1st January, 1895 .....	.....	58,290	0 0		
Value of sundry minerals exported in 1895 .....	.....	4,637	0 0		
Totals .....	.....	62,927	0 0	62,927	0 0
General Total.....	.....	.....	.....	£ 113,888,865	9 7

TABLE showing approximately the number of Miners employed in Gold-mining, the Quantity of Gold won, the Area of Ground worked, and the Value of Machinery employed, in the Colony of New South Wales, 1895.

District and Division.	Alluvial Miners.		Quartz Miners.		Total Miners.	Quantity of Gold.			Price of Gold per oz.		Value of Gold won.	Auriferous ground worked.	Quartz reefs proved to be Auriferous.	Value of Machinery.
	Europeans.	Chinese.	Europeans.	Chinese.		Alluvial.	Quartz.	Total.	From To					
									s.	s.				
ALBERT—														
Milparinka	130	10	..	..	130	152 0 0	167 10 0	319 10 0	80/-	80/-	1,316 0 0	..	..	1,000
Tibooburra	180	6	30	..	216	1,324 18 18	..	1,324 18 18	80/-	80/-	5,299 15 0	12	..	1,000
Wilcannia	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Broken Hill and Silverton	..	..	..	..	..	..	4,450 0 0	4,050 0 0	80/-	81/-	18,000 0 0	..	..	..
	300	16	30	..	346	1,476 18 18	4,817 10 0	6,294 8 18	80/-	81/-	25,215 15 0	12	..	2,000
BATHURST—														
Blayney	162	..	130	..	292	612 15 20	..	612 15 20	74/-	74/-	2,285 4 0	10	3	15,400
Bathurst	425	60	..	..	485	1,215 0 0	..	1,215 0 0	77/6	77/6	4,017 0 0	..	..	700
Carcoar	8	..	165	..	173	76 0 0	1,080 9 0	1,165 9 0	75/-	77/6	4,850 0 0	4	15	5,300
New bridge	120	24	30	..	174	549 0 0	262 0 0	811 0 0	75/-	76/-	3,063 13 10	12	7	533
Cowra	150	..	50	..	200	1,410 0 0	400 0 0	1,810 0 0	..	82 0	6,500 0 0	4	6	2,000
Mount McDonald	..	..	50	..	50	..	421 16 0	421 16 0	77/8	82/0	1,573 7 5	16	7	9,000
Mitchell	130	..	78	..	228	1,348 0 0	1,797 0 0	3,045 0 0	75/-	77/6	13,077 0 0	..	..	28,000
Oberon	170	..	4	..	174	376 11 2	..	376 11 2	72 6	75/-	1,450 0 0	12	5	200
Orange	..	..	650	..	650	68 0 0	83,342 0 0	83,440 0 0	70/-	80/-	292,229 0 0	..	..	70,000
Rockley	106	0	28	..	140	1,049 0 0	491 0 0	1,540 0 0	75/-	76/-	5,777 15 0	18	3	1,530
Trunkey	150	20	80	..	250	1,120 0 0	1,220 0 0	2,340 0 0	76/-	80/-	8,620 0 0	..	10	12,000
Tuena	350	15	50	..	415	1,164 8 6	510 0 0	1,674 8 6	75/6	80/-	6,495 14 2	..	..	2,900
Burrage	60	..	15	..	75	255 0 0	..	255 0 0	72/6	77/6	993 15 0	20	3	11,515
Wyagdon	30	4	10	..	44	215 0 0	..	215 0 0	78/0	75/-	860 0 0	20	..	140
O'Connell	20	..	..	..	20	130 0 0	..	130 0 0	..	60/-	390 0 0	..	..	..
	1,901	129	1,830	..	3,360	10,083 15 4	80,533 5 0	99,632 0 4	60/-	82/6	892,888 0 5	110	50	154,219
COBAR—														
Cobar and Mount Drysdale	..	..	650	..	650	..	10,030 0 0	10,000 0 0	72/-	83/-	37,500 0 0	..	..	26,500
Eurobodong	..	..	16	..	16	..	420 0 0	420 0 0	77/6	80/-	1,650 0 0	18	9	700
Mount Hope	..	..	25	..	25	..	1,187 0 0	1,187 0 0	..	80/-	4,403 0 0	..	..	4,000
Condobolin	..	..	100	..	100	..	410 6 17	410 6 17	..	..	1,691 0 4	..	..	..
Gulganna	..	..	185	..	185	..	751 10 0	751 10 0	75/-	77/0	2,928 18 0	..	..	..
Bourke	..	..	13	..	13	..	..	..	..	..	..	..	..	..
Nymagee	..	..	59	..	59	..	..	..	..	..	..	..	..	..
	..	..	1,039	..	1,039	..	12,768 16 17	12,763 16 17	72/-	83/-	48,072 18 4	18	9	31,225
CLARENCE AND RICHMOND—														
Ballina	497	..	..	..	497	2,345 0 0	..	2,345 0 0	77/10	80/-	9,061 17 6	..	..	800
Dalmonston	25	..	49	..	74	180 0 0	829 16 1	1,009 16 1	62/-	80/-	3,801 0 0	600	40	5,000
Grafton	80	3	44	..	127	1,317 0 0	315 10 0	1,632 10 0	80/3	77/-	6,951 4 6	25	6	3,100
Nana Creek	20	..	200	..	220	40 0 0	1,514 0 0	1,554 0 0	..	75/-	5,843 5 0	255	76	2,316
Maclean	50	..	..	..	50	455 0 0	..	455 0 0	77 0	82/-	1,830 0 0	..	..	..
Lismore	55	..	..	..	55	1,200 0 0	..	1,200 0 0	77/10	80/-	4,300 0 0	..	..	500
	727	3	293	..	1,023	5,367 0 0	2,689 6 10	8,256 6 10	62/-	82/-	31,617 7 0	850	122	11,716
HUNTER AND MACGRAY—														
Copeland	12	..	70	..	82	113 8 3	338 0 0	454 8 3	65/-	75/-	1,558 5 4	..	8	2,000
Dungah	3	..	46	..	49	20 0 0	117 0 0	137 0 0	62 6	77 6	446 18 0	..	7	2,850
Kempsey	..	..	2	..	2	3 0 0	..	3 0 0	..	75/-	11 5 0	..	..	..
Taree	45	..	25	..	70	..	..	..	..	..	..	..	..	..
	60	..	143	..	203	141 8 3	453 0 0	594 8 3	63 9	77/6	2,016 8 4	..	15	4,850
LACHLAN—														
Barnedman	..	..	15	..	15	..	117 0 0	117 0 0	5/-	77/6	447 10 6	3	13	4,100
Cudal	10	..	..	..	10	..	..	..	..	..	..	..	..	..
Forbes	50	..	180	..	180	75 0 0	225 0 0	300 0 0	75/-	78/-	1,162 10 0	1	2	..
Grenfell	70	..	170	..	240	448 3 22	929 8 0	1,377 11 22	77/-	77/6	5,291 19 2	25	80	4,200
Canowindra	31	..	54	..	85	154 4 0	504 0 17	658 4 17	75/6	80/-	2,517 15 0	..	4	2,500
Murrumbidgee	105	..	35	..	200	1,993 5 23	..	1,993 5 23	74/-	77/6	7,036 15 3	..	..	..
Parkes	144	6	424	..	574	1,073 12 14	8,099 5 6	10,372 17 20	65/-	83/-	38,093 1 10	..	..	20,000
Temora	180	20	400	..	600	..	7,473 2 16	7,473 2 16	69/-	80/-	25,213 13 0	225	15	2,000
Young	250	19	..	..	269	2,228 0 0	..	2,228 0 0	77/-	77/6	8,633 10 0	..	1	1,500
Carco	14	..	12	..	26	73 0 0	173 0 0	246 0 0	70/-	72/6	870 2 6	3	10	26,722
Alectown	150	10	20	..	180	400 0 0	194 0 0	594 0 0	..	75/-	2,227 10 0	8	7	500
Marsden	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Trundle	260	..	..	..	260	249 0 0	..	249 0 0	76/-	77/-	946 4 0	2	..	..
Molong	40	..	20	..	60	50 0 0	..	50 0 0	74/8	75/-	187 10 0	..	..	..
Yalgoggin	2	..	100	..	102	..	804 5 0	804 5 0	65/-	80/-	3,116 0 4	6	10	600
Wyalong	..	..	2,100	..	2,100	..	24,497 0 0	24,497 0 0	..	75/-	91,863 15 0	..	..	5,000
Do West	..	..	..	..	..	..	1,003 0 0	1,003 0 0	..	79/-	5,075 0 0	3	25	..
Reeflon	50	..	100	..	150	20 0 0	..	..	77/6	..	..	..	..	..
	1,400	55	3,530	..	5,041	7,364 6 11	45,219 1 15	52,583 8 2	65/-	83/-	195,688 10 7	270	123	67,182
MUDGE—														
Gulgong	650	..	28	..	673	4,000 0 0	..	4,000 0 0	73/-	79/8	15,200 0 0	30	10	5,500
Hargraves	20	40	140	..	200	600 0 0	1,850 0 0	2,450 0 0	77/6	80/-	9,705 0 0	50	3	4,100
Peak Hill	78	..	123	..	201	870 5 0	7,315 12 0	8,191 17 0	72/-	78/-	30,019 8 9	16	0	12,000
Wellington	50	40	190	..	270	739 7 15	7,032 8 18	7,821 16 0	71/-	83/-	29,723 0 0	6	1	32,000
Windsor	250	40	50	..	340	1,700 0 0	700 0 0	2,400 0 0	77/-	80/-	9,345 0 0	40	16	1,400
Mudgee	400	..	32	..	432	200 0 0	6,046 3 11	7,146 3 11	75/-	77/6	27,353 6 2	..	..	..
Cobborah	300	..	..	..	300	333 0 0	..	333 0 0	75/-	..	1,244 6 0	..	..	..
	1,748	110	553	..	2,416	8,498 12 15	23,844 4 5	39,842 10 20	71/-	83/-	123,139 19 11	142	39	55,000
PEEL AND URALLA—														
Stewart's Brook	..	..	100	..	100	..	1,210 0 0	1,210 0 0	67/-	75/-	4,356 0 0	..	..	8,000
Nunole	208	12	63	..	283	928 9 0	4,846 11 0	5,770 0 0	74/6	75/-	20,224 3 6	..	6	8,300
Ngrera	135	12	65	..	212	..	1,494 0 0	1,494 0 0	70/-	74/6	5,600 0 0	..	..	2,500
Barraba	..	..	170	..	170	..	250 0 0	250 0 0	75/-	77/6	938 0 0	..	..	3,500
Armidale	32	2	29	..	63	364 0 0	..	364 0 0	70/-	75/-	2,980 0 0	2	9	3,000
Glen Innes	82	..	37	..	70	..	661 9 0	661 9 0	72/-	73/-	2,380 0 0	..	..	..
Hillgrove	25	..	400	..	425	174 1 0	21,443 3 0	21,617 4 0	70/-	78/-	75,660 3 3	15	14	60,139
Hillgrove West	..	..	235	..	236	..	7,583 0 0	7,583 0 0	70/-	78/-	26,759 9 10	..	..	20,000
Uralla	300	20	..	..	320	2,200 0 0	..	2,200 0 0	76/-	80/-	8,800 0 0	..	..	..
Walcha	25	..	10	..	35	1,029 0 0	40 0 0	1,069 0 0	75/-	..	3,870 19 2	..	..	..
Kookabookra	80	30	10	..	120	615 0 0	20 0							

District and Division.	Alluvial Miners.		Quartz Miners.		Total Miners.	Quantity of Gold.			Price of Gold per oz.		Value of gold won.	Auriferous ground worked.	Quartz reefs proved to be Auriferous.	Value of Machinery.
	Europeans.	Chinese.	Europeans.	Chinese.		Alluvial.	Quartz.	Total.	From	To				
TAMBAROORA AND TURON—	No.	No.	No.	No.	No.	oz. dwt. gr.	oz. dwt. gr.	oz. dwt. gr.	s.	s.	£ s. d.	sq. m.	No.	£
Hill End.....	150	60	140	..	340	2,451 14 21	1,008 14 3	4,360 0 0	75/-	77/6	16,560 14 0	40	40	9,200
Ironbarks.....	100	20	60	..	260	1,994 7 2	700 0 0	2,694 7 2	74/-	80/-	10,508 0 0	12	23	2,500
Sofala.....	250	50	250	..	550	3,307 15 12	493 7 4	3,801 2 16	70/-	76 6	14,250 0 0	35	..	5,700
Rylstone.....	80	2	12	..	94	.....	.....	.....	..	..	.....	..	..	.....
	670	122	462	..	1,244	7,758 17 11	3,102 1 7	10,856 18 18	70/-	80/-	41,327 14 0	87	68	17,400
NEW ENGLAND--														
Fairfield.....	308	72	110	..	400	2,978 0 0	3,709 0 0	6,747 0 0	66/-	75/-	28,614 10 0	..	..	9,100
Tenterfield.....	10	..	20	..	39	440 0 0	.....	460 0 0	..	55/-	1,237 10 0	..	..	675
Wilson's Downfall.....	10	2	..	..	12	161 0 0	.....	161 0 0	..	70/-	563 10 0	288	..	50
	337	74	130	..	541	3,589 0 0	3,709 0 0	7,358 0 0	65/-	75/-	26,415 10 0	288	..	9,825
TUMUT AND ADELONG--														
Germantown.....	..	..	16	..	6	.....	18 7 0	18 7 0	75/-	77/6	61 1 6	20	2	3,525
Albury.....	15	..	160	..	165	.....	2,322 0 0	2,322 0 0	..	70/-	8,360 0 0	..	..	1,150
Adelong.....	171	5	147	..	323	1,817 3 7	2,806 0 10	4,623 3 17	72/-	80/-	17,452 10 4	..	..	31,000
Cooma.....	29	6	188	..	173	1,075 0 0	311 0 0	1,386 0 0	70 6	75/-	6,072 0 0	..	..	6,250
Captain's Flat.....	4	3	..	..	7	40 0 0	2,164 0 0	2,204 0 0	75/-	78/-	8,590 12 0	..	..	5,045
Gundagai.....	230	..	43	..	323	1,200 0 0	676 0 0	1,876 0 0	..	75/-	7,035 0 0	..	..	5,250
Junee.....	80	..	50	..	80	120 0 0	75 0 0	265 0 0	70/-	76 6	995 15 0	..	..	600
Tumut.....	115	..	..	..	115	105 10 0	.....	105 10 0	76/-	77/-	442 15 0	..	..	..
Nimitybelle.....	10	..	4	..	14	20 0 0	30 0 0	60 0 0	72/6	75/-	187 10 0	30	2	100
Queenbeyan.....	20	..	15	..	35	261 0 0	95 0 0	356 0 0	75/-	81/-	1,368 0 0	1	3	200
Reedy Flat.....	164	10	..	..	174	920 0 0	.....	920 0 0	77/6	..	3,566 0 0	..	..	..
Tumbarumba.....	175	6	..	..	189	1,850 0 0	.....	1,850 0 0	65/-	70/-	6,290 0 0	..	..	3,100
Tarcutta.....	..	..	14	..	14	15 0 0	18 0 3	33 0 3	75/-	78/-	117 11 5	..	..	350
Corowa.....	30	..	8	..	38	50 0 0	50 0 0	100 0 0	78/6	80/-	391 5 0	1	9	500
Kiandra.....	150	21	20	..	221	802 0 0	8 0 0	810 0 0	70/-	77/6	3,006 13 0	..	3	1,000
Gundaroo.....	20	..	30	..	50	65 0 0	48 10 0	113 10 0	77/10	82/6	451 4 5	25	3	..
Narrandera.....	..	..	34	..	34	..	964 0 0	964 0 0	..	80/-	3,356 0 0	..	..	1,000
Garangula.....	250	..	..	..	250	4,302 0 0	.....	4,302 0 0	..	..	16,670 5 0	..	..	..
Rungendore and Bywong.....	20	..	100	..	120	..	814 0 0	814 0 0	77 6	80/-	3,259 10 8	8	12	2,500
Wagga Wagga.....	..	..	20	..	20	.....	.....	.....	..	..	.....	..	..	..
	1,493	51	857	..	2,401	12,712 13 7	10,400 6 13	23,112 19 20	65/-	82/6	87,672 13 4	85	34	60,570
SOUTHERN--														
Araluen.....	238	27	20	..	285	2,840 0 0	107 0 0	3,067 0 0	70/-	76 6	15,577 0 0	..	..	18,060
Bombala.....	50	20	13	..	83	545 0 0	..	545 0 0	76/-	80/-	2,071 0 0	..	..	30,000
Braidwood.....	70	12	..	..	82	800 0 0	..	800 0 0	75/-	77/-	3,089 0 0	20	..	600
Rye Park.....	..	..	107	..	107	..	..	..	..	..	..	..	..	..
Pmbula.....	..	..	80	..	80	..	7,400 0 0	7,400 0 0	61/-	80/-	27,533 16 6	..	..	17,480
Burrows.....	60	..	22	..	82	..	125 0 0	125 0 0	75/-	..	468 15 0	..	..	1,260
Little River.....	130	60	20	..	200	1,568 10 22	100 0 0	1,668 10 22	77/-	78/-	6,470 12 0	..	10	745
Major's Creek.....	124	7	34	..	165	995 3 5	820 14 16	1,815 17 21	63/-	77 6	5,803 3 5	..	15	20,230
Moruya.....	16	..	30	..	46	80 0 0	250 0 0	330 0 0	70/-	80/-	1,195 0 0	1	3	4,000
Nerrigundah.....	100	65	20	..	185	1,044 1 19	133 0 0	1,174 1 19	80/-	63/6	5,126 17 0	10	6	3,300
Yaiwal.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Nerriga.....	110	..	10	..	120	700 0 0	90 0 0	790 0 0	77/6	..	3,061 5 0	..	14	6,700
Wagonga.....	51	10	76	..	137	193 10 16	458 18 1	652 8 17	70/-	75/-	2,331 8 7	..	..	5,850
Nelligen.....	2	..	40	..	42	5 0 0	190 4 0	195 4 0	77/10	82/6	810 16 9	25	20	820
Batemans Bay.....	7	..	25	..	32	90 0 0	204 12 12	294 12 12	75/-	80/-	1,041 8 0	1	3	680
	958	191	497	..	1,646	8,862 6 14	9,936 9 5	18,798 15 10	77/6	83/6	70,631 4 0	57	71	109,717

Summary.

Compiled from Mining Registrars' Reports.

TABLE showing approximately the number of Miners employed in Gold-mining, the quantity and value of Gold won, the area of ground worked, and the value of machinery, in the Colony of New South Wales during 1894.

District.	Alluvial Miners.		Quartz Miners.		Total Miners.	Quantity of Gold.			Price of Gold per oz.		Value of Gold won.	Auriferous ground worked.	Quartz reefs proved to be Auriferous.	Value of Machinery.
	Europeans.	Chinese.	Europeans.	Chinese.		Alluvial.	Quartz.	Total.	From	To				
Albert.....	No.	No.	No.	No.	No.	oz. dwt. gr.	oz. dwt. gr.	oz. dwt. gr.	s.	s.	£ s. d.	sq. m's.	No.	£
Bathurst.....	300	16	30	..	346	1,475 18 18	4,817 10 0	6,294 8 18	80/-	81/-	25,215 15 0	12	..	2,000
Clarence and Richmond.....	1,901	120	1,330	..	3,360	10,098 15 4	80,533 5 0	90,632 0 4	60/-	82/6	352,888 0 5	110	59	164,218
Cobar.....	727	3	293	..	1,023	5,567 0 0	2,080 0 10	8,256 0 10	62/-	82/-	31,647 7 0	830	122	11,710
Hunter and Macleay.....	..	..	1,039	..	1,039	.....	12,078 10 17	12,768 10 17	72/-	83/-	48,072 13 4	18	9	31,225
Laehlan.....	60	..	143	..	203	141 8 3	453 0 0	594 8 3	68/6	77/6	2,016 3 4	..	8	4,350
Mudgee.....	1,406	55	3,560	..	5,041	7,364 6 11	46,210 1 16	52,553 8 2	65/-	83/-	195,688 10 7	270	123	67,182
New England.....	1,748	110	658	..	2,416	8,498 12 15	23,844 4 5	32,342 16 20	71/-	83/-	123,180 10 11	142	30	55,000
Peel and Uralla.....	337	74	130	..	541	3,580 0 0	3,709 0 0	7,358 0 0	55/-	75/-	25,415 10 0	288	..	9,825
Tamboora and Turon.....	898	82	1,104	..	2,174	6,093 10 0	39,708 13 0	45,802 8 0	67/-	80/-	161,393 12 1	17	25	114,930
Tumut and Adelong.....	670	122	452	..	1,244	7,753 17 11	3,102 1 7	10,855 18 18	70/-	80/-	41,327 14 0	87	68	17,400
Southern.....	958	191	497	..	1,646	8,862 6 14	9,936 9 5	18,798 15 10	76/6	83/6	70,631 4 0	57	71	109,717
	10,498	833	10,103	..	21,434	72,158 8 11	246,151 19 0	818,310 7 11	77/6	83/6	1,132,160 2 0	1,995	586	638,632

District and Division.	Quartz.											Alluvial.													
	Steam-engines employed in winding, crushing, &c.		Crushing machines.	Stamp-heads.	Concentrators.	Whims and pulleys.	Water-wheels.	Pumps.	Huntingdon mills.	Whips.	Frac. vanners.	Chilian mills.	Steam-engines employed in winding, pumping, &c.		Water-wheels.	Turbines.	Whims and pulleys.	Whips.	Pumps.	Pudding-machines.	Hydraulic hoses.	Boring-machines.	Shiteo boxes.	Other machinery.	
	No.	Aggregate horse-power.											No.	Aggregate horse-power.											
LACHLAN DISTRICT—																									
Yalgogrin	1	14	1																						
Temora and Barmedman	6	130	1	15			1																		
Alectown	1	12	1	10																					
Greenfell	3	26		20					5			1	11				5								
Chnowindra	4	59		10		1			4																
Cargo	6	110	3	35			4																		
Young	2	8	1	5								3	31												
NEW ENGLAND DISTRICT—																									
Ennerville	9	87	1	10							1														
Fairfield	6	243	6	56						1													1		
Tenterfield	2	14	2				2							1											
PEEL AND ORALLA DISTRICT—																									
Armidale	4	26		40																					
Stewart's Brook	3	36	3																						
Barraba	4	40	2																						
Hillgrove West	4	85		40																					
Hillgrove	12	304	3	93	4		1			17															
Kookabookra	20	1	10	10																					
Nundla	6	81		38																					
Swamp Oak	6	77		46																					
Walela	1	12																							
TUMBU AND ADELONG DISTRICT—																									
Bugendore and Bywong	2	32		10				1																	
Albury	3	24	3																						
Adelong	12	254	2	35			2					7	118			2			3						
Coonambidge	4	75	3	33																					
Captain's Flat	2	24	2	30				1																	
Junee	2	10	1	10																					
Cootamundra	1	10	1	5																					
Nimble	1	8	1	5																					
Reedy Flat			1	5			1																		
Queanbeyan	2	20	2																						
Gundagai	2	19	2	13								1	45							1					
TAMBAROORA AND TURON DISTRICT—																									
Hill End	17	490	8	77																			1		
Ironbarks	8	98	3	37																1					
Sofala	9	173	7	52								3	25												
SOUTHERN DISTRICT—																									
Araluen	1	12	1	10			1			1		7	133	7					2	4			20		
Cobargo				6			1					1	12	8					8					150	
Major's Creek	7	79	1	52			2			3															
Muraya	3	60	3	15								1	6												
Nerrigundah	5	31	6	33			1																		
Pumbula	4	184	3	80			1	3																	
Nerriga	1	10	1	10								1	40									2		60	
Braidwood												1	8						3						
Nelligen	4	21	4	24																					
Bateman's Bay	1	8		10								1	12												
Wagonga	3	63		48			6	1																	
Totals	279	4,129	160	1,587	4	10	19	11	10	34	1	35	581	169	3	7	30	54	7	2	230				

I have the honor to be,
Sir,
Your obedient Servant,

D. C. M'LACHLAN,

Department of Mines and Agriculture,
March 14th, 1896.

Under Secretary for Mines and Agriculture.

CHIEF INSPECTOR OF MINES' REPORT.

Sir,

In submitting my annual report for the year 1895 I do myself the honor to inform you that the following is a list of accidents reported on by Wardens, Coroners, Inspectors of Mines, and Mining Registrars, as having occurred in the year 1895 in the metalliferous mines of New South Wales:—

TABLE A.
Fatal, Serious, and Minor Accidents, 1895.

No	Date.	Name of Mine.	Locality.	Person Killed.	Person seriously Injured.	Minor Accidents.	Occupation.	Nature and Cause of Injury or Death.
1	1 Jan.	Proprietary Block 12	Broken Hill	John Cotty		J. Veal	Trucker	Jammed by truck.
2	2 "	No name	Locksley				Miner	Both legs broken and skull fractured by fall of earth.
3	2 "	B.H. Proprietary	Broken Hill		Albert Smith		Furnace hand	Legs scalded removing water-jacket.
4	5 "	" Block 12	"			George Miller	Miner	Severe bruises on head caused by loose ore falling off timber.
5	11 "	"	"			Alfred Williams	Trucker	Small bone of leg broken—jammed between trucks.
6	11 "	B.H. South	"		Charles Kutchen		Miner	Leg broken by fall of rock.
7	17 "	Wright's Mine	Coolac	Wm. Cummins				Crushed by fall of rock.
8	24 "	No name	Wombat	Robt. Johnson				Internal injuries by fall of earth.
9	25 "	"	Bailow		Wm. Saddler			Head crushed by fall of earth.
10	27 "	B.H. Proprietary	Broken Hill			G. Williams	Labourer	Loss of a finger crushed by timber.
11	31 "	"	"	John McGuire			Quarryman	Crushed by fall of rock.
12	2 Feb.	Fort Bourke Tunnel	Cobar		— Guinness		Miner	Hand shattered | Drilling into unexploded dynamite.
13	2 "	"	"			— Brown		Bruises and cut | ploded dynamite.
14	2 "	B.H. Propy. Block 11	Broken Hill		Pat. Curry			Ribs broken by falling through stope.
15	4 "	No name	Oberon			James Moore		Leg broken by fall of earth.
16	8 "	B.H. Propy. Block 13	Broken Hill			Geo Taylor	Trucker	Jammed on truck.
17	13 "	Drysdale Proprietary	Mt. Drysdale			Tom Titus	Miner	Ribs broken by fall off ladder.
18	21 "	No name	Trunkey Creek	Jer. Sullivan				Smothered by fall of earth.
19	22 "	Junction Mine	Broken Hill		J. Stowebury		Foreman	Leg broken and spine injured by fall of timber.
20	27 "	B.H. Proprietary	"	Robert Dins			Labourer	General injuries by runaway truck.
21	12 Mar.	No name	Springmount	J. E. Ryan			Quarryman	Suffocated by foul air.
22	15 "	B.H. Proprietary	Broken Hill		D. Campbell		Trucker	Internal injuries—run over by truck.
23	22 "	Peak Hill Proprietary	Peak Hill		Wm. P. Quigley		Miner	Leg and ribs broken by runaway cage.
24	30 "	Helvetia Mine	Gulgong	John Egan				Head smashed by fall of earth.
25	31 "	Baker's Creek Mine	Hillgrove	Michael O Neil			Timberman	Head crushed and arm fractured by fall off stage.
26	3 April	West Sunlight	Broken Hill			G. L. Smith	Miner	Premature explosion.
27	7 "	B.H. Proprietary	Broken Hill		C. Hill			Leg broken by fall of rock.
28	7 "	"	"		W. Tripp		Trucker	Kneecap dislocated—jammed between trucks.
29	9 "	Tarrawingee Co.	Tarrawingee	Victor Cleal			Quarryman	Internal and spinal injuries by stone from blast.
30	16 "	B.H. Propy. Block 11	Broken Hill			W. Lee	Miner	Wrist broken by fall through stope.
31	20 "	" Block 12	"			J. Ward	Quarryman	Scalp wound by fall of rock.
32	22 "	No 1 Myall Mine	Tonungley			W. McGuire	Miner	Bruised on body by fall of rock.
33	26 "	B.H. Propy. Block 11	Broken Hill			J. Trezona	Trucker	Cut on arm, being jammed by truck.
34	3 May	" Block 13	"			J. Uren	Miner	Bruised and cut by fall off stage down shaft.
35	8 "	No name	Eugilbar	Wm. Kellick				Neck and legs broken by fall of earth.
36	14 "	Central Mine	Broken Hill		Ch. M'Clunchy			Internal injuries by fall of ore.
37	17 "	Peak Hill Proprietary	Peak Hill		John Townsend			Compound comminuted fracture of leg by explosion of shot.
38	23 "	Crown of Peak Hill	"		Gideon Treshewry			Leg broken by fall of pulley down shaft.
39	10 June	Central Mine	Broken Hill		— Adams			Severe cut thigh by explosion of shot.
40	11 "	Broken Hill South	"	Wm. Harris				Bodily injuries by fall through stope.
41	21 "	B.H. Proprietary	"		A. T. Franki		Labourer	Contused skull—struck by fly-wheel.
42	26 "	"	"		R. Reever		Quarryman	Cuts and bruises by fall down quarry.
43	4 July	Tarrawingee Flux Quarry	Tarrawingee	Pat. Garric				Fall over face of quarry by rope breaking, causing internal and external injuries.
44	5 "	B.H. Proprietary	Broken Hill			F. Barber	Miner	General shaking by fall off ladder.
45	5 "	Crown of Peak Hill	Peak Hill			J. Homan		Rib broken by fall off stage.
46	5 "	"	"			J. Luckwell		Bruised by fall off stage.
47	8 "	B.H. South Mine	Broken Hill			S. Vician		Cuts on arms and legs by fall of ore.
48	8 "	B.H. Proprietary	"			Wm. George		Cuts on head by fall off stage.
49	9 "	No name	Young		Hy. Gould			Skull fractured by collapse of windlass.
50	12 "	B.H. Proprietary	Broken Hill	W. Barrett			Labourer	Internal injuries—jammed in timber.
51	13 "	Great Cobar C. Mine	Cobar			Jos. Buckley	Miner	Fall down pass.
52	15 "	B.H. Proprietary	Broken Hill			Jes. Sharp	Labourer	Foot crushed by water-jacket.
53	18 "	South Mine	"	W. M'Leish			Miner	
54	18 "	"	"	G. Holmes				
55	18 "	"	"	J. Lee				
56	18 "	"	"	B. Snell				External and internal injuries caused by their being hurled against the sides of the drive, by compressed air from fall of ground.
57	18 "	"	"	A. Trembath				
58	18 "	"	"	W. Arthur				
59	18 "	"	"	C. Ellison				
60	18 "	"	"	F. Pearse				
61	18 "	"	"	W. L. Panter				
62	18 "	"	"		R. Mortimer			
63	26 "	B.H. Proprietary	"		J. Carey			
64	27 "	B.H. Block 14	"			W. Budd	F. Kuidries	
65	27 "	"	"			Josh. Glasson		
66	27 "	British Lion	Trunkey Creek					
67	2 Aug.	Hill Top Mine	Wyalong West	James Bevet			Miner	Arm shattered drilling out missed shot.
68	4 "	B.H. Block 14	Broken Hill					Back broken by fall of rock.
69	8 "	" Proprietary	"		H. Francis	E. Crofton	Quarryman	Eyes injured drilling out missed shot.
70	14 "	" Block 14	"		W. M'Carthy		Miner	Leg fractured by rolling stone.
71	20 "	Great Cobar C. Mine	Cobar	James Calvi			Labourer	Injuries to arms and head by explosion of shot.
72	23 "	Tuttleby and Bruce	Araluen		J. N. Littrell		Miner	Killed by explosion of shot.
73	24 "	No name	Wee Jasper		W. Cashman			Leg broken in two places by fall of earth.
74	24 "	B.H. Proprietary	Broken Hill					Badly bruised by fall of earth.
75	6 Sept.	Excelsior Mine	Dalmorton		J. Graham	P. M'Gann	Quarryman	Ankle injured by rock from shot.
76	7 "	North Central	Broken Hill	Josh. Brokenshire			Miner	Leg broken by fall of rock.
77	10 "	B.H. Proprietary	"			R. Barnes		Leg and back injured, lockjaw supervening, by fall down shaft.
78	11 "	"	"		J. Duesbury			Bruises on back by fall of bucket down shaft.
79	17 "	"	"	J. Voller			Labourer	Concussion of brain, being struck by truck.
80	23 "	"	"	W. R. Tonkin			Shunter	Body crushed by truck.
81	4 Oct.	No name	Rockley	Albert Thomas			Miner	Abdominal injuries by fall of rock.
82	7 "	Great Surprise	Wyalong West			John Todd		Spine injured by fall of earth.
83	10 "	Lake George C. Mine	Captain's Flat			Wm. Lewis	Trucker	Ribs broken by fall off rope down shaft.
84	10 "	Ruby Mine	Broken Hill	James H. Martin			Miner	Scalp wound by fall off truck.
85	11 "	B.H. Propy Block 11	"	Charles Heven			Quarryman	Burns by explosion of shot.
86	5 Dec.	"	"	Wm. Daly				Killed by explosion of shot.
87	11 "	Great Tarcome Mine	Gulgungia	Ch. Eason			Miner-owner	Neck broken by fall down shaft.
88	14 "	B.H. Block 10	Broken Hill	James Broadstock			Surface hand	Killed by fall of ore-dump.
89	20 "	Young Australia	Wyalong	M. J. Cusack			Miner	Spinal injuries—struck by dummy.
90	20 "	Cotterill's Mine	Rockley	Josh. Fell				Internal injuries by fall of rock.
91	26 "	B.H. Proprietary	Broken Hill		John Langdon		Surface hand	Loss of toe by foot crushed in machinery.

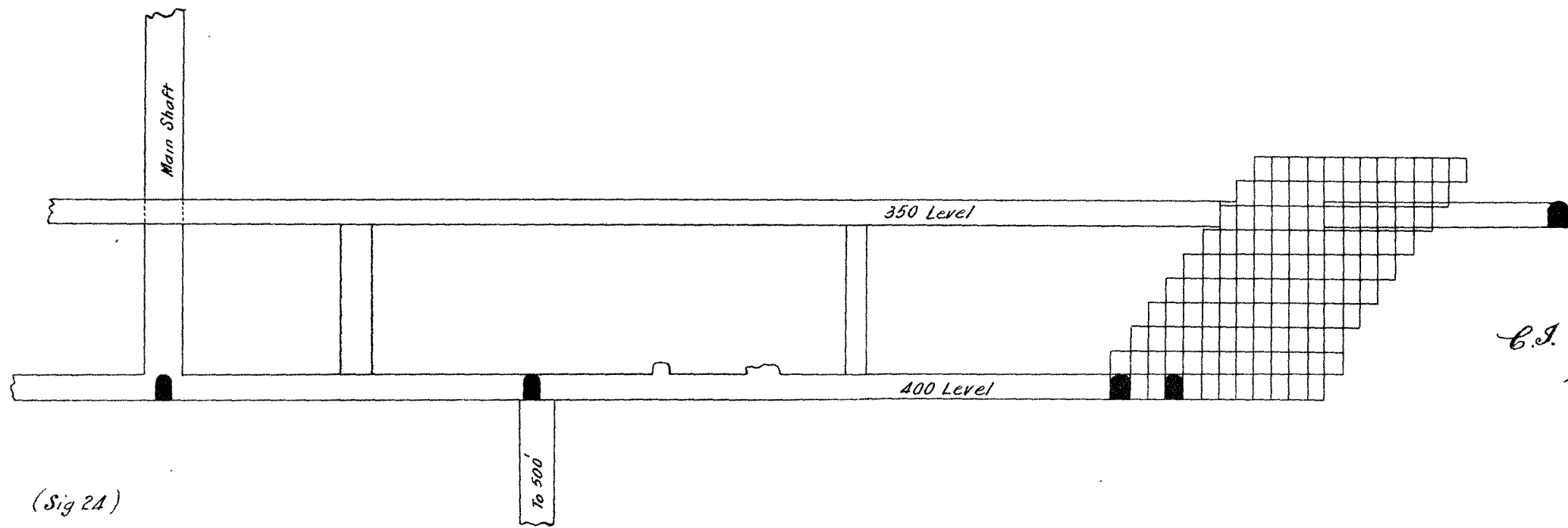
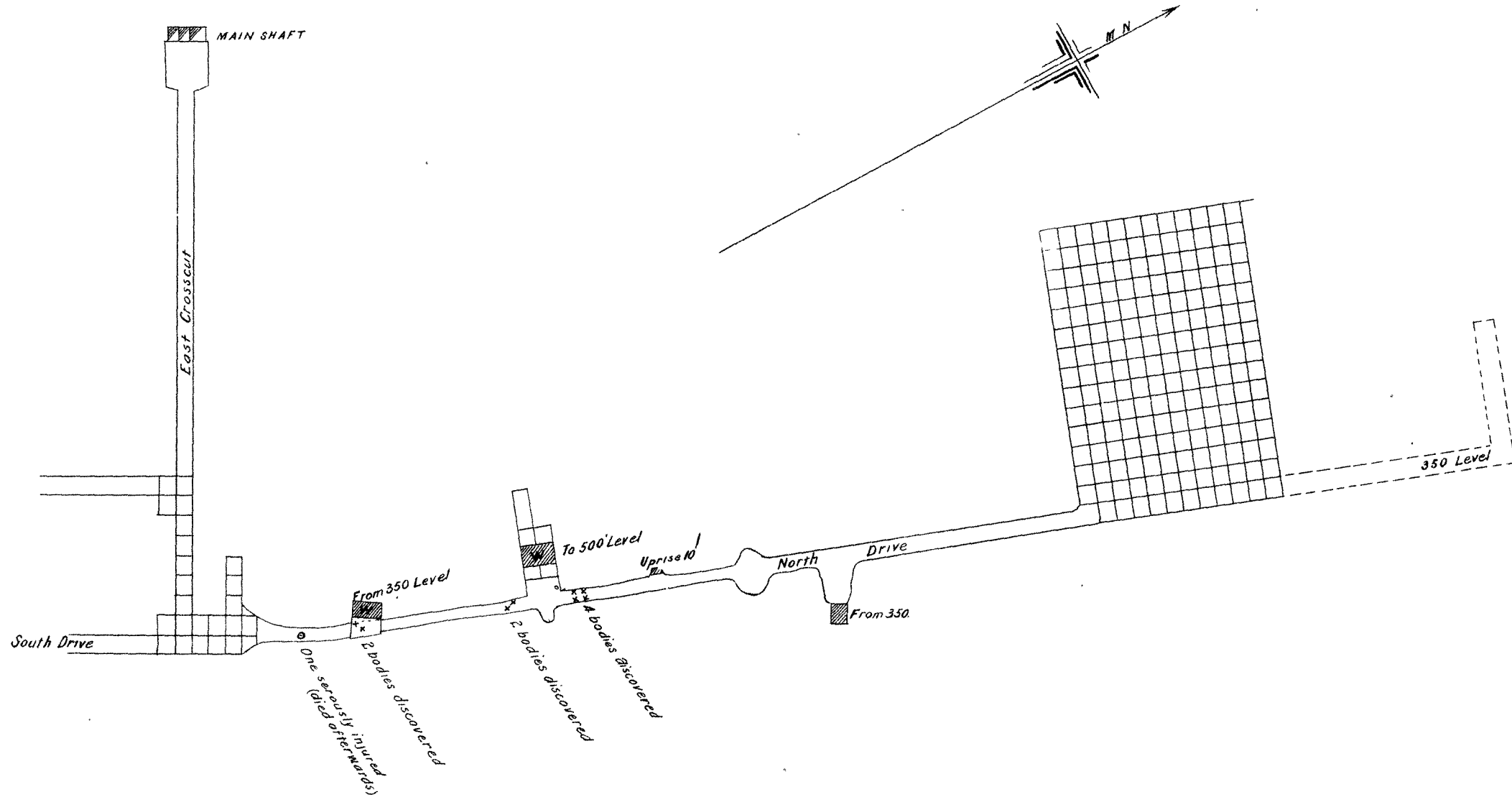
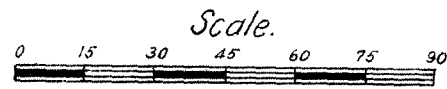
ABSTRACT.

Fatal—5 gold quartz, 7 gold alluvial, 20 silver, 1 copper, 1 chrome, 2 limestone; total, 36. Serious—6 gold quartz, 5 gold alluvial, 17 silver; total, 28. Minor—5 gold quartz, 20 silver, 2 copper; total, 27. Grand total, 91.

E.

BROKEN HILL SOUTH MINE

PLAN & SECTION OF SITE OF CREEP



C. J. Valentine
Surveyor
30/7/95.

(Sig 2A)

TABLE B.

NUMBER of Men employed in the Metalliferous Mines of New South Wales, and value of Machinery, at 31st December, 1895, and percentage of persons killed and injured.

Mining District.	Alluvial Gold.		Quartz Gold.	Silver.	Copper.	Tin.		Other.	Total.	Value of Machinery.	
	Euro-peans.	Chinese.				Euro-peans.	Chinese.			£	s. d.
Albert	300	16	30	4,297	...	...	...	300	4,943	797,000	0 0
Bathurst	1,901	129	1,330	100	60	...	...	...	3,520	154,218	0 0
Clarence and Richmond	727	3	293	...	...	...	...	...	1,023	11,716	0 0
Cobar .....	...	...	1,039	...	641	...	...	...	1,680	76,225	0 0
Hunter and Macleay	60	...	143	...	3	8	...	2	216	19,175	0 0
Lachlan	1,406	55	3,580	...	...	...	...	10	5,051	67,182	0 0
Mudgee	1,748	110	558	...	...	...	...	...	2,416	55,000	0 0
New England	337	74	130	50	...	390	320	6	1,297	17,820	0 0
Peel and Uralla	898	82	1,194	15	...	448	208	94	2,939	118,929	0 0
Tambaroora and Turon	670	122	452	...	...	...	...	40	1,284	17,400	0 0
Tumut and Adelong	1,493	51	857	150	160	35	...	110	2,856	58,072	0 0
Southern	958	191	497	46	4	...	...	2	1,698	110,367	0 0
Total	10,498	833	10,103	4,658	868	871	528	564	28,923	1,503,104	0 0
Persons killed per 1,000 persons employed.	..62	..50	4.29	1.15	.....	.....	.....	5.32	1.25	.....	.....
Persons injured per 1,000 persons employed.	..44	..60	3.65	...	.....	.....	.....	..97	.....	.....	.....

The minor accidents are not included in the above percentages.

Table A gives the number of accidents, date, name of mine or company, locality, persons killed or injured, occupation, and cause of death or injury.

Table B gives in addition to the percentage of persons killed, or injured, the number of persons employed, and the value of the machinery in, on, or in connection with the metalliferous mines of New South Wales.

Out of the total of 36 persons killed, 20 lost their lives in silver-mining, 5 in auriferous quartz-mining, 7 in alluvial gold-mining, 1 in copper-mining, 1 in chrome-mining, and 2 in limestone (flux) mining.

The large number of fatal accidents which occurred during the year in silver-mining is due to the calamity caused in the South Broken Hill Mine by a sudden fall of a large mass of lode-stuff on the 415-foot level, and the consequent concussion of air which rushed through a level connected with the shaft, throwing the men who were in the level off their feet, instantly killing 8, and another died from the injuries received a few days afterwards. [See my reports marked C and D.] The tracing herewith showing the site of the creep, and where the bodies and those seriously injured were discovered, in the 415-foot level, is the work of Mr. C. F. Valantine, surveyor, and was kindly presented to me for official use by Mr. J. B. Gluyas, the general manager of the South Broken Hill Mine.

C.

REPORT by Mr. W. H. J. Slee, F.G.S., Chief Inspector of Mines, on the accident in the South Broken Hill Mine, whereby nine persons lost their lives on 18th July last.

Sir,

Broken Hill, 20 August, 1895.

I have the honor to inform you that I have inspected the scene of the accident in the South Broken Hill Mine, by which accident nine persons lost their lives on the 18th July last. Very little can be added by me to the evidence obtained at the inquest. It appears that ample time was given to the men to withdraw, and take away their tools. Altogether there were twenty men working in the stopes when Mr. S. Mayne, the under mining manager, ordered the whole of the men to leave the stopes, and take away their tools, as a creep was likely to take place. This was done at 3 p.m., and the creep took place at 3.50 p.m., or fifty minutes after the men were warned to get to a place of safety. Some of the men went to the cross-cut and others remained in the level, distant from 100 feet to 200 feet from where the fall took place, no doubt thinking that they were perfectly safe, and I have no doubt that up to that time any miner would be of the same opinion. The theory that noxious gases exploded through the sudden fall of earth I think is erroneous, there being no visible evidence of such an explosion: but there is substantial evidence that the immediate cause of the accident was the fall of earth causing concussion of compressed air, the latter forcing itself at a terrific rate along the 415-foot level through the only opening connected with the shaft. The men being in so confined a space were no doubt lifted off their feet like mere feathers, and thrown with terrific force against the top and sides of the levels, which caused instantaneous death. As the stopes were rather warm to work in, the men were probably afraid to go at once to the surface or enter the cross-cut into a sudden cold, either of which they had ample time to do. I have read works on mining accidents both in European and American mines, but have never seen one mentioned similar to that which occurred on the 18th July last in the South Broken Hill Mine, and in my forty years of mining experience I have never heard anything of the kind before. This is certainly one of those unpreventable accidents which may occur as long as extensive mining operations are carried on.

I have, &c.,

W. H. J. SLEE,

Chief Inspector of Mines.

The Under Secretary for Mines and Agriculture.

D.

SUPPLEMENTARY Report by Mr. W. H. J. Slee, F.G.S., Chief Inspector of Mines, on the accident in the South Broken Hill Mine, whereby nine persons lost their lives on 18th July last.

Sir,

Broken Hill, 22 August, 1895.

I do myself the honor to furnish you with an additional report in connection with the accident which occurred in the South Broken Hill Mine on the 18th July last, and by which accident nine men lost their lives, and others were injured. This morning, in company with Mr. Inspector Hebbard, I again inspected the scene of accident, and went in the broken ground as high as possible, not without some considerable amount of risk, but could see nothing to throw further light on the subject. I could, however, see that the sets of timber had been secured by stays and angles, on the same principle as adopted in the principal Broken Hill mines. In fact, Inspector Hebbard and I inspected these very stopes in the

the last week of June and considered everything safe. The stopes rise from south to north, ten sets being the highest obtained, but in the vertical it would only be about five sets; the lower parts of the sets were filled in with mullock. Very probably the whole of the lode stuff slipped away from the overhanging wall, which is very greasy. Inquiries have also been made by me amongst a large number of persons, principally miners, and in no instance have I met one person who said otherwise than that the accident was unpreventable and no one was to blame. Three of the miners spoken to by me were working in the stopes (with those killed) at the time the underground manager, Mr. Samuel Mayne, instructed by the general manager, Mr. J. B. Gluyas, ordered the men out of the stopes to a place of safety. These three men escaped with slight injuries, and are again at work, whilst their comrades were killed by their side, and these men state that the underground manager gave them warning at 2 p.m. on the 18th July, and again at 3 p.m. ordered them from their work, against the whole of the men's wish, as they thought the manager stopped them from working without real cause. The creep took place fifty minutes after this, and as the men worked on contract they could have gone to the surface had they chosen to do so. But, as stated in my former report, all the men thought they were safe in the level when overtaken by concussion of air.

I have, &c.,

W. H. J. SLEE,

Chief Inspector of Mines.

The Under Secretary for Mines and Agriculture.

The reports of Inspectors Milne, Hebbard, and Godfrey are attached herewith. I may here state that the abovenamed Inspectors have given me every possible assistance, and I have good reason to think that they have given general satisfaction to all concerned.

The following districts have been visited by me in my capacity of Chief Inspector of Mines:—Cootamundra, Wyalong (Reefton, Barmedman, and Temora twice), Rye Park, Gundagai, Adelong, Bowning, Yass, Gunning, Yarrawa, Burrowa, Young, Grenfell, Bywong, Captain's Flat, Murrumburrah, Garangula, Albury (twice), Bulgandra, Bowna, Corowa, Marulan, Bungonia, Broken Hill (twice), Tarrawingi, Milparinka, Tibooburra, Mount Brown, Cobar, Mount Drysdale, Byrock, Coolabah, Bald Hills, Nymagee, Gilgunnia, Overflow, White Cliffs (Wilcannia), Tenterfield, Boono Boono, and Drake.

To accomplish this work I travelled by railway fully 12,000 miles, and by vehicle 2,328 miles.

Amongst a number of reports furnished by me to the Department, the following received the Honorable the Minister's approval for publication:—Report on Drake, Milparinka, White Cliffs, Bulgandra, Gilgunnia, Corowa, Cobar, Coolabah, Mount Drysdale, Bald Hills, Grenfell, and Temora.

The total numbers of letters written and registered in my branch during the year 1895 are as follows:—

	Letters written in 1895.	Papers registered in 1895.
Chief Inspector of Mines	3,311	4,551
Diamond drills	210	440

The above is irrespective of telegrams, circulars, and other documents not copied.

There are also a large number of papers received and dealt with in connection with the Prospecting Vote.

During the year I have lost the valuable services of Mr. M'Culloch, who was transferred to the Head Office, and Mr. M'Neil took his place as Clerk to the Chief Inspector of Mines. Both Messrs. J. S. M'Neil and J. S. Leigh have greatly assisted me in my office duties, which are greatly on the increase and accumulating.

I have, &c.,

W. H. J. SLEE, F.G.S.,

Chief Inspector of Mines.

REPORT by Mr. Slee, F.G.S., Chief Inspector of Mines, on the prospect of the Drake Gold-field.

Sir,

Drake, 7 March, 1895.

I do myself the honor to inform you that I have completed my official duties here. The yield of gold for the Drake Division for 1894 was 6,062 oz., a considerable increase of previous years. This increase in the yield of gold is principally due to the Prospecting Vote and new arrivals who have been assisted to come here from Sydney under the system adopted by the Mines Department.

Drake has quite a permanent appearance, owing to the fact that the miners are more satisfied to settle and search for gold than was the case in former years.

The principal yield obtained during the year has been from the Lady Jersey Mine, which, through the aid of the Prospecting Vote granted to Mr. George Rivers, part owner and manager, discovered rich auriferous veins in the felsite formation. With a small crushing plant, known as Patterson's Patent Elephant Stamp, or rather Arms, worked by spring, which crushes on an average of about 4 tons in twenty-four hours, the manager, Mr. G. Rivers, obtained for his Company during last year 1,851 oz. of gold. The Company now intend to erect a large crushing plant, when they expect larger returns than hitherto. The works of this mine are extensive, and the prospects of future prosperity are very encouraging.

The Adeline Mine crushed 544 tons, with a yield of 570 oz. 13 dwt., and also crushed for the public 573 tons, with a yield of 896 oz. 7 dwt. of gold. The All Nations (Hineman and party) and other mines are also yielding payable results.

Miners can be seen in gullies fossicking for gold which for years past were either considered worked out or too poor to be worth working; nevertheless, several persons are now making a living.

The White Rock Mine is again at work. Fifteen stamps are continually crushing, and Messrs. Rossiter and Harton feel confident that at last they have discovered the proper method by which to treat the White Rock ore on a payable basis, even at the present low price of silver. There is a large deposit of ore in the mine which could be cheaply worked on the quarry system; the trouble hitherto has been the great loss of silver in the treatment, but which trouble, by the consistent energy and perseverance of Mr. Rossiter, seems to have at last been overcome.

I have, &c.,

W. H. J. SLEE,

Chief Inspector of Mines.

The Under Secretary for Mines and Agriculture.

REPORT by Mr. W. H. J. See, F.G.S., Chief Inspector of Mines, on mining in the Milparinka District.

Sir,

Milparinka, 27 May, 1895.

I do myself the honor to inform you that I have, for the present, completed my official duties on the Albert Gold-field. Mining matters have been greatly improved since the new discoveries were made on Little Bendigo, a locality situated about 5 miles northerly of Milparinka. The reefs occur in the slate formation, in lenticular blocks, with a strike of 50° north of west, with an easterly underlay. A large

large number of claims have been taken up; the principal, so far, are House and party (prospectors), who have a reef averaging about 2 feet in thickness. The gold can be seen in the stone with the naked eye, and is well distributed through the quartz, which, by appearances, should yield from 2 oz. to 3 oz. per ton, and, at the time of my inspection, there were about 40 tons of stone at grass. Chambers and party, who are on a different line of reef, westerly from House and party's prospecting claim, have a reef several feet in thickness, and fine gold can be seen with the naked eye in some of the solid quartz. Kershaw and party, Lindberg and party, Bamuss and party, Sullivan and party, and others have also excellent indications. As stated above, these reefs occur in lenticular blocks, therefore, the quartz will, at times, pinch out, or even totally disappear; but miners should not be discouraged by such occurrences, they should sink and drive for new makes of quartz. Indications are not wanting to the observer to believe that numerous reefs of a payable nature may be discovered, provided the quartz-veins in the hills at Little Bendigo are thoroughly and systematically prospected. Up to the present very little actual work or thorough prospecting has been performed. There are about 100 men at Little Bendigo.

At Mount Browne, Geo. Smith and party, Jas. Kershaw and party, and others are still obtaining payable gold, and a few parties of miners are also working at the Four-mile. At Warratta, Mr. Sheridan has had some men at work for some months past to discover the quartz-vein from which the rich specimens were obtained. He has discovered some very narrow but rich veins, and is in great hopes that further rich discoveries will be made by him. The quartz reef at the Wamberriga Range has been reoccupied of late with a view to further developments. At Tibbooburra, a few prospectors are seeking for new discoveries of gold, but the scarcity of water has greatly retarded their progress; as, however, from 1 to 1½ inch of rain fell in the district during last week, numbers of fossickers will be able to make a living in the alluvial. I here beg to reiterate my opinion, expressed in my annual report of 1893 and former reports, that Mount Browne, Mount Poole, the reefs on Wamberriga Range, Good Friday, Nuggety, Easter Monday, The Granito (Tibbooburra) and Tipperary Gully (Two-mile), which are situated in a tract of country 50 miles in length by 10 miles in width, will, sooner or later, be closer united by leads or other gold workings, and that rich but narrow quartz-veins will be discovered. In fact, prospecting for payable auriferous quartz-veins has been greatly neglected on the whole Albert Gold-field. Scarcity of water is the greatest drawback, and is severely felt about Little Bendigo.

I have, &c.,

W. H. J. SLEE,

Chief Inspector of Mines.

The Under Secretary for Mines and Agriculture.

REPORT by Mr. W. H. J. Slee, F.G.S., Chief Inspector of Mines on the Opal Fields at White Cliff.

Sir,

White Cliffs, 16 June, 1895.

I have the honor to inform you that I have completed my inspection and other official work in connection with the White Cliff Opal Mines, and forward you herewith separate reports on each separate subject.

These opal mines are situated about 16 miles from Taralla Home Station, 60 miles from Wilcannia, 100 miles from Milparinka, and 160 miles from Broken Hill.

The opal is found in the Cretaceous formation, in small veins varying from a mere thread to 2 inches in thickness, at different shallow levels, the deepest so far obtained being about 50 feet, and the only guidance the miner has in mining for this opal is small veins of common opal known to opal miners as potch, and it is amongst this common opal or potch patches, valuable opal is frequently discovered. I was informed by opal buyers that some of the White Cliff opal is the finest in the world; as much as £20 per oz. has been paid on the field. Lately the output has diminished; but a patch of very fine opal was discovered during my visit, valued by the owners at £350, one piece alone being valued at £100. It is variously estimated that from £70,000 to £100,000 worth of opal has so far been discovered, and sold, from the White Cliff Opal Fields. At present the most valuable opal deposits seem to be held under mineral leases, which are worked on the tribute system; but there is still a large area of country totally unprospected either in depth or distance.

Fourteen (14) years ago, when I occupied the position as Warden of the Mount Browne Gold-fields, I forwarded several small pieces of fairly good opal found by me (associated with gypsum) near Milparinka, and which was pronounced by the late Mr. C. S. Wilkinson, Government Geologist, as good opal, showing a good red and green fire, and since my visit to the White Cliff Opal Fields I feel confident that not only will payable opal mines be discovered near Wilcannia, and in different localities between Wilcannia, Milparinka, and in that direction towards the Queensland Border. In fact, in the near future this hot and arid country, now mere sheep walks, will be settled on here and there by flourishing industrious mining communities.

White Cliff, which has a public school, post-office, two hotels, several stores and private dwellings, has a total population of about 400, which may be increased at any moment, should fresh opal discoveries be made.

* * * * *

I have, &c.,

W. H. J. SLEE,

Chief Inspector of Mines.

REPORT on the Bulgandra Gold-field by the Chief Inspector of Mines, Mr. Slee, F.G.S.

Sir,

Bulgandra, 1 July, 1895.

Having, in accordance with your instructions, visited the Bulgandra Gold-fields and inquired into several matters in connection with same, I have the honor to inform you that I also inspected the underground workings of the principal mines, and am of opinion that there are no defined quartz reefs in the locality, but the gold occurs in small irregular quartz-veins, associated with felspathic dykes from a few inches to several feet in width. Numbers of claims are at work on several dykes, such as the Lone Hand, Pardos Nolan, Grey and party, whose greatest depth is 35 feet, and who crushed 38 tons yielding 103 oz. of gold; the average thickness of the vein being about 10 inches. Several claims both N.E. and S.W. of Nolan and party's are at work with various success.

At.

At the Goodwood dyke, Albert Bonting and party are 60 feet in depth, the width of crushing stuff being 2 ft. 6 in., and have crushed 110 tons with a yield of 62 oz. of gold; strike of dyke due west. Several claims are at work both east and west, some of which are also payable.

On the Show Day Line, Hewitt and party are down 86 feet, they had two crushings, one 60 tons yielding 2½ oz. per ton, and 17 tons yielding a total of 42 oz. 6 dwt.; thickness of vein from 4 to 8 in. On this line there are also several claims at work, some of which are payable.

On the Welcome Find line, Driscoll and party's deepest part is 70 feet, their crushing stuff in parts of the claim is fully 8 feet in width, and they crushed 74 tons with a yield of 70 oz. of gold.

Although, as I stated above, there are no defined quartz reefs so far discovered on the field, nevertheless, if the dykes are worked with a proper system and economy, they are likely to return payable results for years to come. As a rule the payable nature of small quartz-veins associated with dykes such as occur at Bulgandra do not carry payable gold to any great depth, say, over 200 feet, but, before that depth is reached many thousands of tons of crushing stuff may be treated with payable results, provided that instead of the primitive mode a better system of working be adopted throughout the field.

Independent of fresh discoveries in quartz there is a great probability that payable gold may be discovered in alluvial and there are several gullies well worth prospecting, especially one within half a mile of the Albury side of the township of Bulgandra.

A 10-stamp crushing machine of a good type is in full work. The population of the field numbers about from 150 to 200 (many having left temporarily to go shearing and are likely to return after the shearing season). There is a private school, stores, and the usual business premises, but so far no hotel.

The distance from Albury is 41 miles. A township has been surveyed on a reserve, and as soon as the latter is cancelled buildings of a more substantial character than those at present in use will be proceeded with.

I have, &c.,

W. H. J. SLEE,
Chief Inspector of Mines.

The Under-Secretary for Mines and Agriculture.

REPORT by Mr. W. H. J. Slee, F.G.S., Chief Inspector of Mines on the Gilgunnia, Overflow, Rest Down, and Hermidale Mines.

Chief Inspector of Mines' Office, Department of Mines and Agriculture,
Sydney, 29 July, 1895.

Sir,

In compliance with your instructions I have inspected the new gold discoveries at Gilgunnia, and do myself the honor to inform you that I have forwarded you separate reports on different subjects in connection with said discoveries. The latter are situated in the parishes of South Peak and Tarcombe, county of Blaxland. Some are on the travelling stock-road No. 2,361 from "Gilgunnia Hotel" to Eremeron.

Discoveries have also been made, and claims are at work on the disallowed conditional purchased land applied for by Henry Kruge.

So far, Gilgunnia is essentially a quartz-reefing district, consisting of a net-work of auriferous quartz-veins, from a mere thread to several feet in thickness, and with a strike of almost all points of the compass, the principal strike is about N.E.

The area in which the discoveries have so far been made is about 5 miles by 3 miles in extent.

The following are the principal mines at work:—

The Dream (Finn and party).—Depth, 50 feet; average thickness of quartz-vein, 6 inches; 5½ tons crushed at the Clyde Works, Granville, yielded a total of 35 oz. of gold. Six tons of quartz have also been dispatched to Park and Lacey's for treatment.

The same party have struck a reef south of No. 1 shaft, 3 feet in thickness, containing a little gold, which by further prospecting may become payable. This is a distinct reef from the one from which a payable crushing was obtained.

The Rising Sun (Mullins and party).—Depth, 54 feet; average thickness of vein from 6 to 8 inches. A crushing of 6 tons from this claim, treated at the Clyde Works, Granville, yielded 4½ oz. of gold per ton. The quartz was taken from the western leg of a saddle-reef, which saddle shows distinctly in the shaft near the surface.

The Tarcombe Claim (Eason and party).—Has lately been floated into a company of 10,000 shares of £1 each. Depth, 50 feet, with an average thickness of vein from 6 to 12 inches. I was informed that 2½ tons quartz treated yielded 3 oz. 17 dwt. 10 gr. of gold, and that No. 1 North had crushed 3 tons, yielding 1 oz. of gold per ton. There are several claims on this line.

At the Four-mile, that is about 4 miles easterly of Tarcombe reef, are several claims at work with various success.

The Prospecting Claim (Collins and party).—Depth, 40 feet; average thickness of reef, 14 inches. No crushing has so far been made, and gold could be seen with the naked eye in some of the quartz.

No. 1 East (Bray and party).—Depth, 40 feet, are on a reef about 1 foot in thickness in which gold can be seen.

The Keep-it-Dark (Scaton and party).—Depth, 30 feet; average thickness of quartz-vein, 18 inches, showing gold.

The Moonlight (Talbot and party) and others on the field, too numerous to mention for the purpose of this report, are more or less on gold of which some claims seem apparently payable.

The whole of the quartz-veins are associated with oxide of iron and pyrites, the quartz is easily crushed, and so far the ore is not refractory; they occur in lenticular shapes (pinching and bulging) in an altered sandstone formation intersected by (cross coarses) dykes of perhaps a volcanic origin, the rock being soft it is easily worked without explosives. Scarcity of water is the great drawback for immediate developments, although I have no doubt that by the time the depth of 150 feet to 200 feet is reached an ample supply of underground water fit for quartz-crushing, but not for domestic purposes, will be met with; hard rock and refractory ore may also be met with at the above said depth.

At the time of my inspection there were about 500 persons on the ground. A street had been formed by rows of tents, of which I am sorry I could not take advantage, owing to the fact that one side of said street was on the stock route, and some of the residence areas were in too close proximity of quartz claims. I settled several disputes in my capacity as Warden, and by request of the Progress Committee

Committee and the people present, I selected a township site, and marked off two sections on a street. The site chosen by me is perhaps not satisfactory to every person on the field, as there were no less than three or four rival sites; the one selected is the most eligible, considering all circumstances, and was approved of by the majority of the people present. It is midway between Tarcum line, and Finn and Mullin's line of reefs, clear of the stock route, and near, but not on, the principal gold discoveries.

In conclusion, I beg to state that the Gilgunnia gold-field, although perhaps not extensive, is likely to profitably employ a population of a few hundred persons for some time to come, as some of the quartz-veins are certain to yield more than payable returns; whereas, others require strict economy and systematic working before shareholders are compensated. As stated before, the great drawback is an immediate water supply, and machinery for the treatment of auriferous quartz.

In my reports published in 1880, 1883, 1884, 1887, and more recent dates, I drew attention to the country between Cobar and Mount Hope, Nymagee, and Cobar, Nyngan, Nymagee, and Girilambone, as being well worthy of prospecting for gold and other minerals, but I would strongly advise the public not to rush to Gilgunnia unless parties are prepared with ample means to prospect for at least six months in a hot dry country, such as the districts referred to. The population at Gilgunnia is greater than present circumstances warrant, work is not obtainable at any price, either for miners looking for wages, tradesmen or labourers.

Before my return to Sydney, I also inspected the Overflow, the Rest Down, and Hermidale mines.

At the Overflow, which is situated about 25 miles easterly of Nymagee, a lode has been discovered about 9 miles S.E. of the Overflow Home Station about 5 ft. in width, from which assays were made, yielding from 17½ per cent. of lead 8 oz. of silver and 3 dwt. of gold up to 58½ per cent. of lead, 26 oz. of silver and 13 dwt. of gold per ton. Unfortunately, instead of following the lode down, a vertical shaft of a rather large size for prospecting purposes has been sunk at the back of the lode 50 feet in depth which naturally proved nothing. The appearance of the locality is favourable for payable mineral deposits.

At the Rest Down, Goodwin and party are still prospecting, so far without payable results. The country a few miles nearer Nymagee has a more decided auriferous appearance than at Rest Down proper.

At Hermidale Messrs. Hennessey and Oldfield crushed 10 tons for the yield of 4 dwt. of gold per ton. This mine is worthy of being further prospected.

I have, &c.,

W. H. J. SLEE,

Chief Inspector of Mines.

The Under Secretary for Mines and Agriculture.

REPORT on the Corowa Gold Workings, by Mr. H. J. Slee, F.G.S., Chief Inspector of Mines.

Sir,

Corowa, 31 August, 1895.

Having inspected the mining operations in the Corowa district, I do myself the honor to inform you that sinking has not yet been commenced by the Corowa Deep Lead and Prospecting Company. The quantity of high quality gold shown to me by Mr. Chenhall, of Corowa, and testified by statutory declaration that it was obtained by the company from the bottom of four bore-holes, viz., 294 ft., 298 ft., 307 ft., and 310 ft., respectively, leaves little doubt, if any, that deep alluvial leads exist on the New South Wales side of the river Murray, in the vicinity of the town of Corowa. In fact, deep alluvial mining operations on a profitable and extensive scale are now carried on in the Rutherglen district, Victoria, and payable prospects have been obtained by boring on the Victorian side, near the banks of the river Murray, proving that the Rutherglen rich alluvial leads will be traced under the Murray into New South Wales.

The Hillside Quartz-mining Company's operations, about 8 miles N.E. of Corowa, and the Nulla Nulla or Redland alluvial rush, were also inspected by me. At the former a great deal of work has been done; the deepest shaft being 70 feet. An 8-stamp quartz battery has been erected within a short distance of the mine, and large quantities of quartz have been crushed; but so far, not with any success. The company, however, intend to test their quartz reef at a greater depth.

At Nulla Nulla, on Redland Rush, I found about forty men at work; the sinking varied from 15 ft. to 50 ft. in depth; thickness of wash from 6 to 12 in., yielding in a few instances sufficient to give wages, and in others barely tucker. The prospectors (Messrs. Tiplady and party), washed one load yielding 12 dwt. 17 gr. of gold. Fair prospects were also washed in my presence in McLennen's and other claims. There are quite sufficient miners on the ground, as far as the Redland Rush is concerned; the whole length only being about half a mile in length before it enters into freehold lands. If miners could make easy terms with the landowners, then there would be inducement for prospecting, and perhaps a payable lead may be discovered within a mile below the Redland Rush.

The whole locality has a decided auriferous appearance, but being principally freehold land prospecting cannot be carried on cheaply. Although the Corowa district is not likely to become famous in quartz-mining, there is a very great probability that in the near future Corowa will take its stand as a prosperous gold-field of New South Wales.

I have, &c.,

W. H. J. SLEE,

Chief Inspector of Mines.

The Under Secretary for Mines and Agriculture.

REPORT by the Chief Inspector of Mines (W. H. J. Slee, Esq., F.G.S., &c.), on the Mines at Coolabah, Byrock, Mount Drysdale, and Bald Hills.

Sir,

Cobar, 28 Oct., 1895.

I do myself the honor to inform you that I have completed my inspection of the Coolabah, Byrock, Mount Drysdale, and Bald Hill Mines.

Near Wilga Dam, Coolabah, a party of miners are now prospecting in a Tertiary formation, on a site known as the Verecani Riley Mount. Small quantities of alluvial gold have frequently been found in the locality, but so far not payable. The present party (Gilligan and Riley), intend to prospect systematically by sinking and driving across the deepest part of the channel. About 3 miles from Gilligan's a quartz reef has been discovered by Peacock and party, half a ton yielding 6 dwt. of gold. In my opinion the prospects of the said reef are not encouraging, and are not likely to yield payable returns.

Several

Several quartz reefs were examined by me, in the Byrock district, some of which are worthy of thorough prospecting.

At the Bald Hills, about 35 miles from Byrock, and 50 miles from Cobar, a few parties are prospecting—the principal of which is Redcliff and party, who had a narrow quartz vein near the surface, in which gold, with the naked eye, could be seen. But as the vein has faulted, they intend prospecting for it on a deeper level.

In my opinion, the country between Bald Hills and Byrock, and Bald Hills and the Government Tank near the Tindory Hotel, has a more pronounced auriferous appearance than in the immediate vicinity of the Bald Hills.

Mining matters at Drysdale are not very flourishing, as a large number of the claims are lying idle.

The Mount Drysdale Company's Mine, in which rich gold discoveries were made through the aid of the Prospecting Vote, has had some very rich crushings, and as the gold occurs in bunches in the country rock, new discoveries may be made at any time. The shaft and workings are in good order, and reflect great credit on Mr. S. J. Skewes, the Mining Manager, the deepest shaft on the mine being 300 feet, but the present workings are being carried on at the 80-ft. and 180-ft. levels.

The total number of miners on the field is now somewhat below 106.

The old C. S. A. Mine, about 8 miles from Cobar, has been retaken for further prospecting. Hitherto it has been prospected for copper deposits, but it has a more auriferous appearance, and there is a greater probability that payable gold, instead of copper, will be discovered in the C. S. A. Mine.

I have, &c.,

W. H. J. SLEE,

The Under Secretary for Mines and Agriculture.

Chief Inspector of Mines.

REPORT by W. H. J. Slee, Esq., F.G.S. &c., Chief Inspector of Mines, on mining matters in the Cobar District.

Sir,

Cobar, 30 October, 1895.

I do myself the honor to inform you that I have completed my inspection in the Cobar District.

Mining matters are on a more solid foundation than they were twelve months ago, when public excitement ran so high owing to the very rich finds in the Mount Drysdale Mine. The frenzy consequent upon the mining boom having disappeared, mine-owners and managers have now settled down to proceed with the genuine development of their respective mines.

The Great Cobar Copper Mine, which has been almost totally idle for some years, was restarted last year by five plucky enterprising gentlemen, who hailed from the neighbourhood of Singleton, and who deserve the utmost praise for endeavouring to make the mine pay (under the tribute system) at the then low price of copper. Many obstacles and difficulties presented themselves during the first year of the existence of the Great Cobar Mining Syndicate Company (the tributors), but through the energy and sound common sense-management of Mr. William Longworth, these difficulties are one by one disappearing, and it is to be hoped that the tributors' syndicate will receive their well-merited reward, as by their action a large number of men have obtained employment, and the prosperity of the Cobar district has been placed on a sounder foundation. Mr. W. Longworth is now rasing ore from the 74 fathom, 38 fathom, and higher levels, and as will be seen below, the percentage of copper is very low, and very little, if any high grade ore can be obtained; nevertheless, fair profits are extracted, and the syndicate appear to be satisfied with their plucky undertakings. The tributing syndicate are now employing 415 persons, including boys. Their monthly consumption of firewood is 2,163 tons; of coke, 550 tons; and of coal, 91. The average amount paid monthly for freight is £1,151; wages, £4,036. Quantity of ore smelted (monthly), 3,859 tons. Average percentage of copper per ton of ore, $\frac{1}{4}$ per cent. Number of water-jackets in use for smelting purposes—one 80 tons, and one 30 tons. The syndicate intend to extend their operations, and so obtain a still greater output in the future.

One of the most pleasing incidents in connection with the working of the Tributing Syndicate Mine is well worth noticing for the public good, and the publication of which may induce other mine-owners, tributors, or syndicates to follow the Cobar syndicate's noble example, namely, that although a large number of unemployed men offered themselves daily to Mr. William Longworth, one of the tributary syndicate, and manager, he, in face of the number of men daily seeking work at the rate of wages paid by the company, posted a notice in the mine that owing to the slight rise in the market value of copper, the syndicate had come to the conclusion that on and after a certain date the Company, or rather Syndicate, intended to raise the wages of the whole of their employes $7\frac{1}{2}$ per cent. This came as an agreeable surprise to those employed. They have now enjoyed the increase for over a month, and during my inspection of the underground workings I could not help noticing the high spirit and contentment of the men, and how they vied with each other to work for the real interest of their employers.

The gold-mines within 3 miles of Cobar from the Fort Bourke to the Oriental are still working with varying success.

The Occidental still under the able management of Mr. G. Fawl, who is continually crushing with 15-stamp battery on a low quality quartzite lode. The Albion Mine which should certainly be payable is under suspension. The Chesney, Mr. J. P. Watson manager, is now bailing his deep shaft for the purpose of extensive and deeper mining operations than have hitherto been undertaken on that line of country.

The Mount Pleasant has just completed the erection of a 10-stamp battery, and the Young Australian, which so far has been a good mine, will also erect a 15-stamp battery with all the newest gold-saving appliances. The manager, Mr. G. T. Hunts, thinks his machinery will reach completion by about the end of this year.

At the Peak, about $1\frac{1}{2}$ miles in a southerly direction from the Occidental, Connelly, Barass, and party have discovered a slate formation over 20 feet in width; they crushed samples at the Clyde Works, Granville, which gave highly payable results, and has caused quite a rush to the locality. I have no doubt that if this line of country is more thoroughly and systematically prospected other payable gold discoveries will be made.

At present there are quite sufficient men in the district for all purposes.

I have, &c.,

W. H. J. SLEE,

The Under Secretary for Mines and Agriculture.

Chief Inspector of Mines.

REPORT

REPORT by the Chief Inspector of Mines, W. H. J. SLEE, Esq., F.G.S. &c., on the Mitchell's Creek Freehold Estate Mine, Mitchell's Creek.

Sir,

Daviesville, 4 November, 1895.

Having completed my inspection of the Mitchell's Creek district, I do myself the honor to submit my report on the Mitchell's Creek Freehold Estate Mine. This mine which is now under the general management of Mr. J. M. Findlay, is being worked on sound commercial principles. The smallest details are not allowed to escape careful consideration, and it is only by such means that such and similar mining properties can be made to yield payable returns. I am indebted to Mr. Findlay for all the details and other valuable information which added to my own observations has prompted me to give the following interesting and instructive details:—

The property, which is a freehold and contains 600 acres, was bought by Messrs Dick, Davies, Dalveen, and Findlay, in the latter part of 1888. Operations started in June, 1889, by sinking a shaft known as No 1. At the 140-foot level water, which had accumulated in the old workings, was met with and overcome by the erection and use of a double barrel plunger pump working on the footwall of the underlay.

In June, 1890, a 15-stamp battery was erected by the Company which started crushing on quartz from the No. 1 shaft. The battery has crushed since its erection 21,600 tons of quartz yielding 17,228 oz. of gold.

In February of the present year the battery was increased to 25 head of stampers, and has since crushed 7,223 tons of quartz for a yield of 5,306 oz. of gold. The total number of tons of quartz crushed and yield of gold obtained up to the 19th October last, that is, in five years and four months, is 28,900 tons yielding 22,531 oz. 7 dwt. 8 gr. of gold, giving an average of 15 dwt. 14 gr. per ton. The value being £83,716 10s. 2d. The total number of persons employed in the mine, 98; and on the surface, including battery and chlorination works, 47, making a total of 145 persons directly employed.

The crushing and gold-saving appliances consist of a 25-stamp battery, each stamper when new being 6cwt.; the crushed stuff passes through screens 240 holes to the square inch, then over four copper plates in front of each battery of five stamps. The first 2 feet is plain copper, the second and third, together 5 feet, is electric silvered, followed by a mercury well, and then over the fourth plate, 2 feet electric silvered, into the tailing shoot. The electric silvering is done on the mine by the company's electrician. The tailing shoot connecting the battery with the vanners is 400 feet in length, and conveys the pulp from the battery tables to the concentration shed. This wooden shoot is cleaned up every four weeks as some of the finest amalgam stops in the crevices. At the clearing up on Saturday the 2nd inst., 19 oz. of amalgam were obtained out of said shoot; the latter discharges on a second set of amalgamating tables. There were 9 vanners in full work, and one thrown out of gear for repairs. The loss of quicksilver for a twelve months' run averages $\frac{3}{4}$ oz. per ton of quartz crushed, and the tailings from the vanners concentrates have now been reduced by the treatment adopted by Mr. Janistky, the Company's able Metallurgist, to 1 dwt. 4 gr. per ton, being about 3 dwt. per ton less than when Mr. Janistky took charge of the chlorination works. I may here state that the ore is refractory containing gold, silver, copper, and other minerals, the gold being very fine, and although the yield per ton is 15 dwt. and over no gold can be seen in the stone. The Company also intend to make their own chloride of lime for which they have a plant on their mine.

The electric-light is used on all the surface works, but so far has not been introduced into the underground workings of the mine.

Although there is more quartz in sight than can be crushed for the next two to three years, the underground workings are steadily extending, and very probably the Company will ere long add an additional 25-stamp to their crushing power.

No. 1 shaft is down 680 feet in which six different levels have been opened, namely, at the 205 feet, 327 feet, 420 feet, 530 feet, 600 feet, 680 feet. At present there are not many men employed on these levels. The 327-foot level which had been idle for some time, and which is now in 370 feet, south from the shaft has lately been driven into a body of higher quality stone than has previously been obtained by the Company, the same class of stone has also been discovered in the 100-foot level in workings known as Snow's Tribute.

No. 2 shaft, which is at present the chief supplier of quartz, is 480 feet in depth. Five different levels are being worked, namely, 131 feet, 200 feet, 310 feet, 400 feet, and 480 feet; the last level is the shortest being 160 feet in length. The reef is in parts over 3 feet in width, averaging about 20 inches, well defined throughout, with smooth walls, a horse appearing at times, splitting the reef. But this only occurs at long distances apart, and for a short extent; the vein splitting, but never actually faulting. The output of this shaft averages about 100 trucks per day, or 400 tons of quartz per fortnight.

Snow's shaft, above mentioned, is a temporary working shaft, depth 76 feet; at a trial crushing of 10½ tons yielded 1 oz. of gold per ton, and at a lower level, 200 feet from surface, assays gave recently 3 oz. of gold per ton. These levels are now being extended with all speed to cut under this rich stone, and the 327-foot level has already intersected it, and is extending into the rich vein at the rate of 3 feet per day. The opening up of this part will add greatly to the gold-producing power of the mine; as hitherto this part of the mine has received very little attention.

As already stated, I have gone into details in this report, in the belief that it would not only be interesting but instructive to the mining community, as too much detailed information cannot be given to the public on such important mining operations. But on the contrary, such information may become a valuable guide for others in their endeavours to carry on economical systematic mining. The facts and figures given by me certainly prove beyond doubt that many gold and other mineral deposits which have been worked and abandoned in the Colony of New South Wales, may be made to pay, under a proper system, by men of energy, perseverance, and practical knowledge, such as the owners of the Mitchell's Creek Freehold Estate Company appear to be.

Through the working of this mine a township has sprung up, which has been named Daviesville, after Mr. Phillip Davies, one of the owners of the mine. This town contains a population of about 400, has a daily mail from Wellington, post office, school, and a number of business premises, including boarding-houses, but no hotel; the erection of an hotel is discouraged by the company.

I have, &c.,

W. H. J. SLEE,

The Under Secretary for Mines and Agriculture.

Chief Inspector of Mines.

REPORT

REPORT by W. H. J. Slee, Esq., F.G.S., &c., Chief Inspector of Mines, on Mining at Grenfell.

Sir,

Grenfell, 30 November, 1895.

Having for the present completed my official work in the Grenfell district, I do myself the honor to inform you that owing to the severe drought mining operations have been greatly retarded. Very little has been done in alluvial mining. At the quartz reefs, the Young O'Brien just completed a crushing of 840 tons of quartz, yielding 346 oz. 5 dwt. of gold. This yield, although not up to expectation, is nevertheless payable, the reef being several feet in thickness; the water for crushing purposes being very dirty, perhaps the concentrates will contain a higher yield of gold.

J. H. Dodd and party have struck the reef at the depth of 190 feet, on the south end of the Consols. It is surmised that this is the continuation of the old O'Brien reef, which was lost in Guliani's claim, about twenty-five years ago. The quartz looks promising, containing a fair percentage of pyrites, but, so far, no gold.

Southerly of Dodd and party's claim, and westerly of the old Outward-bound Reef, Messrs. Thomas Holsen and party have discovered a reef several feet in width, in which a little gold can be seen with the naked eye; but whether it is really payable cannot be ascertained for certain until a crushing has taken place. The Homeward-bound (Campbell and party) is still at work and sinking; a party of tributors have lately taken over the mine, and are sanguine of success.

O'Brien, Clarkson, and party (Lucknow Reef) have a well-timbered shaft down to the depth of 286 feet, at the bottom of which is a reef fully 10 feet in width, containing a little gold, but not payable. This party have sunk over 100 feet through the barren quartz, and at the time of my inspection it appeared to me that an improvement had taken place within the last few feet of sinking; as the latter is, however, very costly, the party intend opening on the 266-ft. level along the line of reef, in a southerly direction, to ascertain whether payable gold exists in said direction. The reef, although almost barren, still keeps in well-defined walls, and the indications are promising. The party is deserving of success for their plucky, persevering actions, and should they obtain payable gold, an impetus will be given in re-working or prospecting the Grenfell reefs at a lower level.

The Enterprise Reef, which has almost been continually worked and yielded payable returns since the opening of the Grenfell goldfield in 1866, is now being worked on the tribute system. The battery belonging to the mine is now the only one crushing for the public in the Grenfell district.

Several of the Tyagong reefs, which have been idle for years, have recently been retaken, with a view to development; very little can be done with them at present owing to the drought. The richness of the Grenfell quartz reefs is now a matter of history, several of which gave several thousands of pounds sterling to the working shareholders. In my opinion it only requires energy and perseverance, combined with an economical system of prospecting the deeper levels, to once more place Grenfell in the front rank of the quartz-reefing districts of New South Wales.

I have, &c.,

W. H. J. SLEE,

The Under Secretary for Mines and Agriculture.

Chief Inspector of Mines.

Report by Mr. W. H. J. Slee, F.G.S., Chief Inspector of Mines, &c., &c., on the New Alluvial Rush at Reefton.

Sir,

Temora, 21 December, 1895.

I do myself the honor to inform you that in connection with my recent official duties in the Temora district, I also inspected the new alluvial rush at Reefton. On my arrival at the rush I found about fifty miners on the ground. Mr. Slattery, the prospector, had washed a few loads yielding about 7 dwt. of gold per load, and as that ground is very shallow, with a good thickness of wash-dirt, the claim so far returns payable results, but unfortunately no other party has been successful in discovering payable gold. No. 3 Morris, Pain, and Party washed two loads of stuff during my visit yielding about 2 dwt. of gold per load—not payable. Shafts have been sunk from Slattery's prospecting claim to Nixen's selection for a distance of about half a mile in a well-defined east and west channel, but so far without any payable results; the deepest shaft being that of Smith and party's, which bottomed at 84 feet, with about 1 foot of wash and close to the boundary of Nixen's selection.

The wash in the shallower ground, near the quartz reefs, is angular, but at a greater distance from the quartz reefs it becomes waterworn, although as stated before, without any payable results, notwithstanding this, several parties are still driving across the channel in the hopes of striking something payable, of which there is still a probability.

But in my opinion the only hope for extensive alluvial discoveries in the Reefton district is the prospecting for, and discovery of, a deeper channel trending in an opposite direction from Slattery's channel, and which through several tributories has received the principal part of the denudation of the Reefton auriferous quartz reefs.

The present population at Reefton is ample for all purposes, and it would be worse than folly for anyone to come any distance to the Reefton alluvial rush. Several of the Reefton quartz reefs are still yielding payable returns, but the battery dam being dry, and water very scarce, parties have to stack their quartz waiting for rain.

A telegram was received by me to-day from Mr. Frederick Marshall, of Barmedman, to the effect that Roberts and party just crushed from a new discovered quartz reef situated about 7 miles on the Wyalong side from Barmedman 23 tons quartz, crushed at Barmedman, yielding 29 oz. 8 dwt. of smelted gold, the reef being 18 inches in thickness. This is highly payable, and proves beyond doubt my often-expressed opinion that payable gold would be discovered between Barmedman and Wyalong.

In fact, sooner or later, many of the still unprospected localities between Scrub Yards, Reefton, Barmedman, Wyalong, and Yalgogrin, will be able to profitably support an industrious mining population.

In different parts of the Scrub Yards, say from 10 to 14 miles from Temora, new gold discoveries (principally in quartz) have of late been made, the foremost of which is Hall and party who, during the last twelve months, crushed 286 tons yielding 1,782 oz. 12 dwt., or at the rate of 6 oz. 5 dwt. per ton.

The reef averages from 3 to 15 inches in thickness, has been worked in parts over 100 feet in depth, and traced fully 400 feet along the surface. But owing to the land being held under conditional lease, adjoining claims are unable to work until the matter *re* their application for permit has been settled.

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A ten-stamp battery is now in course of erection, and will be able to start in February next, provided sufficient rain fall in the meantime for quartz crushing purposes.

Taking everything into consideration the prospects on the Scrub Yards Districts are encouraging, the only drawback is that most of the land is held under conditional purchase or conditional lease. Although where the gold discoveries have been made are on rugged ironbark ridges; unfit for agricultural or even pastoral purposes and with very little, if any, improvements.

I expect a large population to be settled on these parts as soon as satisfactory arrangements can be made with the conditional leases.

At Temora an effort has again been made to work the deep alluvial which was found in Parker's prospecting claim, and in Moran's, known as the Golden Gate, at a greater depth than in any other part of the Temora lead, as it is thought by some that a false but the main bottom has been worked, and while on this subject I may here state that the late Mr. C. S. Wilkinson, Government Geologist, frequently expressed his opinion both verbally and in his official reports (*see* annual report of Department of Mines, 1881) that the true bottom of the Temora Lead had not been discovered, and with that object in view he has frequently in my company urged miners to try in various parts of the old lead for the true bottom.

Unfortunately, however, large areas of land have been alienated on the course of the old lead which in itself will prevent further prospecting.

The Municipal Council of Temora through their able Mayor, Mr. M'Gregor, have brought the subject once more prominently before the public and are now urging for some aid out of the Prospecting Vote to solve the interesting problem, whether the pipe-clay on which the alluvial gold at Temora was obtained, was or was not the true bottom.

Power, Bray, and party, who are working in the old Golden Gate Claim, and on a lower level than that attained by the original party, are, and have been, on payable gold for some considerable time, and Todd, Irwin, and party who have taken up part of Parkers' old prospecting claim are working below the level originally worked by Parker and party, and are obtaining gold, but so far not payable.

In my opinion recent developments are proving these alluvial auriferous deposits to be mere caverns filled with clay (mere pug) and waterworn pebbles somewhat similar to those at the Happy Valley, and Canadian Lead, Gulgong, or the Cow Flat, Cargo, and not in a regular continuous lead.

As there is, however, a large area of similar formation to the Golden Gate, and Parker's Claims along the whole course of the lead it would, perhaps, be expedient to sink four or five shafts along the old lead which I would recommend.

I have, &c.,

W. H. J. SLEE,

Chief Inspector of Mines.

The Under Secretary for Mines and Agriculture.

INSPECTOR MILNE'S ANNUAL REPORT.

Sir,

Sydney, 3 January, 1895.

I have the honor to submit this, my Annual Report, of the inspection of mines in the following districts:—

Armidale, Barraba, Bingera, Bear Hill, Borah Creek, Crowe Mountain, Dungog, Elsmore, Glen Innes, Glen Elgin, Guy Fawkes, Hillgrove, Inverell, Kookarabookra, Moonan Brook, Monkerai, Mururundi, Narrabri, Niangala, Nundle, Stewart's Brook, Scone, Swamp Oak, Tamworth, Tia, Tilbuster, Tingha, Uralla, Walcha, Wangat, and Warraldi in the northern district.

Araluen, Braidwood, Bungonia, Bateman's Bay, Brimbramalla, Moruya, Mogo, Nelligen, Welcome Reefs, Nerriga, Shoalhaven River, Snowball, and Tarago in the southern district.

Capertee, Clear Creek, Caloola, Cobbrah, Dark Corner, Brown's Creek, Bathurst, Blayney, Burnt Yards, Box Ridge, Forest Reefs, Gratti, Hill End, Hargreaves, Leadville, Lucknow, Lewis Ponds, Long Creek, Mudgee, Mount McDonald, Molong, Macquarie River, Merindie, Newbridge, Ophir, Orange, Pyramul, Palmer's Oakey, Sunny Corner, Slattery's Creek, and Sofala in the western district.

The total number of working mines inspected during the year is 292, employing 1,768 men; several of the principal mining centres in the north and west have been inspected twice or more during the year.

In the larger and more extensively-worked mines the managers are careful, and every attention paid to the safe timbering and other precautions in and about the mines for the safety of those in their employ. The result of this is noticeable in the list of accidents, where it will be seen that comparatively few accidents occur in the larger mines from falls of ground.

In the smaller mines worked by the individual miners where no one is recognised as the manager, and are simply prospecting on barely making a living, some difficulty occurs in having their mines kept in a safe condition.

With these parties no doubt in a number of cases want of money is the principal cause of their neglect, and the loss of time in getting timber with which to secure their mines which is simply prospecting, and in some places expecting to leave the ground any day; they would sooner run the risk than get timber to secure it, saying it will last our time, knowing full well the danger they are running in their work.

With others again, want of knowledge when the mine is in an unsafe state; and again a number of cases gross carelessness in fitting the timber used for securing the ground.

Besides the above, I have, as a member of the Prospecting Board, inspected and reported on 230 applications for aid out of the Prospecting Vote.

The total number of mines inspected working or for aid is 522. In the execution of which I have travelled a distance of 3,678 miles.

I have, &c.,

DAVID MILNE,

Inspector of Mines.

The Chief Inspector of Mines, Sydney.

INSPECTOR HEBBARD'S ANNUAL REPORT.

Sir,

Broken Hill, 5 February, 1895.

I have the honor to present my annual report for the year 1895, as follows:—

During the year I have visited all the outlying portions of the district, with the exception of Mount Browne.

The mining industry, which at the beginning of the year was in a very depressed condition, has received a fresh impetus owing to the profitable treatment of the low grade sulphide ore, and the discovery, in some of the mines, of bodies of ore rich enough to bear cost of shipment and realisation without a preliminary concentration. Practically, the "Sulphide problem" is solved, and mines are again on the dividend list which had returned no profit since the depletion of the oxidised ores.

The depression was added to by the occurrence of a fire in the Block 11 portion of the Broken Hill Proprietary Mine, which broke out on 21st July, 1895, and led to the throwing out of employment of a large number of men of various occupations; and incidentally, to a large exodus of men to Western Australia, as it was for some little time feared the fire would spread throughout the mine on the line of lode.

Fortunately, the persistent efforts made to cope with the flames by means of water, steam, and carbonic-acid gas, aided by the collapse of the ground, and the partial filling-up of the Block 11 quarry, checked the progress of the fire, and after a while allowed of the burning section being bulk-headed, and completely isolated.

The precautionary measures were the placing of solid bulk-heads in all unstoped passages leading to the fire; and this was done in every possible place in the Proprietary Mine, as also in Block 10 Mine, where the stopes connected with those of the Proprietary on the south end.

The collapse of the ground adjacent to Block 10 made huge fissures in the solid rock and ore, and led the fire into that mine, where, before it could be overcome, the stopes in the vicinity of Block 11, above the 240-ft. level, were completely gutted.

In reopening the mine every possible precaution was taken for the safety of the men in providing air and water and canvas linings to keep back the gas as the men progressed, but notwithstanding this the men were sometimes overcome. The gas, however, does not appear to have left any permanent effect on the affected men.

The opening of Drew and McGregor shafts has caused a very good and thorough ventilation, and apparently has completely driven the gas out of the mine.

The burning portion is secured by brick bulk-heads in the solid ground, and where this was not possible in stopes, the struts have been cut out, the height and width of the stope, the sides of the standing timber lined with plate-iron, and the intervening space filled with sand.

The burnt-out ground is also being filled with sand, and the timbered portion filled with fine sand run in with water.

There are now nearly 200 men working in the recovered portion of Block 11 under fairly satisfactory conditions.

The district is now almost entirely dependent on the sulphide ores, and the only company carrying on smelting operations locally is the Broken Hill Proprietary.

The opening up of the sulphide ores in the various mines has been very satisfactory, almost unlimited supplies having been developed, until it now seems as if there were more sulphide ores of a payable character in the mines than have been extracted of oxidised ores.

At White Cliffs the search for the gem is continuous, and attended with a fair amount of success. The search now extends to upwards of 50 feet in depth, and it is stated the stone obtained at that depth is, if anything, superior to that obtained nearer the surface.

At Thackaringa Pinnacles and Day-Dream the mines are being worked in a desultory fashion, though doubtless the demand for sulphide ore will lead to renewed activity.

The mines now at work on the Broken Hill lode are Broken Hill North, Broken Hill Junction-North, Broken Hill Junction, British, Block 14, Broken Hill Proprietary, Block 10, Central and South.

The Victoria Cross, has recently been repegged, and probably will soon be at work. During the year I have endeavoured to have the provisions of the Lead-poisoning Act carried into effect.

In some instances everything needful has been accomplished, but in others, particularly Block 10 and Central Mines, scarcely anything has been done in compliance with the Act. This is especially the case in regard to changing house, and washing and bathing accommodation, and I am of opinion that very strong measures will have to be taken before the companies named will comply with the Act in this particular.

Since the enforcement of Clause 3 of the Lead-poisoning Act, the names of 88 men have been recorded as having suffered from lead-poisoning from 1st May to 31st December.

In a great many instances the illness lasted only a day or a few days.

Of the 88 cases, 27 were uncertificated; of the cases recorded, 32 were miners; and the balance, 56, were employed on furnaces, 7 were over 50 years of age, 16 over 40, 31 over 30, and 30 over 20 years of age.

In my opinion the baths and other accommodation of this nature where provided are not made use of to the full extent by the men as they might be.

The accident list for the year is a very heavy one, comprising 21 fatal, 26 serious, and 21 accidents of a minor character. The fatal accidents include the victims of the lamentable South Mine disaster, which occurred on 18th July, 1895. As this has been very fully reported on, it is only necessary to state that the deaths were undoubtedly caused by the violent rush of air through the level in which the men were standing consequent on the collapse of the stope from which they had been withdrawn.

Of the remaining twelve fatal accidents, 1, Jas. Martin at Appolyn Valley was the result of the ignition of some powder in an open can which he was preparing to take up the shaft in a bucket; 2, Victor Cleal, at Tarrowingee, the result of being struck by a stone from a blast 200 yards away, and where he thought he was perfectly safe; 3, W. H. Tonkin, Broken Hill Proprietary Mine, the result of a fall of stone which he was attempting to bar down; 4, J. Voller, Broken Hill Proprietary Railway, being run over by a truck which he was helping to push; 5, J. Brokenshire, through stepping into Central Shaft, supposing the cage was the platform; 6, P. Guarre, at Tarrowingee, fall over face of quarry through breaking of a rope, to which a rock-drill was suspended; 7, J. McGuire, through the unexpected coming

coming away of some ground he was taking down in the open cut, Broken Hill Proprietary Mine; 8, R. Dias, Proprietary Mine, open cut, through a runaway truck on an incline the truck not having been chocked when it reached the top; 9, W. Barrett, Broken Hill Proprietary Mine, in stacking timber at saw-mill; 10, Jas. Broadstock, through a fall of a loose ore stored at surface of Block 10, which was being filled into railway trucks; 11 and 12, Charles Herreen and Wm. Daly, Broken Hill Proprietary open-cut, a mistake having been made as to whether a certain blast had been lit, these men had gone back to fire it.

These with the victims of the South disaster comprise the twenty-one fatal accidents for the year.

Of the serious and minor accidents, a large number cannot fairly be classed as mining accidents, as they have occurred in other operations than mining, and the same applies to some of the fatal accidents.

Numerous other casualties have been reported to me from time to time, of a trifling nature.

Work in the district is almost entirely confined to the Broken Hill line of lode. The tin-fields of Euriovie and Waukeroo are deserted.

A great number of claims are being pegged that are known to contain sulphide of lead, and there seems a prospect of some of them being worked in the near future.

The total number of men employed in the district exclusive of Mount Browne and White Cliffs, is 4,297; divided into men employed in mining and raising ore, 2,327; men employed in the reduction of ore and construction of plant, 1,970; total, 4,297. Allowing about 200 miners, &c., for White Cliffs and Mount Browne, the figures are practically the same as for 1894, when the number employed in the district was 4,500.

I have, &c.,

JAMES HEBBARD,

The Chief Inspector of Mines, Sydney.

Inspector of Mines.

ACTING INSPECTOR GODFREY'S ANNUAL REPORT.

Sir,

Sydney, 14 January, 1896.

I have the honor to forward you my annual report for the year 1895.

During the year I visited and inspected at the following places:—

Broken Hill, where I was stationed for the first three months of the year.

In the west—Barnedman, Newbridge, Reefton, Sebastopol, Tomora, including Possum Power and Combaning; Trunkey, Yalgogrin, including Mulyan and Nariah, Young, and Wyalong, where I remained for two and half months.

In the south—Adaminaby, Bywong, Bega, Bombala, Braidwood, including Major's Creek and Bell's Creek; Burrowa and Frogmore, Bateman's Bay, including Bimbimie and Big Hill, Brimbramalla, Bungonia, Burrier, Captain's Flat, Cooma, including Cowra Creek, Fiery Creek, Macanally, Myalla and Arable, Cootamundra, Candelo, Delegate, Gundaroo and Dairy Creek, Kiandra, Murrumburrah, Mount Dromedary, Marulan, Nerriga, including Mountainy and Tim's Gully; Nadgingomar, including Mantou Reef and Welcome Reefs; Nerrigundah, Pambula, Qeambayan, Tharwa, Wyndham, Wolunla, Wallendbeen Wogonga, and Yalwal.

During the time I was at Broken Hill three fatal accidents occurred, all of which were preventable; in each case the jury returned a verdict of accidental death, with which verdicts I concurred. One fatal accident occurred at Wyalong through a fall of ground, due to neglect in not putting in timber where it was urgently wanted.

I had no other fatal accidents to inquire into; but there is the usual long list of serious and minor accidents due to explosions. I have been very particular this year in trying to enforce the general rules regarding explosives, but I find that the rules are continually broken, and little or no care used in handling the explosives—cartridges and detonators are kept indiscriminately in the same box, without lid or covering; frozen dynamite is thawed in tins over the forge, or in front of a fire; scrapers are used for tamping even when proper sticks or bars are supplied, and it is a common occurrence for men to go back to a missed hole with in 5 to 10 minutes, and to unprick the charge, and to draw it. No amount of inspection can guard against such accidents, where the men break the rules laid down for their own safety, knowing the danger they run, and deliberately incurring the risk, and so long as men deliberately and knowingly handle explosives in a dangerous way, so long will blasting accidents occur. As a rule, the larger mines under the control of a responsible manager, are carefully worked, and the general rules for the inspection and regulation of mines other than coal and shale mines, were well complied with. But in the smaller mines owned by working parties, the mine is often very defective, and the class of work done very bad. Want of money may be partly the cause, but the more probable reason is, that there is no particular individual to take the responsibility,—each man is his own "boss," works in his own way, and does exactly what he likes, and consequently accidents occur. If one of the party were appointed manager, and had the sole responsibility, I think it would conduce to more efficient and safer work.

I served an unusually large number of written notices this year, most of them on mine-owners at Wyalong, where the ground is of a treacherous nature, and sufficient care not exerted. I trust that better work will be done for the future. In the discharge of my duties during the year I inspected 626 mines (some of these being inspected two or three times), employing about 6,000 men. I travelled 8,404 miles, namely, 1,849 on horseback, 1,022 by coach, 5,175 by train, and 358 on foot. I also reported on 120 applications for aid and under the Prospecting Vote.

I have, &c.,

J. R. GODFREY,

The Chief Inspector of Mines, Sydney.

Acting Inspector of Mines.

SUPERINTENDENT OF DIAMOND DRILLS REPORT.

The Superintendent of Diamond Drills to The Under Secretary for Mines and Agriculture.

Sir, Department of Mines, Diamond Drill Branch, Sydney.

In submitting my Annual Report on the working of the diamond drills for the year 1895, I do myself the honor to attach to said Report the following Appendices.

Appendix A.—Return showing the locality, strata, depth bored, percentage of core extracted, and rate per foot, exclusive of office salaries, store wages, and rent, also Superintendent of Drills travelling expenses.

Appendix B.—Summary of diamond drills, showing the number of feet bored, working cost to the Department, average cost at per foot, and the amount receivable for the year 1895.

Appendix C.—Balance-sheet of diamond drills.

Appendix D.—Diagram section of bore during the year 1895.

The total depth bored with the diamond drills in 1895 was 299 feet, or 258 feet less than in the year 1894. The field cost for boring, exclusive of office salaries, store wages, and rent, was equal to 15s. 2½d. per foot, or 1s. 6¾d. per foot less than during the year 1894.

The total amount paid into the Treasury during 1895 was £171 16s.

The percentage of core saved during the year was 87.60. This low percentage was due to the fact that the drills passed through an old level which had been worked, hence no core would be obtained.

The cost of wear and tear of diamonds during the year was 3s. 9½d., the extra cost of diamonds is due to the hard nature of the strata passed through.

Although part of the salaries has been added to the cost of boring, it is but fair to state that the clerks are fully occupied with clerical work in connection with Chief Inspector of Mines Office, several of the hand-borers and a Tiffen machine have been working in the field boring for minerals.

The Honorable the Minister for Mines and Agriculture, Mr. Sydney Smith, M.P., adopted a new departure by which the use of the diamond drills can be made available at almost a nominal cost in basaltic or other mineral country which has not been prospected, and which is either too hard, wet, or deep, and therefore too costly for sinking. On those terms a number of the diamond drills are likely to come in use during the next year.

I have, &c.,

W. H. J. SLEE,

Superintendent of Diamond Drills.

APPENDIX A.

DIAMOND-DRILL work, showing average cost per foot for boring, exclusive of office salaries, store wages, rent, and Superintendent's travelling expenses, for year 1895.

No. of bores	1	Days occupied— <i>contd.</i>	
Locality	Captain's Flat	Repairing	12
Diameter of bores	4 in.	Delays	6
Strata	Porphyry	Holidays	5
Depths—		Total	86
Bored during year	299 ft.	Rate bored per hour	9.34 in.
Days occupied—		Percentage of core obtained	87.60
Moving	3	Cost—	
Erecting	12	Amount	£227 15 0
Boring	43	Per foot	0 15 2

J. S. McNEILL.

J. S. LEIGH.

W. H. J. SLEE,

Superintendent of Diamond Drills.

APPENDIX B.

SUMMARY of Diamond-drill work, showing number of feet bored, total working cost to Department, average cost per foot, and amounts receivable for 1895.

Locality ... ..	...	...	...	...	...	£	s.	d.
Bored	Captain's Flat	299 ft.	Proportion of balance of general account ...	21	1	4		
		£ s. d.	Proportion of balance of general stores issued ...	0	2	9		
Wages	110	5 4	Office salaries	149	9	7		
Carriage—			Store wages	36	10	4		
Railway	4	1 7	Rent	39	13	4		
Other	0	6 6	Total	453	8	3		
Repairs	1	14 0	Cost per foot	1	10	3½		
Diamonds used	56	18 7	Amounts receivable in full	153	18	1		
Stores issued	33	4 11	Amount receivable per foot	0	10	3½		

Comparative statement of Diamonds used per foot:—

1893 = 3/8	1898 = 1/0 2/3	1892 = 2/2
1894 = 2/0 1/2	1889 = 1/3 2/3	1893 = 3/3 1/2
1895 = 1/5 2/3	1890 = 7/4 2/3	1894 = 7/9
1886 = 7/8 1/2	1891 = 1/9 2/3	1895 = 3/9 2/3
1897 = 1/6 1/2		

J. S. McNEILL.

J. S. LEIGH.

W. H. J. SLEE,

Superintendent of Diamond Drills.

APPENDIX C.

APPENDIX C.

BALANCE SHEET, 1895.—Diamond Drills.

Dr.			Cr.		
	£ s. d.	£ s. d.		£ s. d.	£ s. d.
To value of field machinery and plant other than diamonds at 1st January.....		11,605 8 2	By amount receivable for boring during the year.....	153 18 1	
Value of new stock in store at 1st January.....	700 11 1		Diamond fractures sold.....	7 1 0	
Value of stores purchased..	4 10 6	705 1 7	Inspection Fee.....	2 2 0	0 3 0
Value of new diamonds at 1st January.....	1,115 0 11		Value of field machinery and plant other than diamonds at 31st December.....	11,605 8 2	
Value of diamonds in suspense, 1st January.....	464 0 2		Less 5 per cent. depreciation	680 5 5	11,025 2 9
Value of fractures, 1st January.....	18 19 8	1,508 0 9	Value of new stock in store at 31st December.....		671 3 2
Working expenses (exclusive of office salaries, store wages, and rent).....		227 15 0	Value of new stock of diamonds at 31st December.....	1,115 0 11	
Office salaries.....	512 10 0		Value of diamonds in suspense at 31st December..	366 3 6	
Less charged, as under..	363 0 5	149 0 7	Value of diamond fractures at 31st December.....	15 3 11	
Store wages.....	125 4 0		Value of diamonds in field at 31st December	40 2 0	1,545 19 4
Less charged, as under..	88 13 8	36 10 4	Depreciation as above		13,212 5 3
Rent.....	141 13 4		Balance.....		580 5 5
Less charged, as under..	102 0 0	39 13 4			932 0 0
		453 8 3			
Expenditure of a general character not chargeable to diamond drill boring, viz:—					
Portion of general account	51 3 2				
Portion of general stores issued.....	0 6 9				
Office salaries.....	303 0 5				
Store wages.....	38 13 8				
Rent.....	102 0 0	605 4 0			
		1,058 12 3			
		£14,967 11 9			£14,967 11 9

J. S. McNEIL,
J. S. LEIGH.

W. H. J. SLEE,
Superintendent of Diamond Drills.

EXAMINER OF COAL-FIELDS' REPORT.

Report of the Examiner of Coal-fields for the Colony of New South Wales for the year 1895.

IN compliance with the provisions contained in the 26th section of the Coal Mines Regulation Act, 39 Vic. No. 31, I have the honor to submit the half-yearly reports of Messrs. Dixon, Bates, and Humble, Inspectors of Collieries for Coal Mines at work and opening out in the Counties of Northumberland, Durham, Gloucester, Buckland, and Pottinger, called the northern district; and of Mr. Rowan, Inspector of Collieries for Coal and Shale (Boghead Mineral) Mines at work and opening out in the Counties of Camden, Cook, and Roxburgh, in the Illawarra or southern district, the south-western and western districts.

The information I have the honor to submit with respect to the number of accidents above and below ground, quantity and value of coal gotten, number of persons employed on the surface and underground, coal exported and that used for home consumption, and notices received of new mines opening or in course of development, &c., &c., during the year 1895, is as follows:—

In 1895, the year under notice, there have been 10 fatal and 47 non-fatal accidents—5 of the fatal accidents occurred through falls of coal, 1 by skips, 1 by a descending cage in shaft, and 3 by falls of stone.

Ten of the non-fatal accidents occurred by skips; 25 by falls of coal; 1 by a falling prop; 1 by a coal truck; 2 by being scalded by steam above ground; 5 by falls of stone roof; 1 by falling off a trolley; and 1 by jumping off a train of skips.

In 1894 the fatal accidents were 7, and the non-fatal accidents 40. Two of the fatal accidents happened from falls of coal; 1 by explosion of a shot; 1 by falling down incline; 1 by falling on cage in incline; and 2 from falls of stone.

Five of the non-fatal accidents occurred by skips; 28 by falls of coal; 1 by fall of stone; 1 by the bursting of pin of machinery; 3 by ignition of powder; 1 by truck on surface; and one on engine plane.

In 1893 the fatal accidents were 13, and the non-fatal accidents 45. Ten of the fatal accidents happened from falls of coal; 1 from fall of stone; 1 from loaded waggon on surface; and 1 by descending cage at bottom of shaft.

Four of the non-fatal accidents occurred from an explosion of gas; 22 from falls of coal; 5 by skips; 5 by falls of stone; 2 by ignition of loose powder; 1 by waggon on surface; 1 on railway line; 1 falling down shaft on to cradle; 1 by explosion of a shot; 1 by crank shaft of engine when in motion; 1 by a piece of coal falling down shaft; and 1 by a falling prop.

RETURN

Returns showing the number of fatal and non-fatal accidents; those caused by "falls of coal," stone "roof"; and Lithgow, Ferndale, Bulli, A. A. Co.'s Hamilton Pit, and South Burwood Sinking Pit disasters, 1873 to 1894 inclusive.

Year.	Fatal accidents.	Remarks on fatal accidents.	Non-fatal accidents.	Remarks on non-fatal accidents.	Men above and below ground.	Tons of coal raised.	Tons of coal raised per life lost.
1873...	13	9 by falls of coal	10	4 by falls of coal, 1 by stone roof *.....	1,192,862	91,758	
1874...	5	3 by falls of coal, 2 by stone roof	13	6 by falls of coal, 4 by stone roof *.....	1,304,612	260,922	
1875...	8	4 by falls of coal, 3 by stone roof	10	6 by falls of coal	1,329,729	166,216	
1876...	4	2 by falls of coal, 1 by stone roof	8	4 by falls of coal	1,319,918	329,979	
1877...	7	4 by falls of coal, 1 by stone roof	21	16 by falls of coal	1,444,271	208,324	
1878...	8	2 by falls of coal, 1 by stone roof	15	12 by falls of coal, 1 by stone roof	1,575,497	196,937	
1879...	5	2 by falls of coal, 2 by stone roof	19	10 by falls of coal	1,583,381	316,676	
1880...	8	4 by falls of coal, 1 by stone roof	19	8 by falls of coal	1,466,180	183,272	
1881...	2	2 by falls of coal	33	25 by falls of coal	1,769,597	884,798	
1882...	12	10 by falls of coal	33	23 by falls of coal	2,109,282	175,773	
1883...	15	8 by falls of coal, 1 by stone roof	34	15 by falls of coal, 4 by stone roof	2,521,457	168,096	
1884...	14	6 by falls of coal, 2 by stone roof	34	14 by falls of coal, 6 by stone roof	2,749,109	196,364	
1885...	11	7 by falls of coal, 2 by stone roof	40	18 by falls of coal	2,878,863	261,714	
1886...	29	10 by falls of coal, 1 by stone roof, 8 by Lithgow disaster, 1 by Ferndale flooding.	43	15 by falls of coal, 2 by fall of roof	2,830,175	97,592	
1887...	94	81 killed by Bulli catastrophe, 5 by falls of coal, 2 by falls of stone roof.	45	22 by falls of coal, 5 by fall of stone roof.	2,922,497	31,090	
1888...	15	6 by falls of roof	43	12 by falls of coal, 4 by stone roof	3,203,443	213,562	
1889...	41	11 by crush at Hamilton Pit, 11 by falls of coal, 4 by over-winding at South Burwood.	57	24 by falls of coal	3,655,632	89,161	
1890...	13	4 by falls of coal, 1 by fall of roof	36	17 by falls of coal, 3 by stone roof	3,060,876	236,145	
1891...	21	7 by falls of coal, 3 by fall of roof	54	27 by falls of coal, 6 by stone roof	4,037,929	192,282	
1892...	8	4 by falls of coal, 3 by fall of roof	77	38 by falls of coal, 10 by stone roof	3,780,967	472,620	
1893...	13	10 by falls of coal, 1 by fall of stone	45	22 by falls of coal, 5 by fall stone	3,278,327	252,179	
1894...	7	2 by falls of coal, 2 by fall of stone	40	28 by falls of coal, 1 by fall stone	3,672,076	524,582	
1895...	10	5 by falls of coal, 3 by fall of stone	47	25 by falls of coal, 5 by fall of stone roof.	3,738,589	373,858	

* Figures not available.

From this return it will be seen that the fatal accidents exceed those of 1894 by 3, and that the tons of coal raised per life lost are less than the previous year, but more than in 1893.

The returns of the collieries raising coal and shale (boghead mineral) which have been collected and forwarded to me by the Mining Department show the following figures for the year 1895:—

COAL RETURN.

	Northern District.	Southern and South-western Districts.	Western District.	Total.
Tons of round and small coal raised	tens cwt. gr. 2,631,221 11 0	tens cwt. gr. 916,502 15 0	tens cwt. gr. 190,864 14 0	tens cwt. gr. 3,738,589 0 0
Value of round and small coal raised ...	£ s. d. 813,227 15 6	£ s. d. 241,838 10 3	£ s. d. 40,260 15 3	£ s. d. 1,095,327 1 0
Persons employed above ground	Number. 1,170	Number. 363	Number. 49	Number. 1,582
Persons employed under ground	5,602	1,585	247	7,435

PETROLEUM OIL, CANNEL COAL OR BOGHEAD MINERAL RETURNS.

Western and Southern Districts.

Tons of boghead mineral or petroleum oil cannel coal	59,426 5 tons
Value of boghead mineral or petroleum oil cannel coal raised	£75,218 18s. 8d.
Persons employed above ground	108
Persons employed underground	246

COKE RETURN.

	Tons cwt.	£ s. d.
Northern Districts	11,326 8	} 102,553 10 6
Southern and Western Districts	16,304	

COMPARATIVE

COMPARATIVE Statement of Returns for 1894-95.

	Men and boys above ground.	Men and boys below ground.	Tons of round and small coal.		Value.	
			tons	cwt. qr.	£	s. d.
NORTHERN DISTRICT.						
Australian Agricultural, Newcastle, Wallsend, Newcastle Coal, Lambton, Co-operative, Brown's, Duckenfield, South Waratah, Wickham and Bullock Island, Hetton, Burwood, Stockton, West Burwood, West Wallsend, New Lambton, Bloomfield, Thornley, Greta, New Anvil Creek, Rix's Creek, Ellesmere, New Park, Rosedale, Dulwich, Centenary, Ebbw Vale, South Wallsend, East Greta, Gartlec, Morrislet, Burwood Extended, Wallarah, Elmore Vale, Denton Park, Maryland, Hillside, Marshall's, Morley, Pioneer, Seaham, Pacific, Rays, Thornton, Rose Hill, Liddles, Kyuga, Font Hill, Gladstone, Louisvale, Northumberland, South Hetton, Wright's, Bayley's Reward, Bells, Gunnedah, Jackson's, Meredith's, Oakvale, Sunderland Surprise, Side, Scanlon's..	1,170	5,602	2,631,221	11 0	813,227	15 0
Total in 1895.....	1,170	5,602	2,631,221	11 0	813,227	15 6
" 1894.....	1,302	5,770	2,605,142	13 1	883,174	14 7
Decrease in 1895	132	168	.....	.....	69,946	19 1
Increase " .....	.....	.....	26,078	17 3	.....	.....
SOUTH AND SOUTH-WESTERN DISTRICTS.						
Metropolitan, Coal Cliff, South Bulli, Osborne, Wallsend, Mount Kembla, Australian Kerosene Oil and Mineral Co., Bellambi, Corramal, Mount Pleasant, Great Southern, South Clifton, Box Vale, Hillend, Bulli Steam Coal, Austinnere	363	1,586	916,502	15 0	241,838	10 3
Total in 1895.....	363	1,586	916,502	15 0	241,838	10 3
" 1894.....	312	1,443	867,063	19 0	226,935	12 8
Increase in 1895	51	143	49,438	16 0	14,902	17 7
WESTERN DISTRICT.						
Oakey Park, Vale, Zig Zag, Vale of Clwydd, Lithgow Valley, Eskbank, Eskbank Old Tunnel, Herrmitage, Coeruvill, Rawdon, Irondale, Cullen Bullen, Folly, Ivanhoe, Retort (N.S.W. Shale and Oil)	49	247	190,864	14 1	40,260	15 3
Total in 1895.....	49	247	190,864	14 1	40,260	15 3
" 1894.....	54	245	199,869	12 0	45,463	0 7
Decrease in 1895	5	.....	9,004	17 3	5,202	5 4
Increase " .....	.....	2	.....	.....	.....	.....

From these returns we find that in the Northern District, in the year under notice, there has been a decrease of 300 persons employed in and about the collieries, and an increase of 26,078 tons of coal raised, and £69,947 in value.

In the South and South-western Districts there has been an increase of 194 persons employed in and about the collieries, and an increase of 49,439 tons of coal raised and of £14,903 in value.

In the Western District there has been a decrease of 5 persons employed above ground, and an increase of 2 persons employed under ground, and a decrease of 9,005 tons of coal raised and of £5,202 in value.

Years.	Exports to Intercolonial Ports.			Exports to Foreign Ports and United Kingdom and other British Possessions.			Total Exports.			Home consumption.
	Quantity.	Average per ton.	Value.	Quantity.	Average per ton.	Value.	Quantity.	Average per ton.	Value.	
	Tons.	£ s. d.	£	Tons.	£ s. d.	£	Tons.	£ s. d.	£	Tons.
1893	1,160,238	0 8 6'05	493,372	674,832	0 9 6'35	321,557	1,335,090	0 8 10'57	814,929	1,443,233
1894	1,175,972	0 7 1'73	419,751	660,053	0 8 1'20	385,018	2,12,512	0 7 6'88	904,769	1,540,951
1895	1,196,504	0 6 9'69	407,271	969,726	0 7 6'75	360,623	2,160,230	0 7 1'74	773,954	1,572,359
	3,531,814	0 7 5'72	1,320,394	2,594,631	0 8 3'27	1,073,253	6,126,445	0 7 9'76	2,393,652	4,562,648

Years.	Total output and value.			Coal raised per each person employed in and about the mines.			Value of coal raised per each person employed in and about the mines.			Tons of coal raised per each life lost.		
	Quantity.	Average per ton.	Value.	Quantity.	Average tons per person employed.	Persons employed.	Value.	Average value per person employed.	Persons employed.	Quantity.	Average tons per each life lost.	Lives lost.
	Tons.	£ s. d.	£	Tons.	Tons.	Number.	£	£ s. d.	Number.	Tons.	Tons.	Number.
1893	3,278,328	0 7 1'73	1,171,722	3,278,328	329	9,971	1,171,722	117 10 3	9,971*	3,278,328	252,179	13
1894	3,672,076	0 6 3'55	1,155,573	3,672,076	402	9,128	1,155,573	126 12 5	9,126	3,672,076	524,682	7
1895	3,738,589	0 5 10'31	1,095,327	3,738,589	414	9,017	1,095,327	121 9 5	9,017	3,738,589	373,853	10
	10,689,993	0 6 4'84	3,422,622	10,689,993	380	23,114	3,422,622	121 14 9	23,114	10,689,993	356,299	30

* Exclusive of the men engaged in sinking for coal.

NORTHERN DISTRICT.

Number of persons employed in and about the mines	6,772
Number of persons employed underground	5,602
Quantity of coal raised in tons	2,631,221 11 0
Number of non-fatal accidents	38
Number of lives lost by accidents	9
Persons employed per each non-fatal accident	178
Persons employed per each life lost	752
Tons of round and small coal raised per each non-fatal accident	69,242
Tons of round and small coal raised per each life lost	292,357
Tons of coal raised per each person employed in and about the mines	388
Tons of coal raised per each person employed underground	409
Value of coal raised	£813,227 15 6
Value of coal raised per each person employed in and about the mines	120 1 8
Value of coal raised per each person employed underground	145 3 4

SOUTHERN DISTRICT.

Number of persons employed in and about the mines	1,949
Number of persons employed underground	1,586
Quantity of coal raised in tons	916,402 15 0
Number of non-fatal accidents	7
Number of lives lost by accident	1
Persons employed per each non-fatal accident	278
Persons employed per each life lost	1,949
Tons of round and small coal raised per each non-fatal accident	130,928
Tons of round and small coal raised per each life lost	916,502
Tons of coal raised per each person employed in and about the mines	470
Tons of coal raised per each person employed underground	577
Value of coal raised	£241,838 10 3
Value of coal raised per each person employed in and about the mines	124 1 7
Value of coal raised per each person employed underground	152 9 7

WESTERN DISTRICT.

Number of persons employed in and about the mines	206
Number of persons employed underground	247
Quantity of coal raised in tons	190,864 14 0
Number of non-fatal accidents	2
Number of lives lost by accident .....	.....
Persons employed per each non-fatal accident	148
Persons employed per each life lost	No life lost.
Tons of round and small coal raised per each non-fatal accident	95,432
Tons of round and small coal raised per each life lost	No life lost.
Tons of coal raised per each person employed in and about the mines	644
Tons of coal raised per each person employed underground	772
Value of coal raised	£40,260 15 3
Value of coal raised per each person employed in and about the mines	136 0 0
Value of coal raised per each person employed underground	162 19 11

The following table shows comparisons between the year under notice and the preceding year, as regards the proportion the accidents and deaths bear to the persons employed, and the quantity and value of the coal raised for each person employed in and about the mines and underground, in the Northern, Southern, and Western Districts.

	Northern District.		Southern Districts.		Western District.	
	1894.	1895.	1894.	1895.	1894.	1895.
Number of persons employed in and about the mines	7,072	6,772	1,755	1,949	200	206
Number of persons employed underground	5,770	5,602	1,443	1,586	245	247
Quantity of coal raised in tons	2,605,142 13 1	2,631,221 11 0	867,063 19 0	916,502 15 0	199,869 12 0	190,864 14 0
Number of non-fatal accidents	27	38	18	7	Nil	2
Number of lives lost by accident	6	9	Nil.	1	Nil	Nil
Persons employed per each non-fatal accident	261	178	136	278	No non-fatal accident.	148
Persons employed per each life lost	1,178	752	No life lost.	1,949	299	No life lost.
Tons of round and small coal raised per each non-fatal accident	96,486	69,242	66,697	130,928	No non-fatal accident.	95,432
Tons of round and small coal raised per each life lost	434,190	292,357	No life lost.	916,502	199,869	No life lost.
Tons of coal raised per each person employed in and about the mines	368	388	494	470	698	644
Tons of coal raised per each person employed underground	451	409	600	577	815	772
Value of coal raised	£ 83,274 14 7	£ 813,227 15 6	£ 226,935 12 8	£ 241,838 10 3	£ 45,463 0 7	£ 40,260 15 3
Value of coal raised per each person employed in and about the mines	124 17 7	120 1 8	129 2 8	124 1 7	152 1 0	136 0 0
Value of coal raised per each person employed underground	153 1 3	145 3 4	157 5 3	152 9 7	185 10 11	162 19 11

The following statistical return furnished by Mr. Logan, the Collector of Customs, Newcastle, shows that the greatest increase in the export of coal from that port has been:—Chili, 39,289 tons; Victoria, 33,118; Singapore, 15,176; India, 8,557; Western Australia, 6,530; Queensland, 4,345; New Hebrides, 4,875; and Mexico, 3,643; and the greatest decreases are to South Australia, 40,608; Philippine Islands, 38,697; New Zealand, 5,375; Hong Kong, 4,115; Peru, 4,348; and Java, 2,050 tons.

NEWCASTLE.—New South Wales export of Coal during the years 1894 and 1895.

Countries.	1894.	1895.	Increase.	Decrease.
	Tons.	Tons.	Tons.	Tons.
Victoria	606,686	639,804	33,118	.....
New Zealand.....	160,244	154,869	.....	5,375
South Australia	167,799	127,191	.....	40,608
Queensland	16,499	20,844	4,345	.....
Tasmania	55,099	57,285	2,186	.....
Western Australia	31,430	37,960	6,530	.....
Hong Kong	25,723	21,608	.....	4,115
United States	272,352	273,693	1,341	.....
Java	25,414	23,364	.....	2,050
Ecuador	2,373	972	.....	1,401
New Caledonia	6,965	8,639	1,674	.....
Mauritius	12,334	11,257	.....	1,077
Fiji.....	3,060	4,975	1,915	.....
India	29,484	38,041	8,557	.....
Philippine Islands	86,679	47,982	.....	38,697
Peru	31,573	27,225	.....	4,348
Chili	206,541	305,830	39,289	.....
Sandwich Islands	46,983	44,436	.....	2,547
Mexico	11,028	14,671	3,643	.....
South Sea Islands.....	900	.....	.....	900
Singapore	10,100	25,276	15,176	.....
United Kingdom	3,230	3,400	170	.....
New Hebrides .....	.....	4,875	4,875	.....
Ceylon .....	.....	2,986	2,986	.....
Kamschatka	413	.....	.....	413
Other Countries	2,500	4,433	1,933	.....
Panama	16,265	18,812	2,547	.....
Total	1,891,674	1,920,378	139,235	101,581

DECENNIAL RETURN.—Port of Newcastle.—Foreign and Intercolonial Ports.

Year.	Vessels cleared outwards for Foreign and Intercolonial Ports.		Total value of Imports from Foreign and Intercolonial Ports.	Quantity and value of Coal exported to Foreign and Intercolonial Ports.		Total value of Exports (inclusive of Coal) to Foreign and Intercolonial Ports.	Total amount of Revenue collected.
	No. of Vessels.	Tonnage.		Tons.	Value.		
1885	1,388	1,076,346	£ 930,200 0 0	1,552,136	£ 832,495 0 0	1,927,626 0 0	£ 108,834 18 6
1886	1,335	1,097,382	843,474 0 0	1,544,694	823,189 0 0	1,398,723 0 0	119,131 15 0
1887	1,334	1,154,439	781,796 0 0	1,658,336	886,921 0 0	1,788,664 0 0	117,543 7 10
1888	940	815,516	758,586 0 0	1,580,337	852,083 0 0	2,067,460 0 0	126,036 7 9
1889	1,277	1,126,892	924,150 0 0	2,091,557	1,102,722 0 0	1,894,321 0 0	132,018 0 1
1890	916	842,180	816,694 0 0	1,628,038	875,197 0 0	1,768,379 0 0	124,782 14 10
1891	1,425	1,476,097	871,063 0 0	2,244,729	1,160,965 0 0	2,032,522 0 0	166,048 2 9
1892	1,307	1,381,318	765,083 0 0	1,894,735	879,482 0 0	1,846,953 0 0	191,394 12 10
1893	1,108	1,209,467	451,253 0 0	1,583,882	702,190 0 0	1,700,813 0 0	151,286 8 1
1894	1,255	1,415,159	427,581 0 0	1,891,674	710,341 0 0	1,485,475 0 0	158,895 12 11
1895	1,207	1,410,004	420,778 0 0	1,920,378	678,217 0 0	1,417,122 0 0	155,362 8 1

SUMMARY of persons employed, number of fatal accidents (deaths), and ratios of the number of persons employed, and the number of fatal accidents in and about the "United Kingdom" and "New South Wales" Coal Mines, since 1874:—

Year.	United Kingdom.				New South Wales.			
	Persons employed.	Lives lost by accident.	Persons employed per life lost.	Death-rate from accidents per 1,000 persons employed.	Persons employed.	Lives lost by accident.	Persons employed per life lost.	Death-rate from accidents per 1,000 persons employed.
1874	538,829	1,056	510	1.959	.....	5	.....	.....
1875	535,845	1,244	430	2.321	3,308	8	413	2.418
1876	514,532	933	551	1.813	4,084	4	1,021	0.979
1877	494,391	1,208	409	2.443	4,657	7	665	1.503
1878	475,329	1,413	336	2.972	4,792	8	599	1.669
1879	476,810	973	490	2.040	5,035	5	1,007	0.993
1880	484,933	1,318	363	2.718	4,676	8	584	1.710
1881	495,477	954	519	1.925	4,098	2	2,049	0.488
1882	503,987	1,126	447	2.234	4,487	12	373	2.674
1883	514,933	1,054	483	2.046	5,481	15	365	2.736
1884	520,376	942	552	1.810	6,227	14	444	2.248
1885	520,632	1,150	453	2.207	7,097	11	645	1.549
1886	519,970	953	545	1.833	7,847	29	270	3.694*
1887	526,277	995	529	1.890	7,998	94	85	11.762†
1888	534,945	888	601	1.666	9,301	15	620	1.612
1889	563,735	1,064	530	1.887	10,277	41	250	3.989‡
1890	613,233	1,160	529	1.891	10,315	13	793	1.260
1891	648,450	979	662	1.509	10,820	21	515	1.940
1892	664,300	982	676	1.478	10,910	8	1,364	0.733
1893	683,008	1,060	644	1.551	9,971	13	767	1.303
1894	795,240	1,127	704	1.410	9,126	7	1,303	0.767
1895	.....	.....	.....	.....	9,017	10	901	1.108

* Excessive number of falls of coal and Lithgow disaster caused this high death-rate.

† Bulli catastrophe and excessive falls of coal caused this high death-rate.

‡ Hamilton pit crush, excessive falls of coal, and over-winding of four men at South Burwood sinking pit caused this high death-rate.

Newcastle Harbour (the principal Coal Port of the Southern Hemisphere), and its Facilities for Shipment.

Newcastle, in the county of Northumberland, the trade of which is second only to that of Sydney, owes its great commercial importance to the different coal-mines which have been opened out close to and within 32 miles of the harbour.

On the south or town side of the harbour there is a continuous line of wharf, 3,607 feet long, belonging to the Government, 2,130 feet of which is occupied for cargo berths for deep-draught vessels; 500 feet reserved for Sydney passenger steamers; and the remaining 977 feet is used as a general cargo wharf, including a lumber berth for loading vessels with timber. The whole length of this wharf is lit with gas.

At Bullock Island, on the western side of the harbour, a substantial timber Government wharf, 7,760 feet in length, and four ballast jetties, each 50 feet long and 200 feet apart, has been constructed along the face and round the south end of what was formerly known as the Ballast Dyke; at present 5,550 feet of this wharf is set apart chiefly for the shipment of coal. The loading is performed by hydraulic cranes, of which twelve are erected, capable of shipping 1,000 tons of coal each in twenty-four hours—six being 15-ton, four 9-ton, and two 25-ton cranes, the latter for discharging heavy machinery, &c., and three 15-ton steam cranes. The remainder of the wharf and the ballast jetties are used by vessels discharging ballast or waiting their turn to load. Ships of the largest class can load under the hydraulic cranes, and proceed direct to sea through deep-water channels recently dredged. It is proposed to spend immediately £150,000 to further increase the shipping facilities at Bullock Island. This wharf is now lit by electric light, which greatly facilitates the loading of coal at night, and is one of the finest systems of electric lighting in existence, consisting of fifty large arc lamps, each 5,000-candle power.

A branch double line of railway connects the wharf with the Great Northern railway, and along the back of the wharf is laid a very extensive system of sidings and standage room for working coal traffic.

A sand-dredge is reclaiming foreshore in front of the hydraulic engine-house, where 2,000 feet of wharf will be erected as a commencement of a 90-acre basin inside the present wharf, which basin it is intended to dredge to a depth of 25 feet, where vessels will be able to lie in slack water, and the whole will be lit up with the electric light.

At Stockton, on northern side of harbour, there is a Government wharf 600 feet long with a shoot capable of shipping 1,000 tons in twelve hours. A sand-dredge is also reclaiming foreshore at Stockton.

In addition to these Government cranes, the Australian Agricultural Company have three large private shoots capable of delivering 2,000 to 3,000 tons of coal per diem. Vessels loading from them can discharge their ballast on to the Company's ballast wharf, lying alongside at a draught of 18 ft. 6 in. and upwards. Vessels drawing 22 feet can load at the Company's shoots. The Waratah Company also have a shoot at Port Waratah capable of shipping about 50 tons per hour, and Messrs. J. and A. Brown have two shoots on the Hunter River, at Hexham, 10 miles from Newcastle, capable of shipping 100 tons per hour.

Newcastle Facilities for Shipment of Coal.

The present estimated capabilities for shipment of coal at the abovementioned places in Newcastle Harbour is about 24,000 tons per day by the Government hydraulic cranes, and about 4,800 tons per day from private shoots.

At Catherine Hill Bay, near Lake Macquarie, the Wallarah Coal Company have a jetty 1,060 feet in length, 30 feet above high-water, with two shoots capable of shipping 1,000 tons in eight hours.

Coal shipped from Newcastle Harbour, the Principal Coal Port of the Southern Hemisphere.

The quantity of coal shipped in 1895 to foreign and intercolonial ports was 1,920,378 tons, valued at £678,217; and the largest quantity of coal taken by a steamer (May 30, 1895) was 5,235 tons, by the "Port Stephens," and by sailing vessel, 4,558 tons, by ship "Royal Firth," on June 14, 1895.

Collieries at Work, &c., in the Northern District, viz., Newcastle, Four-mile Creek, Maitland, Greta, East Greta, Singleton, Curlweiss, and Gunnedah.

In 1895 there were sixty-nine collieries at work and opening out in the Northern district, which raised 2,631,221 tons of coal, valued at £813,227, and the number of men employed in and about the collieries was 6,777. The Borehole coal seam is the principal one worked at the Newcastle collieries, and it varies from 18 feet to 4 ft. 2 in. of marketable coal. It is very free from faults, and lies almost horizontal. It is a bright, bituminous, caking coal, of first-class quality for steam, smelting, household, and cooking purposes, and a good gas coal. The cost of hewing it is now 2s. 8d. to 3s. per ton, and the supposed selling price 7s. per ton delivered on board vessels at Newcastle Harbour. The cost of hewing the Burwood coal seam, proved to be the next best in quality at and near Newcastle, is 2s. 7d. per ton, and the selling price is about 1s. less than the Borehole coal. The cost of hewing the Greta coal, situated 35 miles by rail north-west of Newcastle, is about 2s. per ton.

The Newcastle-Wallsend Coal Company has the Government railway contract for furnaces at Eveleigh, at 6s. 6d. per ton; the New Anvil Creek Coal Company has the Murrurundi district contract, at 5s. 4d.; the East Greta Coal-mining Company has the Newcastle and Singleton district, at 5s. 6d. per ton; the Centenary Coal Company the Werris Creek, Narrabri, and Armidale districts, at 8s.; and Green and Curley, of Gunnedah, have also the latter contract, at 7s. 9d. per ton—this colliery being situated 29½ miles from Sydney.

Illawarra District, and its Facilities for Shipment of Coal.

The Wollongong Harbour and Basin is situated 45 miles south of Sydney Harbour, and at low tide there is a depth of 13 feet of water at its entrance and alongside the wharf, where there are three cranes capable of shipping 1,800 tons of coal per hour. The Belmore Basin has a depth of 17 feet of water at its eastern side, where there are four shoots, each capable of shipping 100 tons per hour; but as only two vessels can load there at the same time, the largest quantity of coal shipped by them is 200 tons per

per hour, or 2,000 tons per day. The largest steamship which has coaled at the harbour drew about 15½ feet of water, and carried about 900 tons of coal; and the largest sailing vessel has taken away about 700 tons of coal.

In addition to the Government appliances for shipment of coal at Wollongong, the Coal Cliff, North Illawarra, Bulli, Bellambi, South Bulli, and Mount Kembla Companies have jetties of their own, from which coal is sent by steam colliers, &c., to Port Jackson and elsewhere.

The Coal Cliff jetty has a depth of 18 feet of water at high tide, and 14 feet at low tide, and can ship 100 tons per hour.

The North Illawarra Coal Company, Bulli, Bellambi, South Bulli, and Mount Kembla jetties have a depth of about 26 feet of water at their shoots, and can ship about 120 tons per hour.

Coal shipped at Wollongong Harbour, the Jetties, and sent by Rail, &c.

The coal raised in the Illawarra and Southern districts in 1895 was 910,123 tons, valued at £239,035.

Collieries at Work in the Illawarra or Southern District.

In 1895 there were twelve collieries at work in the Illawarra district that raised 681,782 tons of coal, valued at £174,780, and the number of men employed in and about the collieries was 1,477, and one colliery (Metropolitan) in the Southern district, at Helensburg, adjacent to the Illawarra and South Coast railway, 27 miles from the Metropolis and 29 miles from Darling Harbour, Sydney, that raised 228,341 tons of coal, valued at £64,255, and employed 403 men in and about the mine. The coal seam worked at these twelve collieries is the uppermost one, or No. 1 of the upper coal measures. It is a semi-bituminous coal used for steam, smelting, household, blacksmith, and cooking purposes, and varies from 10 feet to 4 feet in thickness. With the exception of the Metropolitan and South Clifton collieries, the coal is principally wrought from adits driven into the seam in the high ranges fronting the Pacific Ocean at heights of from 20 to 750 feet. The coal seam is very free from faults, and lies almost horizontal.

The cost of hewing the coal is now 2s. per ton, and the selling price at the jetties and Wollongong Harbour is supposed to be about 6s. per ton.

The Metropolitan Coal Company have the Government railway contract for supply of coal to Southern district railway depôts at portion of Penrith railway requirements, at 5s. 4d. per ton, and for Metropolitan district at 5s. 10d.

Collieries at Work in the South-western District.

The South-western collieries (3) are situated at Joadja, Mittagong, and Moss Vale, near to the Great Southern railway. In 1895 they employed 69 men in and about the collieries, and raised 6,379 tons of coal, valued at £2,803.

The Western Collieries, their Railway and Shipping Appliances.

The Western Collieries are situated 91 to 158 miles from Sydney, and are adjacent to, or within a short distance of, the Great Western and Mudgee railway. Their coal meets with a ready sale for railway, manufacturing, household, and other purposes in all the suburban and inland towns, and large quantities of slack are there sold for brick and tile making.

Collieries at Work in Western District.

In 1895 there were 15 collieries at work, that raised 190,864 tons of coal, valued at £40,260; and the number of men employed in and about the collieries was 296. The coal seam worked is the lowest one in the upper coal measures. It is a splint coal, used for steam, smelting, household, and blacksmith purposes, and is 10 feet to 11 feet in thickness. About 5 ft. 8 in. of the lower portion of it is the portion wrought and sold. The coal seam is free from faults, and lies almost horizontal.

The cost of hewing the coal is now 1s. 8d. per ton, and the Lithgow Coal Association supply it to the Railway Department for their Penrith requirements at 5s., and the Cullen Bullen at 4s. 3d. per ton, delivered at colliery siding.

On 9th November, 1893, the Sydney Harbour Collieries Company bored through the Illawarra No. 1 coal at a depth of 2,917 feet, at Cremorne, adjacent to the Sydney Harbour, 10 ft. 3 in. in thickness, of splint and bituminous coal, which proves the correctness of the opinions expressed by myself and others that the metropolis is near the centre of our extensive coal basin, and that the Newcastle and Illawarra coal measures would be found there. The Company are in treaty for some land adjacent to their harbour leasehold, on which two shafts are to be sunk.

Boghead Mineral and Petroleum Oil Cannel-coal Deposits.

These deposits are very irregular in their area and are found in isolated patches, generally at a considerable distance apart, in the midst of the workable coal measures of New South Wales. Whilst the coal seams are very regular in their character (with the exception of their generally improving in quality, and thickening as they leave the edge of the coal basin), the boghead mineral (torbanite) is most irregular, and there is nothing to guide us in telling where the seam is likely to be, but by finding pieces of it at or below its outcrop. Near the edge of the deposits this rich mineral deteriorates, and gradually changes into indurated clay, bituminous and non-bituminous shale, coal, or ironstone.

There are four companies getting and selling the mineral, and two of them manufacture oil and other products therefrom. These mines are situated at Hartley Vale, Genowlan, Ruined Castle, and Nellie's Glen, in the Western district, and at Joadja in the Southern district; and prospecting is going on in the Capertee Valley, situated about 150 miles north-west of Sydney, and at Morrangaroo, near Bathgate and Wallerawang. The richest of the mineral yields about 100 to 130 gallons of crude oil per ton, and 17,000 to 18,000 cubic feet of 35 to 40 candle gas when gas only is extracted from it.

RETURN showing the quantity raised, price per ton, and value of the boghead mineral or petroleum oil (cannel coal), commonly called kerosene shale, from 1865 to 1895 inclusive.

Year.	Tons.	Average price per ton.			Value.			Year.	Tons.	Average price per ton.			Value.		
		£	s.	d.	£	s.	d.			£	s.	d.	£	s.	d.
1865	570	4	2	5·47	2,350	0	0	1881	27,804	1	9	2·59	40,748	0	0
1866	2,770	2	18	10·48	8,154	0	0	1882	48,065	1	15	0·00	84,114	0	0
1867	4,079	3	14	9·21	15,249	0	0	1883	49,250	1	16	10·77	90,861	10	0
1868	16,952	2	17	7·11	48,816	0	0	1884	31,618	2	5	7·85	72,176	0	0
1869	7,500	2	10	0·00	18,750	0	0	1885	27,462	2	8	11·62	67,239	0	0
1870	8,580	3	4	3·18	27,570	0	0	1886	43,563	2	5	10·79	99,976	0	0
1871	14,700	2	6	3·91	34,050	0	0	1887	40,010	2	3	10·43	87,761	0	0
1872	11,040	2	11	11·91	28,700	0	0	1888	34,896	2	2	2·26	73,612	0	0
1873	17,850	2	16	6·55	50,475	0	0	1889	40,561	1	18	3·55	77,066	15	0
1874	12,100	2	5	1·48	27,300	0	0	1890	56,010	1	17	2·07	104,103	7	6
1875	6,197	2	10	2·22	15,500	0	0	1891	40,319	1	18	8·90	78,160	0	0
1876	15,998	3	0	0·00	47,994	0	0	1892	74,197	1	16	8·16	136,079	6	0
1877	18,963	2	9	0·82	46,524	10	0	1893	55,660	1	16	4·44	101,220	10	0
1878	24,371	2	6	11·49	57,211	0	0	1894	21,171	1	10	0·20	31,781	5	0
1879	32,519	2	1	10·06	66,930	10	0	1895	59,426	1	5	3·78	75,218	18	8
1880	19,201	2	6	7·03	44,724	15	0								

THE following notices were received during the year of new mines opening out or in course of development, mines re-opened, sinking of pits, driving tunnels, change of ownership and names of collieries, also colliery management:—

On 3rd January Mr. Wm. Hunter notified that he was sinking a shaft for coal at Lithgow.

On 14th January Mr. J. Wall notified that he was prospecting for shale in the parish of Gindantherie (Glen Alice), near Rylstone.

On 18th January Mr. John Crompton notified having obtained permission from the owners of land at Woonoona (leased by J. Salisbury) to mine for coal, and was opening a small tunnel to work the coal for local purposes.

On 28th January Mr. Alfred Page notified that he was in charge as overman or underground manager of the Anvil Creek Colliery.

On 5th February Mr. Frank Croudace notified having started some men on the coal at Durham, to get coal for the engines.

On 19th February John Ferguson Brown notified having started to mine for coal on the Waratah Coal Company's land, near Lambton Heights, to be known as "Sunnyside."

On 1st March James Jackson notified having opened a colliery on portion 201, Newcastle Pasture Reserve, Lambton.

On 1st March Mr. Henry Harper notified that he was opening out a prospecting tunnel on Mr. Peter Howson's selection, north-east of the South Wallsend Junction.

On 1st April James Jackson notified that he had taken out a mineral license on seven blocks of land, Church-street, Lambton, Nos. 301, 309, 310, 303, 304, 313, and 314, and was going to start work at the new shaft which had been inspected.

On 9th April Joseph Farish notified having commenced to wind coal from his pit, "The Surprise Colliery," Newcastle Commonage.

On 2nd May Mr. J. E. G. Manning, on behalf of himself and others, notified having opened a colliery at Black Jack, near Gunnedah, and to be known as the "Gunnedah Colliery."

On 10th May Mr. Samuel Palmer notified that he intended to open up the mine known as "Erith Colliery," Bundanoon, which has been closed for some years.

On 9th June Mr. Ed. Charlton notified that he had no further connection with the "Bayley's Reward Colliery," having handed everything over to Mr. M. Elliott, of Lambton.

On 24th June Mr. Patrick Scaulon notified that he was prospecting for coal on Tulip's old lease, East Maitland.

On 19th July Mr. T. J. Evans notified having changed the name of the colliery known as "Bulli Pass" to "Bulli Steam Coal" Colliery.

On 5th August Mr. Robert Taylor notified that he had started a colliery on the Pasturage Reserve to be known as "Clickman Colliery."

On 5th August David Mason notified that he had commenced operations on the Newcastle Pasturage Reserve to mine for coal on lots 460, 462, 481, and 482, also streets and lanes adjoining same.

On 24th August Mr. R. Vernon Saddington, Secretary to the Australian Kerosene Oil and Mineral Company, notified that his company had taken over the Genowian Shale Company's property at Capertec, and also had started to work the mine situated on that property.

On 1st September Mr. M. Tulip notified having commenced to mine for coal on the Rathluba Estate, East Maitland.

On 10th September Mr. William Morgan notified the number of allotments applied for to work coal at Griffiths' Hill, Lambton, the name of the mine to be known as "Mountain Ash Colliery."

On

On 11th September James Meredith notified opening out a colliery on Lambton Heights called "Meredith Colliery."

On 28th December Mr. D. R. Harris notified having from above date taken charge of the "New Anvil Creek Mine" in lieu of Mr. Alfred Page.

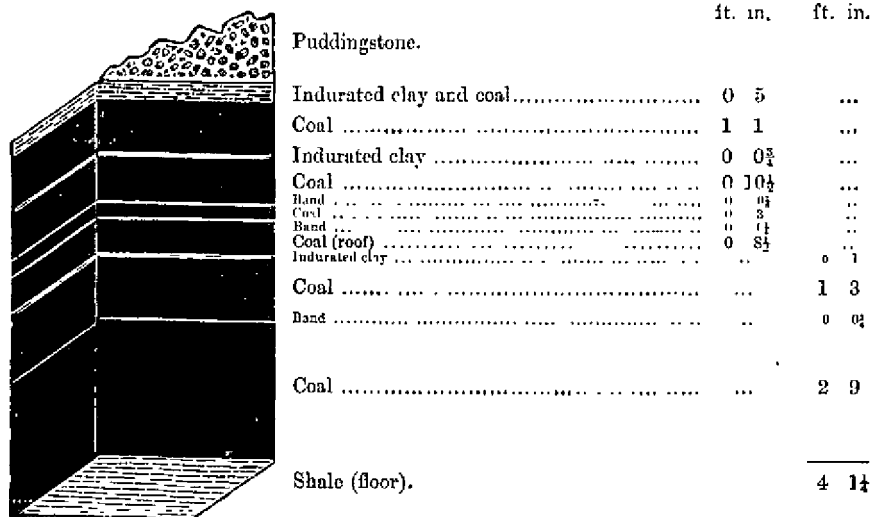
COAL-MINES ABANDONED, &c., DURING THE YEAR 1895.

On 10th January Mr. Thomas Henny notified that he had severed his connection with the "Electric Colliery," and that he would not be blamable after that date.

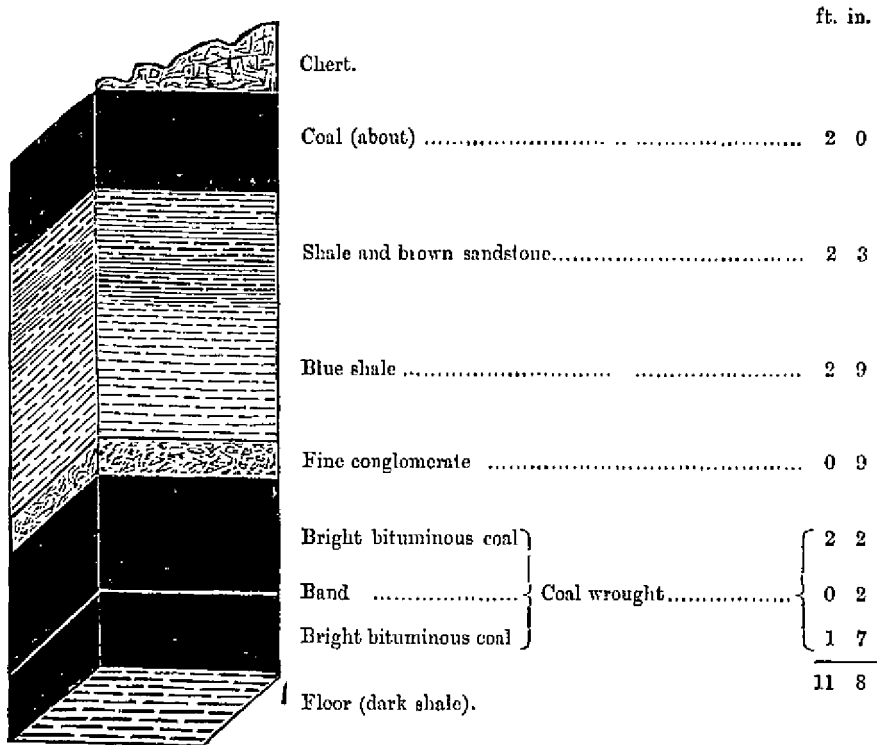
On 15th March, Mr. D. McGeachie for the Waratah Coal Company, notified that the "East Lambton Colliery" has now been abandoned and not likely to be again reopened.

On 12th December Sarah Robson notified that the "Bebside Colliery" had been stopped and the mine abandoned.

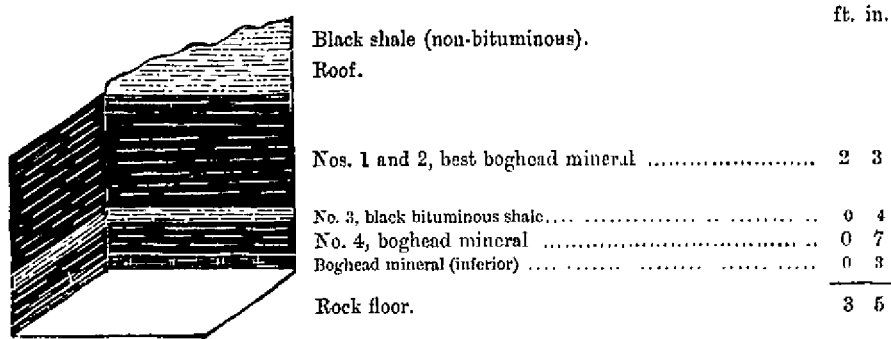
On 18th December, Hugh Snedden notified that his "Sunlight Colliery" had been closed since the last return was sent in, and has no intention of reopening it again.



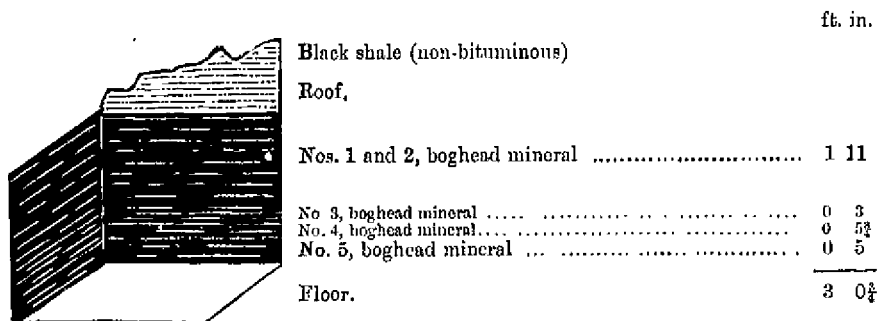
The above is a section of the seam of coal opened out on a Crown mineral lease by Mr. Bashforth, adjacent to the Mudgee main road, at Maddox's Finch, near Cox's River, in the county of Cook, and about 2 1/2 miles from the Wallerawang Railway Station.



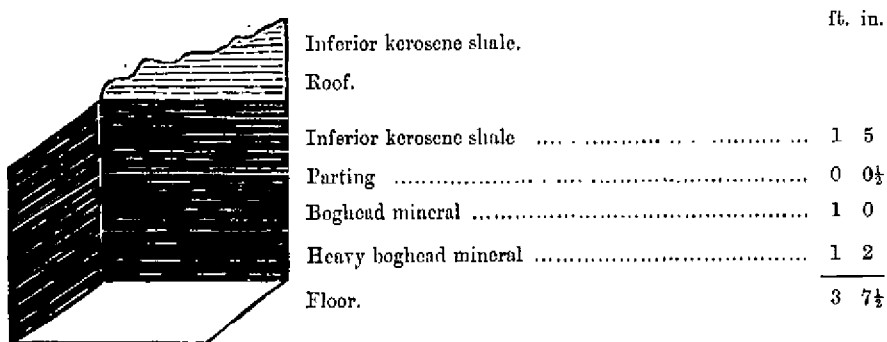
This is a section of a bright bituminous coal seam opened out by Mr. Wallace, adjacent to the Mudgee Road, at Blackman's Flat, in the county of Cook.



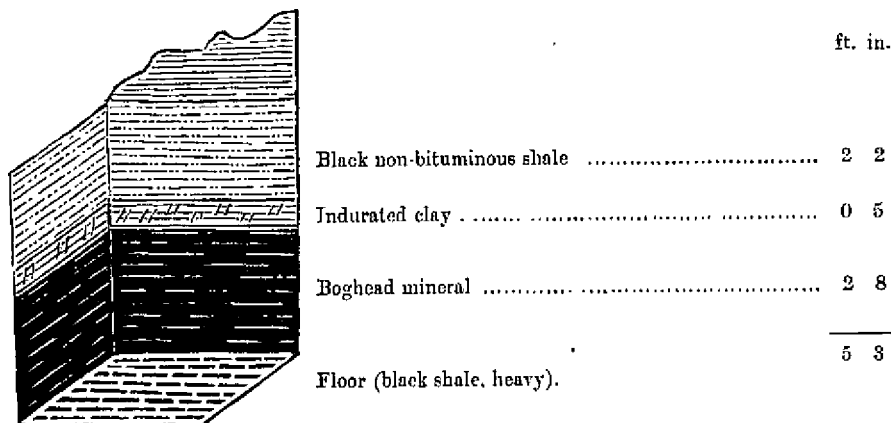
The above is a section of King's "Airley Shale Mine" (near Genowlan), near Capertee, in the county of Roxburgh, from where specimens were taken by me and Mr. Inspector Rowan for analysis. It is situated about $8\frac{1}{2}$ miles by road from Capertee Railway Station, on the Mudgee line of railway.



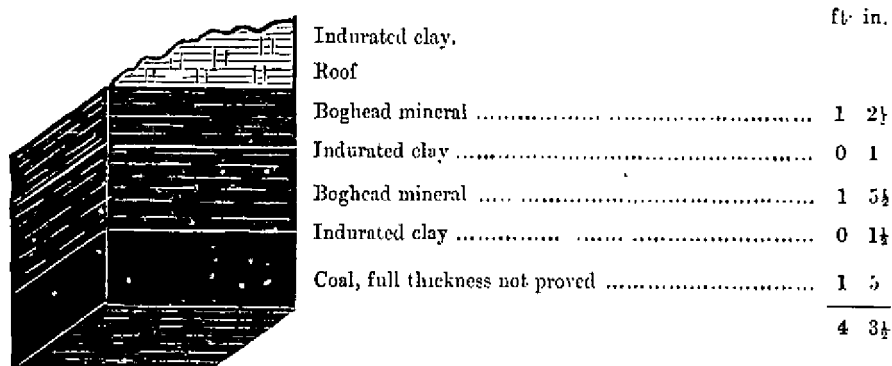
The above is a section of the Australian Kerosene Oil and Mineral Company's mine (late Genowlan), near Capertee, in the county of Roxburgh, from where specimens were taken by me and Mr. Inspector Rowan for analysis. It is situated about 8 miles by road from Capertee Railway Station, on the Mudgee line of railway.



The above is a section of the "Crown Ridge Boghead Mineral Mine," near Capertee and Mudgee line of railway, in the county of Roxburgh, opened out by Messrs. Hart and others, who have been unlawfully extracting boghead mineral therefrom.



The above is a section of the Capertee Shale Co.'s mine, near Glen Alice, in the county of Cook, taken by me and Inspector Rowan at a distance of 230 yards from the outcrop or mouth of adit, which adit is situated about 24 miles by road from Capertee Railway Station, on the Mudgee line of railway.



The above is a section of the Glen Alice Shale Co.'s mine, near Glen Alice, in the county of Cook, taken by me and Mr. Inspector Rowan, at a proving made by them. It is about 21 miles by road from Capertee railway station on the Mudjee line of railway.

PROSECUTIONS AND COMPLAINTS.

Proceedings, where necessary, have been taken to enforce the provisions of the Act, and reports furnished thereon and complaints of deficient ventilation and non-compliance with the "Coal Mines Regulation Act" have, as usual, been inquired into, and reports made thereon.

AUTHORITIES TO MINE AND MINERAL LEASES.

I have also visited numerous localities for the purpose of reporting upon applications to mine coal on Crown land, reserves, &c., work done thereon, and number of men employed; also checked and reported on royalties owing for coal gotten from Crown lands by different colliery companies.

In conclusion, I have only to add that there were 99 coal and 7 boghead mineral mines under inspection, and that notices have been received of 17 new mines opening out, or in course of development, re-opening, sinking, &c., and of 3 only having been abandoned, although there are several others abandoned of which no notice has been received. Also that the year's return shows an increase in the coal trade, for 1895, in the Newcastle district, of 26,078 tons of round and small coal raised, and a decrease in value of £69,948; in the south and south-western districts an increase of 49,438 tons of round and small coal raised, and £14,902 in value; and in the western district a decrease of 9,004 tons of round and small coal raised, and £5,202 in value.

I have, &c.,

JOHN MACKENZIE, F.G.S.,
Examiner of Coal-fields.

THE Half-yearly Report on the Collieries in the Northern District of New South Wales, and accidents investigated by the Inspectors of Collieries during the six months ending 31 December, 1895.

The Examiner of Coal-fields, Sydney.—

Sir,

Newcastle, 28 January, 1896.

Pursuant to the provisions of section 26 in the "Coal Mines Regulation Act 1876," we have the honor to transmit to you this our six monthly report on the state of the various collieries in the northern district for the half-year ending 31st December, 1895.

The total number of collieries under inspection in the northern district during the half-year is sixty-nine.

Three collieries have been added, viz., Meredith, Mason's, and Sunderland.

Two collieries have been abandoned, viz., East Lambton and Kensington.

No work has been done at the following fifteen collieries, viz.:—Awaba, Shamrock Hill, Young Wallsend, Swansea, Richmond Vale, Maitland, Stanford Greta, Summerhill, Leconfield, Fern Valley, Pioneer, West Burwood, Rotunda, Richmond Hill, and Nicholais Tunnel.

PRESENT STATE OF MINES.

A. A. Co.'s No. 2 Colliery.—There are about 120 men, &c., employed in this colliery during the morning shift and about an equal number on the afternoon shift, besides several men, &c., on the night shift. The whole of the work is now pillar extraction. There are five separate and distinct districts, and the total quantity of air circulating in the mine during the daytime is about 60,000 cubic feet per minute. The Act is complied with in every respect.

A. A. Co.'s New Winning Colliery.—At the present time about 60 men, &c., are employed in this colliery during the daytime. The total quantity of air circulating in the mine is about 50,000 cubic feet per minute. There are three separate and distinct districts. The provisions of the Act are fully carried out.

Newcastle Wallsend Colliery.—About 720 men, &c., are employed in this colliery during the day, and supplied with about 150,000 cubic feet of air per minute. The face workings are divided into twelve separate and distinct districts, none of which are overcrowded. The provisions of the Act are complied with.

Newcastle

Newcastle Co.'s Colliery.—About 500 men, &c., are employed in this colliery during the daytime and supplied with about 140,000 cubic feet of air per minute. The face workings are divided into ten separate and distinct districts, none of which are overcrowded. The Act in other respects also is fully carried out.

Lambton Colliery.—There are about 260 men, &c., employed in this mine during the day, and supplied with about 80,000 cubic feet of air per minute. The face workings are divided into ten separate and distinct districts, none of which are overcrowded. The provisions of the Act are complied with.

Co-operative Colliery.—About 220 men, &c., are employed in this mine, and supplied with 42,000 cubic feet of air per minute. The face workings are divided into five separate and distinct districts. The Act is complied with.

Burwood Colliery.—About 210 men, &c., are employed in this colliery during the daytime, and supplied with about 47,000 cubic feet of air per minute. There are three separate and distinct districts, none of which are overcrowded. The provisions of the Act are complied with in other respects also.

Stockton Colliery.—There are about 200 men, &c., employed in this mine, and supplied with about 28,000 cubic feet of air per minute. The face workings are divided into four separate and distinct districts. In September last the No. 3 sinking shaft was connected with the workings, and is at present acting as an intake air-shaft supplying two of the districts with fresh air. It being about 70 feet above the other shafts, affords an escape for men and boys in any case of emergency that may arise. The provisions of the Act are complied with.

Wickham and Bullock Island Colliery.—About 263 men, &c., are employed in this mine during the day, and supplied with about 34,000 cubic feet of air per minute. The face workings are divided into eight separate and distinct districts. The provisions of the Act are complied with.

Hetton Colliery.—There are about 300 men, &c., employed in this mine. The quantity of air circulating through the workings is about 53,000 cubic feet. There are nine separate and distinct districts, none of which are overcrowded. The Act is complied with.

Brown's Colliery.—About 270 men, &c., are employed in this mine during the day, and supplied with about 41,000 cubic feet of air per minute. The face workings are divided into six separate and distinct districts. The provisions of the Act are complied with.

Duckenfield Colliery.—There are about 260 men, &c., employed in this mine during the day. The quantity of air circulating through the workings is about 34,000 cubic feet per minute. There are six separate and distinct districts, none of which are overcrowded. The Act is complied with.

South Waratah Colliery.—About 180 men, &c., are employed in this mine during the day shift, and supplied with about 40,000 cubic feet of air per minute. There are five separate and distinct districts. The Act is complied with in every respect.

New Lambton Colliery.—Only 4 men, &c., are employed in this colliery at the present time, owing to slackness of trade. The whole of the workings are in good condition, and the ventilation is adequate to keep the workings free from noxious gases. The provisions of the Act are fully carried out.

Ebbw Vale Colliery.—There are 12 men, &c., employed in this mine during the daytime, and the total quantity of air in circulation is about 8,000 cubic feet per minute. The Act is complied with in every respect.

Hillside Colliery, Merewether.—There are 3 men, &c., employed in this mine. The ventilation is satisfactory, and the other provisions of the Act are also carried out.

Surprise Colliery, Lambton.—There are only 2 men employed in this mine. The Act is fully carried out.

Sunnyside Colliery, Lambton.—There are 3 men, &c., employed in this mine. Everything is in good order, and the Act complied with.

Bayley's Reward Colliery, Lambton.—There is no person employed in this mine at the present time, as all work in connection therewith is suspended.

Ray's Colliery, Lambton.—There are 2 men occasionally employed getting house-coal. Everything in good order. No cause for complaint.

Meredith's Colliery, Lambton.—This is a new mine which has lately been opened, but very little work has been done beyond opening out. There is no person employed at the present time. The Act is complied with.

Rosehill Colliery, North Lambton.—During the half-year 2 men have been employed in this mine, but at present all work is suspended. The workings are in good order. No cause for complaint.

Beside Colliery, Grovestown.—This small mine is now abandoned.

Green's Colliery, Grovestown.—This mine is now abandoned.

Sunlight Colliery, Grovestown.—This mine is also abandoned.

Jackson's Colliery, Lambton.—All work at this mine is at present suspended.

Quarry Colliery, Waratah.—There are 3 men, &c., employed in this mine. Everything in good order and condition.

Mason's Colliery, Waratah.—There are 2 men occasionally employed in this mine. Everything in good order. No cause for complaint.

Rushton's Colliery, Waratah.—During the six months 2 men have been employed in this mine, but at the present time all work is suspended.

Liddle's Colliery, Waratah.—There are 4 men, &c., employed in this mine. The ventilation is good, and the Act is complied with in other respects also.

Side Colliery, Waratah.—There are 3 men employed in this mine. The ventilation is good and the Act is complied with in other respects also.

Bell's Colliery, Waratah.—This mine is now finally abandoned.

Wright's Colliery, Waratah.—Only 2 men employed in this mine. Ventilation good and the Act complied with.

Elmore Vale Colliery, Wallsend.—There are about 16 men, &c., employed in this mine during the day and supplied with about 5,000 cubic feet of air per minute. The provisions of the Act are fully complied with.

Maryland Colliery, Plattsburg.—About 28 men, &c., are employed in this mine. The quantity of air circulating through the workings is 8,000 cubic feet per minute. There are two separate and distinct districts. The Act is complied with.

Dudley Colliery, Charlestown.—This mine is still practically closed. Two men usually employed in getting fuel for the engine and pumps. The provisions of the Act are complied with.

Durham Colliery.—At the present time there are only 2 men employed, keeping the mine free from water. The provisions of the Act are fully complied with.

Burwood Extended Colliery.—Only 2 men are at present employed in this colliery getting coal for the steam boilers, keeping the workings in repair, &c. The provisions of the Act are complied with.

South Helton Colliery, Lake Macquarie.—Only 1 man employed in this mine. The ventilation is good, and the Act complied with.

Morrisett Colliery, Lake Macquarie.—There are 6 men employed in this mine. The ventilation is satisfactory, and the provisions of the Act complied with.

Wallarah Colliery, Catherine Hill Bay.—There are about 109 men, &c., employed in this mine. The quantity of air circulating through the workings is 18,000 cubic feet per minute. The provisions of the Act are fully complied with.

Northumberland Colliery, Fassifern.—Only 2 men are occasionally employed in this mine. The ventilation is satisfactory, and the Act complied with.

Pacific Colliery, Teralba.—About 150 men, &c., are employed in this mine during the day-time, and supplied with about 40,000 cubic feet of air per minute. There are four separate and distinct districts. The provisions of the Act are complied with.

Gartlee Colliery, Teralba.—There are about 53 men, &c., employed in this mine. The quantity of air circulating through the workings is about 10,000 cubic feet per minute. The Act is complied with.

South Wallsend Colliery, Cardiff.—About 30 men, &c., are employed in this mine, and supplied with about 8,000 cubic feet of air per minute. The provisions of the Act are complied with.

West Wallsend Colliery.—There are about 220 men, &c., employed in this mine, and supplied with about 30,000 cubic feet of air per minute. The face workings are divided into five separate and distinct districts. The Act in other respects also is complied with.

Seaham Colliery.—Since 24th of August last the mine has been closed, and both shafts sealed off in consequence of an underground fire in the east side workings. At the time of stoppage about 170 men and boys were employed, and supplied with about 58,000 cubic feet of air per minute. There are four separate and distinct districts. The Act is complied with.

Thornley Colliery, East Maitland.—Four men are in this mine. The ventilation is satisfactory, and the Act complied with.

Bloomfield Colliery, East Maitland.—There are 8 men employed in this mine. The ventilation is good, and the Act complied with.

Marshall's Colliery, East Maitland.—One man usually employed in this mine. The ventilation is good, and the Act complied with.

Louis Vale Colliery, East Maitland.—Only 2 men employed in this mine. Ventilation satisfactory. No cause for complaint.

Scanton's Colliery, East Maitland.—Three men are employed in this mine. The ventilation is satisfactory, and the Act complied with.

Sunderland Colliery, East Maitland.—There are 4 men and boys employed in this mine. The ventilation is satisfactory. No cause for complaint.

East Greta Colliery, West Maitland.—There are about 150 men, &c., employed in this mine in the two shifts, and supplied with 25,000 cubic feet of air per minute. The provisions of the Act are complied with.

Denton Park Colliery, Farley.—About 22 men, &c., are employed in this mine, and supplied with about 4,000 cubic feet of air per minute. The Act is complied with.

Font Hill Colliery, Farley.—There are 12 men employed in this mine, and supplied with 3,000 cubic feet of air per minute. The provisions of the Act are complied with.

New Anvil Creek Colliery, Greta.—There are 18 men, &c., employed in this mine. The quantity of air circulating in the mine is 9,000 cubic feet. The Act is complied with.

Greta Colliery, Greta.—There are about 180 men, &c., employed in the mine, and supplied with about 50,000 cubic feet of air per minute. There are five separate and distinct districts, none of which are overcrowded. The provisions of the Act in other respects also are complied with.

Ellesmere Colliery, Singleton.—No coal has been drawn from this colliery during the half-year, but the mine is kept open and in a good state of repair ready for resumption of work at any time.

New Park Colliery, Singleton.—There are 23 men, &c., employed in this mine. The quantity of air circulating through the workings is about 8,000 cubic feet per minute. The provisions of the Act are complied with.

Elliott's Colliery, Singleton.—Only two men occasionally employed in this mine. The ventilation is satisfactory, and the Act complied with.

Rosedale Colliery, Singleton.—Five men are employed in this mine. The ventilation is good, and the Act complied with.

Oakvale Colliery, Singleton.—One man occasionally employed getting house coal. Ventilation satisfactory. No cause for complaint.

Dulwich Colliery, Singleton.—There are 7 men employed in this mine. The ventilation is satisfactory, and the Act complied with.

Kayuga Colliery, Muswellbrook.—There are 2 men employed in this colliery. The ventilation is good, and the Act complied with.

Centenary Colliery, Curlewis.—About 20 men, &c., are employed in this mine. The ventilation is good, and the other provisions of the Act are also carried out.

Gunnedah Colliery, Gunnedah.—About 11 men, &c., are employed in this mine. The ventilation is good, and the provisions of the Act carried out.

Gladstone Colliery, Gunnedah.—Only 1 person occasionally engaged at the present time getting a little house coal. The provisions of the Act are observed.

Morley Colliery, Gunnedah.—About 3 men, &c., are employed in this mine. Everything in good order, and the provisions of the Act fully carried out.

ACCIDENTS IN MINES.

The accidents investigated by us in the Northern District, and fully reported upon during the six months ending December 31st, 1895, are 24 in number. We also investigated several other slight accidents, which are not embraced in this report.

Of the 24 accidents in the annexed tabulated list, 4 proved fatal—3 from falls of coal and 1 from fall of stone. Of the non-fatal accidents, 7 were caused by fall of coal, 4 by skips, 4 by fall of stone, 1 by fall of coal and stone, 1 by fall from timber trolley, and 1 from jumping from skip.

The first fatal accident occurred to a miner named Thomas Williams, by a fall of coal in the A. A. Co.'s No. 2 Pit, on July 3rd. The District Coroner, G. C. Martin, Esq., held an inquest on the body of deceased, at Adamstown, on July 4th. The inquest was attended by Inspector Dixon, who heard all the evidence, and fully agrees with the verdict of "accidental death," as returned by the jury.

The second occurred to a miner named Jacob Gibson, by a fall of coal on July 10th, at Greta Colliery, terminating fatally on August 15th. The District Coroner, H. Pinchin, Esq., held an inquest on the body of deceased, at Greta, on August 16th. The inquest was attended by Inspector Bates, who heard all the evidence, and fully agrees with the verdict of "accidental death," as returned by the jury.

The third occurred to a miner named James Lambert, by a fall of coal at Rose Hill Colliery, on August 23rd. The District Coroner, G. C. Martin, Esq., held an inquest on the body of deceased on August 24th, at North Lambton. The inquest was attended by Inspector Dixon, who heard all the evidence, and fully agrees with the verdict of "accidental death," as returned by the jury.

The fourth occurred to a miner named Thos. Pascoc, at South Waratah Colliery, on December 18th, by a fall of stone, terminating fatally on December 23rd. The District Coroner, G. C. Martin, Esq., held an inquest on the body of deceased on December 24th, at Charlestown. The inquest was attended by Inspector Dixon, who heard all the evidence, and fully agrees with the verdict of "accidental death," as returned by the jury.

The first of the non-fatal accidents occurred to a miner named John Hugo at Newcastle-Wallsend Colliery, on July 4th, resulting in fracture of leg by a fall of coal.

The second occurred to a miner named James Lever on July 4th, at Elermore Vale Colliery, by a fall of coal, resulting in severe internal injuries.

The third occurred to a driver named Henry Maddison, at Elermore Vale Colliery, on July 11th, resulting in fracture of leg by loaded skip.

The fourth occurred to a miner named Joseph Hart, on July 26th, at A. A. Co.'s No. 2 Pit, by a fall of coal and stone, resulting in fracture of foot and injury to back.

The fifth occurred to a miner named William Hogg in Newcastle Co.'s pit, on October 3rd, resulting in fracture of leg by fall of coal.

The sixth occurred to a shiftman named Elswald Baird, on October 7th, in Newcastle-Wallsend No. 2 Colliery, by fall of stone resulting in injury to hand and face.

The seventh occurred to a miner named Samuel Gibson, at Burwood Colliery, on October 7th, resulting in severe injury to lower part of body by fall of coal.

The eighth occurred to a miner named John Bothwell, on October 9th, at Duckenfield Colliery, by a fall of coal resulting in fracture of collar bone.

The ninth occurred to a driver named Henry Goodbun, at Co-operative Colliery, on October 29th, resulting in fracture of leg by skips.

The tenth occurred to a miner named William Dunlop, on October 30th, at Newcastle-Wallsend Colliery, by fall of coal resulting in injury to chest and shoulders.

The eleventh occurred to a miner named Jas. Hetherington, at Burwood Colliery, on November 2nd, resulting in fracture of leg by fall of stone roof.

The twelfth occurred to a driver named Alfred Anderson, on November 6th, at Co-operative Colliery, resulting in severe internal injuries by skips.

The thirteenth occurred to a wheeler named Wm. Ford, at Newcastle-Wallsend Colliery, on November 12th, by loaded skips resulting in severe injury to hand.

The fourteenth occurred to a shiftman named James Miller, Senr., on November 15th, at Newcastle-Wallsend Colliery, resulting in injury to back and chest by falling from timber trolley.

The fifteenth occurred to a miner named George Diggins, at Burwood Colliery, on November 25th, by fall of stone roof resulting in severe injury to head and shoulders.

The sixteenth occurred to a driver named Joseph Selway, at Newcastle-Wallsend Colliery, on December 5th, resulting in injury to head by fall of stone roof.

The seventeenth occurred to a water boiler named Robert Renfrew, on December 9th, at Brown's No. 4 Colliery, resulting in fracture of leg by jumping from train of skips.

The eighteenth occurred to a miner named John Johnson, at Burwood Colliery, on December 19th, by a fall of coal resulting in severe injury to lower part of body.

ACCIDENTS ON SURFACE.

There were two non-fatal accidents on the surface at Burwood Extended Colliery, on October 3rd, which occurred to Wilson Rennie, Junr., the Manager, resulting in injury to body and legs by steam scalding and at the same time and place to Isaac Wyper, engine driver, resulting in injury to leg by steam scalding.

The tabulated list of accidents is hereto appended.

I have, &c.,

JOHN DIXON,
THOS. L. BATES,
WILLIAM HUMBLE,
Inspectors of Collieries.

TABLED LIST of Fatal and Non-fatal Accidents in the Northern District of New South Wales, investigated by the Inspectors of Collieries during the half year ending 31st December, 1895.

No.	Date.	Colliery.	Person killed or injured.	Occupation.	Remarks on nature and extent of injuries.	Fatal.		Non-fatal.					Total.		
						Fall of coal.	Fall of stone.	Fall of coal.	Injury by skips.	Fall of coal and stone.	Fall of stone.	Fall from timber trolley.	Jumping from skips.	Fatal.	Non-fatal.
1	July 3	A. A. Co.'s No. 2 pit.	Thos. Williams	Miner	Fatal injury by fall of coal	1								1	
2	" 4	Newcastle Wallsend.	John Hugo	"	Fracture of leg by fall of coal			1							1
3	" 4	Elernore Vale	James Lever	"	Severe internal injuries by fall of coal.			1							1
4	" 10	Greta	Jacob Gibson	"	Fatal injury by fall of coal; died, Aug 15th	1								1	
5	" 11	Elernore Vale	Henry Maddison	Driver	Fracture of leg by loaded skip			1							1
6	" 26	A. A. Co.'s No. 2	Joseph Hart	Miner	Fracture of foot and injury to back by fall of coal and stone.				1						1
7	Aug. 23	Rose Hill	James Lambert	"	Fatal injury by fall of coal	1								1	
8	Oct. 3	Newcastle Co.	Wm. Hoag	"	Fracture of leg by fall of coal			1							1
9	" 7	Newcastle Wallsend No. 2	Oswald Baird	Shiftman	Injury to head and face by fall of stone roof					1					1
10	" 7	Burwood	Saml. Gibson	Miner	Severe injury to lower part of body by fall of coal.			1							1
11	" 9	Duckenfield	John Bothwell	"	Fracture of collar-bone by fall of coal			1							1
12	" 29	Co-operative	Henry Goodburn	Driver	Fracture of leg by skips			1							1
13	" 30	Newcastle Wallsend	Wm. Dunlop	Miner	Injury to chest and shoulders by fall of coal			1							1
14	Nov. 2	Burwood	Jas. Hetherington	"	Fracture of leg by fall of stone roof					1					1
15	" 6	Co-operative	Alfd. Anderson	Driver	Severe internal injuries by skips			1							1
16	" 12	Newcastle Wallsend	Wm. Ford	Wheeler	Severe injury to hand by loaded skips			1							1
17	" 15	Newcastle Wallsend	Jas. Miller, sen	Shiftman	Injury to chest and back by falling from timber trolley						1				1
18	" 25	Burwood	Geo. Diggins	Miner	Severe injury to head and shoulders by fall of stone roof.						1				1
19	Dec. 5	Newcastle Wallsend	Joseph Selway	Driver	Injury to head by fall of stone roof						1				1
20	" 9	Brown's No. 4	Robert Renfrew	Waterbailer	Fracture of leg by jumping from train of skips							1			1
21	" 18	South Waratah	Thos. Pascoe	Miner	Fatal injury by fall of stone, died, Dec. 23rd	1								1	
22	" 19	Burwood	John Johnson	"	Severe injury to lower part of body by fall of coal.			1							1
<i>Accidents on surface.</i>						3	1	7	4	1	4	1	1	4	18
23	Oct. 3	Burwood Extended	Wilson Rennie, jun.	Manager	Injury to body and legs by steam scalding										1
24	" 3	Burwood Extended	Isaac Wyper	Engine-driver.	Injury to leg by steam scalding.										1
														4	20

The Half-yearly Report on the Collieries in the Northern District of New South Wales and accidents investigated by the Inspectors of Collieries during the six months ending 30th June, 1895.

The Examiner of Coal-fields, Sydney.—

Sir,

Newcastle, 27 July, 1895.

Pursuant to the provisions of section 26 in the Coal Mines Regulation Act, 1876, we have the honor to transmit to you this our six-monthly report on the state of the various collieries in the Northern District for the half-year ending 30th June, 1895.

The total number of collieries under inspection in the Northern District during the half-year is 69.

Seven collieries have been added, viz., Scanlon's, Jackson's, Bell's, Side, Sunnyside, Surprise, and Gunnedah.

Three collieries have been abandoned, viz., Ferndale, North Co-operative, and Electric.

No work has been done at the following fourteen collieries, viz., Awaba, Shamrock Hill, Young Wallsend, Swansea, Richmond Vale, Stanford (Greta), Maitland, Leconfield, Fern Valley, Pioneer, West Burwood, Rotunda, Richmond Hill, and Nicholai's Tunnel.

PRESENT STATE OF MINES.

A. A. Co.'s No. 2 Colliery.—There are about 170 men, &c., employed in this mine during the day and supplied with about 70,000 cubic feet of air per minute. The whole of the work at the present time is pillar coal extraction. There are four separate and distinct districts, none of which are overcrowded. The provisions of the Act are fully complied with.

A. A. Co.'s New Winning Colliery.—About 120 men, &c., are employed in this mine. There are four separate and distinct districts, and the total quantity of air circulating in the colliery is about 90,000 cubic feet per minute. None of the districts are overcrowded, and the provisions of the Act are fully complied with.

Newcastle-Wallsend Colliery.—About 705 men, &c., are employed in this mine during the day, and supplied with about 160,000 cubic feet of air per minute. The face workings are divided into thirteen separate and distinct districts, none of which are overcrowded. The Act in other respects also is complied with.

Newcastle Co.'s Colliery.—About 490 men, &c., are employed in this mine, and supplied with about 160,000 cubic feet of air per minute. The workings are divided into ten separate and distinct districts, and none of the districts are overcrowded. The provisions of the Act are also complied with in other respects.

Lambton Colliery.—About 350 men, &c., are employed in this mine during the day, and supplied with about 80,000 cubic feet of air per minute. The face workings are divided into six separate and distinct districts, none of which are overcrowded. The provisions of the Act are complied with.

Co-operative

Co-operative Colliery.—There are about 260 men, &c., employed in this mine, and supplied with about 45,000 cubic feet of air per minute. The workings are divided into four separate and distinct districts, none of which are overcrowded. The provisions of the Act are complied with.

Burwood Colliery.—There are about 200 men, &c., employed in this mine. The face workings are divided into four separate and distinct districts, and the total quantity of air circulating in the mine is about 50,000 cubic feet per minute. None of the districts are overcrowded, and the Act in other respects also is complied with.

Stockton Colliery.—About 220 men, &c., are employed in this mine, and supplied with about 26,000 cubic feet of air per minute. The workings are divided into three separate and distinct districts. The Act is complied with in regard to ventilation. The third shaft has been sunk to the lower portion of the Borehole seam; total depth of shaft, 290 feet. About 18 men, &c., are employed in connection with this shaft. The shaft is lined throughout with cylindrical tubing. A drive is now proceeding in the coal-seam to connect with the workings of the colliery. Such connection will probably be effected in September next.

Wickham and Bullock Island Colliery.—About 280 men, &c., are employed in this mine during the day. The quantity of air circulating through the workings is about 40,000 cubic feet. The workings are divided into nine separate and distinct districts. The provisions of the Act are complied with.

Hellon Colliery.—There are about 320 men, &c., employed in this mine, and supplied with about 55,000 cubic feet of air per minute. The face workings are divided into five separate and distinct districts, none of which are overcrowded. The Act, in other respects also, is complied with.

Brown's Colliery.—About 280 men, &c., are employed in this mine during the day. The quantity of air circulating through the workings is about 55,000 cubic feet per minute. The workings are divided into six separate and distinct districts. The provisions of the Act, in other respects also, is complied with.

Duckenfield Colliery.—There are about 280 men, &c., employed in this mine, and supplied with about 40,000 cubic feet of air per minute. The face workings are divided into five separate and distinct districts, none of which are overcrowded. The Act, in other respects also, is complied with.

South Waratah Colliery.—About 166 men, &c., are employed in this mine during the day-time, and supplied with about 50,000 cubic feet of air per minute. There are five separate and distinct districts, neither of which is overcrowded. The provisions of the Act are fully complied with in other respects also.

New Lambton Colliery.—About 120 men, &c., are employed in this mine, and supplied with about 26,000 cubic feet of air per minute. The mine is divided into two districts, neither of which is overcrowded. The other provisions of the Act are also carried out.

Ebbw Vale Colliery.—There are about 40 men, &c., employed in this mine during the day, and supplied with about 12,000 cubic feet of air per minute. The provisions of the Act in other respects also are carried out.

East Lambton Colliery.—This mine was under inspection for a short time during the half-year, but is now finally abandoned.

Hillside Colliery, Merewether.—There are 2 men and 1 boy employed in this colliery. The ventilation is good, and the Act complied with.

Rosehill Colliery, North Lambton.—Only 2 men employed at the present time. The ventilation is good, and the Act complied with.

Bayley's Reward Colliery, Lambton.—Only 2 men employed in this mine. The ventilation is good, and the Act complied with.

Ray's Colliery, Lambton.—Only 1 man occasionally employed getting a few loads of household coal. No cause for complaint.

Quarry Colliery, Waratah.—One man and one boy employed in this mine. Everything satisfactory.

Wright's Colliery, Waratah.—One man and one boy employed in this mine. No cause for complaint.

Rushton's Colliery, Waratah.—Only 2 men employed at this mine. The ventilation is satisfactory, and there is no cause for complaint.

Liddle's Colliery, Waratah.—Three men employed in this mine. The ventilation is good, and the Act complied with.

Green's Colliery, Grovestown.—Scarcely anything has been done in this mine during the past six months, and at present all work is suspended.

Sunlight Colliery, Grovestown.—Very little work has been done here during the half-year, and at present all work is suspended.

Jackson's Colliery, Lambton.—This mine was commenced during the past six months, but all operations are at present suspended.

Bell's Colliery, Waratah.—This mine has lately been commenced, and 2 men are employed extracting pillar coal. The Act is complied with.

Surprise Colliery, Lambton.—This mine has been very recently commenced. There are 3 men employed extracting pillar coal, and everything is in good working order. The Act is complied with.

Side Colliery, Waratah.—This is a new venture, and 1 man and a boy are employed in the extraction of some of the pillar coal left by the Waratah Company years ago. The ventilation is good, and the Act complied with.

Sunnyside Colliery, Lambton.—This mine has been commenced during the six months. The coal is reached by adit, and pillar coal is being extracted from the Waratah Company's old workings. The Act is fully complied with.

Beaside Colliery, Grovestown.—Only 1 man, occasionally employed getting house coal. No cause for complaint.

Elmore Vale Colliery, Wallsend.—There are about 16 men, &c., employed in this mine. The ventilation is satisfactory, and the Act complied with.

Summerhill Colliery, Plattsburg.—All work at this mine is temporarily suspended.

Maryland Colliery, Plattsburg.—There are 28 men, &c., employed in this mine, and supplied with about 5,000 cubic feet of air per minute in one current. The provisions of the Act are complied with.

Dudley Colliery, Charlestown.—All work at this mine is temporarily suspended.

Durham Colliery.—Only 2 men, at present employed keeping the mine free from water. Everything in connection with this colliery is in good working order, and the provisions of the Act are fully complied with.

Burwood

Burwood Extended Colliery.—Only 4 men employed at this colliery, keeping the workings in repair and free from water, and getting coal for the steam-engines. Everything is in good working order, and the provisions of the Act complied with.

South Hetton Colliery, Lake Macquarie.—Two men are employed in this mine. The ventilation is good, and the Act complied with.

Morissett Colliery, Lake Macquarie.—There are 6 men and 1 boy employed in this mine. The ventilation is good, and the Act complied with.

Wallarah Colliery, Catherine Hill Bay.—There are about 100 men, &c., employed in this mine, and supplied with about 30,000 cubic feet of air per minute. There are two separate and distinct districts. The provisions of the Act are fully complied with.

Northumberland Colliery, Fassifern.—About 8 men are employed in this mine. The ventilation is satisfactory, and the Act complied with.

Pacific Colliery, Teralba.—There are about 140 men, &c., employed in this mine during the day, and supplied with about 40,000 cubic feet of air per minute. The workings are divided into six separate and distinct districts. The provisions of the Act are complied with.

Gartlee Colliery, Teralba.—There are about 44 men, &c., employed in this mine, and supplied with about 9,000 cubic feet of air per minute. The Act is complied with.

South Wallsend Colliery.—About 55 men, &c., are employed in this mine, and supplied with about 8,000 cubic feet of air per minute. The provisions of the Act are complied with.

West Wallsend Colliery.—There are about 160 men, &c., employed in this mine, and supplied with about 70,000 cubic feet of air per minute. The workings are divided into six separate and distinct districts. The Act is complied with.

Seaham Colliery.—About 250 men, &c., are employed in this mine, and supplied with about 70,000 cubic feet of air per minute. The workings are divided into four separate and distinct districts. The provisions of the Act are complied with.

Thornley Colliery, East Maitland.—Four men are employed in this mine. The ventilation is good, and the Act complied with.

Bloomfield Colliery, East Maitland.—There are 8 men employed in this mine. The ventilation is good, and the Act complied with.

Marshall's Colliery, East Maitland.—Only 1 man employed in this mine. The ventilation is satisfactory, and the Act complied with.

Louis Vale Colliery, East Maitland.—There are 3 men employed in this mine. The ventilation is good, and the Act complied with.

Scanlon's Colliery, East Maitland.—One man and a boy are employed in this mine. The ventilation is satisfactory, and the Act complied with.

Kensington Colliery, East Maitland.—This colliery has been under inspection during a portion of the half-year, but is now abandoned.

East Greta Colliery, West Maitland.—About 160 men, &c., are employed in this mine in the two shifts. The ventilation is satisfactory, and the Act complied with.

Font Hill Colliery, Farley.—There are 9 men employed in this mine. The ventilation is good, and the provisions of the Act complied with.

Denton Park Colliery, Farley.—There are 20 men, &c., employed in this mine. The ventilation is satisfactory, and the Act complied with.

Greta Colliery, Greta.—There are about 240 men, &c., employed in this mine, and supplied with about 50,000 cubic feet of air per minute. The workings are divided into five separate and distinct districts. The provisions of the Act are complied with.

New Anvil Creek Colliery, Greta.—About 22 men, &c., are employed in this mine, and supplied with about 9,000 cubic feet of air per minute in one current. The provisions of the Act are complied with.

Ellesmere Colliery, Singleton.—No coal has been drawn from this colliery during the half-year, but the mine is kept open and in a good state of repair, ready for resumption of work at any time.

New Park Colliery, Singleton.—About 23 men, &c., are employed in this mine, and supplied with about 8,000 cubic feet of air per minute. The Act is complied with.

Elliott's Colliery, Singleton.—Two men occasionally employed in this mine. The ventilation is satisfactory, and the Act complied with.

Rosedale Colliery, Singleton.—There are 3 men employed in this mine. The ventilation is good, and the Act complied with.

Dulwich Colliery, Singleton.—There are 9 men employed in this mine. The ventilation is satisfactory, and the Act complied with.

Oakvale Colliery, Singleton.—There are 2 men employed in this mine. The ventilation is good, and the provisions of the Act complied with.

Knyuga Colliery, Muswellbrook.—Two men are employed in this mine. The ventilation is good, and the Act fully complied with.

Centenary Colliery, Curlewis.—About 21 men are employed in this mine, and supplied with about 11,000 cubic feet of air per minute in one current. The mine is in good order, and the Act fully complied with.

Gladstone Colliery, Gunnedah.—There are 8 men, &c., employed in this mine, and supplied with about 3,000 cubic feet of air per minute in one current. The Act is complied with in other respects also.

Morley Colliery, Gunnedah.—Three men are employed in this mine, and a current of about 6,000 cubic feet of air per minute is circulating in the workings. The Act in every other respect is also complied with.

Gunnedah Colliery, Gunnedah.—This mine has only lately been commenced in the Black Jack Mountain, near Gunnedah. Two adits have been driven to the coal-seam, which is the same as that wrought in the Gladstone Colliery. There are 4 men employed in the mine. The ventilation is satisfactory, and the other provisions of the Act are also complied with.

ACCIDENTS IN MINES.

The accidents investigated by us in the Northern District during the six months ending June 30th, 1895, are 41 in number. Of this number, 23 were fully reported upon at the time, and 18 were found to be of a minor character, and full reports were not written thereon.

Of the 23 accidents in the annexed tabulated list, 5 proved fatal; 2 from falls of coal, 1 from injury by skip, 1 from injury in shaft, and 1 from fall of stone. Of the non-fatal accidents, 13 were caused by fall of coal, 4 by skips, and 1 by prop.

The first fatal accident occurred to a miner named Thomas Watson, by a fall of coal in the Newcastle Co.'s B Pit, on January 31st. The District Coroner, G. C. Martin, Esq., held an inquest on the body of deceased at Merewether on February 1st and 6th. The inquest was attended by Inspector Bates, who heard all the evidence, and fully agrees with the verdict of "accidental death," as returned by the jury.

The second occurred to a miner named Robert Maxwell by a fall of coal at Greta Colliery, on March 20th. The District Coroner, J. N. Brooks, Esq., P.M., held an inquest on the body of deceased at Greta on March 20th and 21st. The inquest was attended by Inspector Bates, who heard all the evidence, and fully agrees with the verdict of "accidental death," as returned by the jury.

The third occurred to a deputy named John Gilbert by a train of empty skips at Newcastle, Wallsend Colliery, on March 29th. The District Coroner, G. C. Martin, Esq., held an inquest on the body of deceased at Wallsend on March 30th. The inquest was attended by Inspector Bates, who heard all the evidence, and fully agrees with the verdict of "accidental death," as returned by the jury.

The fourth occurred to a miner named John James by injury in shaft at New Lambton Colliery, on May 7th. The District Coroner, G. C. Martin, Esq., held an inquest on the body of deceased at Lambton on May 7th. The inquest was attended by Inspector Dixon, who heard all the evidence, and fully agrees with the verdict of "accidental death," as returned by the jury.

The fifth occurred to a deputy named William Mc'Ghee by a fall of stone at A.A. Co.'s New Winning on June 4th, terminating fatally on June 5th. The District Coroner, G. C. Martin, Esq., held an inquest on the body of deceased at Merewether on June 6th. The inquest was attended by Inspector Humble, who heard all the evidence, and fully agrees with the verdict of "accidental death," as returned by the jury.

The first of the non-fatal accidents occurred to a miner named James Hailstone, at Duckenfield Colliery, on January 15th, resulting in fracture of ribs by train of skips.

The second occurred to a miner named James Dunn, at Burwood Colliery, on January 16th, by a fall of coal, resulting in fracture of leg.

The third occurred to a miner named John Dent, at Lambton Colliery, on February 5th, resulting in fracture of leg by fall of coal.

The fourth occurred to a wheeler named George Steavenson, at Brown's No. 4 Colliery, on February 5th, resulting in fracture of arm by skip.

The fifth occurred to a wheeler named William Desreux, at Pacific Colliery, on February 28th, by empty skips, resulting in fracture of thigh.

The sixth occurred to a miner named Robert Carnichael, at Hetton Colliery, on March 26th, resulting in fracture of leg by fall of coal.

The seventh occurred to a miner named William Teasdale, at Hetton Colliery, on April 5th, by a fall of coal, resulting in fracture of collar-bone.

The eighth occurred to a driver named William Etherington, at Hetton Colliery, on April 6th, resulting in fracture of thigh by skip.

The ninth occurred to a miner named Henry Leary, at Brown's No. 4 Colliery, on April 6th, by fall of coal, resulting in fracture of ribs.

The tenth occurred to a miner named John Thompson, at A. A. Co.'s No. 2 Pit, on April 19th, resulting in fracture of collar-bone by fall of coal.

The eleventh occurred to a miner named John Phillips, at Hetton Colliery, on April 25th, resulting in fracture of leg by falling prop.

The twelfth occurred to a miner named Herman Fink, at Stockton Colliery, on May 15th, by a fall of coal, resulting in fracture of thigh.

The thirteenth occurred to a miner named David Gwynne, at Hetton Colliery, on May 16th, resulting in fracture of leg by fall of coal.

The fourteenth occurred to a miner named James Brown, at Brown's No. 4 Colliery, on June 5th, by a fall of coal, resulting in fracture of thigh.

The fifteenth occurred to a miner named Joseph Allanson, at Newcastle Co.'s Colliery, on June 12th, resulting in fracture of leg by fall of coal.

The sixteenth occurred to a miner named Thomas Godfrey, at Wallarah Colliery, on June 15th, by fall of coal, resulting in severe injury to back.

The seventeenth occurred to a miner named John Anderson, at Lambton Colliery, resulting in fracture of leg by fall of coal on June 18th.

The eighteenth occurred to a miner named Alan Wilde, at Roschill Colliery, on June 24th, by a fall of coal, resulting in fracture of leg.

There were no accidents on the surface.

The tabulated list of accidents is hereto appended.

We have, &c.,

JOHN DIXON,
THOS. L. BATES,
WILLIAM HUMBLE,
Inspectors of Collieries.

TABLED List of Fatal and Non-Fatal Accidents in the Northern District of New South Wales investigated by the Inspectors of Collieries during the Half-year ending 30th June, 1895.

Date.	Colliery.	Persons Killed or Injured.	Occupation.	Remarks on Nature and Extent of Injuries.	Fatal.				Non-fatal.			Total.	
					Fall of Coal.	Skips.	Shaft.	Fall of Stone.	Skips.	Fall of Coal.	Prop.	Fatal.	Non-fatal.
1896.													
15 Jan.	Duckenfield	James Hallstone	Miner	Fracture of ribs by skips					1				1
16 "	Burwood	James Dunn	"	Fracture of leg by fall of coal					1				1
31 "	Newcastle Co.'s B Pit	Thomas Watson	"	Fatal injury by fall of coal	1								1
5 Feb.	Lambton	John Dent	"	Fracture of leg by fall of coal					1				1
5 "	Brown's No. 4	Geo. Steavenson	Wheeler	Fracture of arm by skip					1				1
28 "	Pacific	William Desreaux	"	Fracture of thigh by empty skips					1				1
20 Mar.	Greta	Robert Maxwell	Miner	Fatal injury by fall of coal	1								1
26 "	Hetton	Robert Carmichael	"	Fracture of leg by fall of coal					1				1
29 "	Newcastle-Wallsend	John Gilbert	Deputy	Fatal injury by empty skips		1							1
5 April	Hetton	Wm. Teasdale	Miner	Fracture of collar-bone by fall of coal					1				1
6 "	"	Wm. Etherington	Driver	Fracture of thigh by skip					1				1
6 "	Brown's No. 4	Henry Leary	Miner	Fracture of ribs by fall of coal					1				1
19 "	A. A. Co.'s No. 2 Pit	John Thompson	"	Fracture of collar-bone by fall of coal					1				1
25 "	Hetton	John Phillips	"	Fracture of leg by falling prop						1			1
7 May	New Lambton	John James	"	Fatal injury in shaft			1						1
15 "	Stockton	Herman Fink	"	Fracture of thigh by fall of coal					1				1
16 "	Hetton	David Gwynne	"	Fracture of leg by fall of coal					1				1
4 June	A. A. Co.'s New Winning	Wm. McGhee	Deputy	Fatal injury by fall of stone				1					1
5 "	Brown's No. 4	James Brown	Miner	Fracture of thigh by fall of coal					1				1
12 "	Newcastle Co.	Joseph Allanson	"	Fracture of leg by fall of coal					1				1
15 "	Wallarah	Thomas Godfrey	"	Severe injury to back by fall of coal					1				1
18 "	Lambton	John Anderson	"	Fracture of leg by fall of coal					1				1
24 "	Rose Hill	Alan Wilde	"	"					1				1
					2	1	1	1	4	13	1	5	18

HALF-YEARLY Report of the Inspector of Collieries on the state of the various Collieries in the Southern and Western Districts of the Colony of New South Wales, and Accidents therein, for the half-year ending 30th June, 1895.

Sir,

In compliance with the requirements of clause 26 in the Coal Mines Regulation Act, 1876, I have the honor to transmit to you this my six-monthly report on the state of the various collieries, for the half-year ending 30th June, 1895.

The total number of collieries under inspection in the Southern and Western Districts during the last six months is 34.

Western District	...	...	...	15 coal-mines and 5 shale-mines.
Southern	...	...	...	13 "
Berrima	...	...	...	2 " 1 "
				30 " 6 " = 36 collieries.

PRESENT STATE OF MINES.

Metropolitan Colliery.—About 300 men and horses are employed underground. The total quantity of air circulating in the mine is about 450,000 cubic feet per minute. The workings are divided into six separate districts. Each district is well ventilated. The wheelers and miners work with locked safety-lamps, and great care is exercised by the management in order to ensure safety. The Act in all matters complied with.

Coal Cliff Colliery.—About 28 men are employed underground, and served with 16,000 cubic feet of air per minute. The Act in all matters complied with.

South Clifton Colliery.—About 140 men are employed underground, and served with about 45,000 cubic feet of air per minute in two separate splits. The Act in all respects complied with.

North Illawarra Colliery.—About 84 men and horses are employed underground, and served with 26,000 cubic feet of air per minute. The Act in all matters complied with.

Bulli Pass Colliery.—About 15 men are employed underground, and served with 3,000 cubic feet of air per minute. The Act in other respects complied with.

Bulli Colliery.—During the last six months only a few miners at work, getting slack from the workings and doing repairs in the haulage roads.

Hillend Colliery.—Only 2 men at work, and served with 1,000 cubic feet of air per minute. The Act in all matters complied with.

Bellambi Colliery.—Work at this mine has been suspended during the last six months on account of slackness of trade; only 3 men are at work doing repairs in the main dip heading.

South Bulli Colliery.—About 150 men and horses are employed underground, and served with about 42,000 cubic feet of air per minute in four separate splits. The Act in every respect complied with.

Corrimal Colliery.—About 90 men are employed underground, and served with about 22,000 cubic feet of air per minute. The Act in all other matters complied with.

Mount Pleasant Colliery.—About 120 men are employed underground, and served with about 28,000 cubic feet of air per minute in two separate splits. The Act in all matters complied with.

Osborne Wallsend Colliery.—About 150 men are employed underground. The ventilation is good, and the Act in every respect complied with.

Mount Kembla Colliery.—About 220 men are employed underground, and served with about 56,000 cubic feet of air per minute. The provisions of the Act are fully carried out in all matters.

WESTERN

WESTERN DISTRICT.

Capertee Shale Mine.—This is a new shale mine, about 25 miles from Capertee Railway Station N.E. Twelve men are engaged driving a tunnel in order to prove the thickness and extent of the shale. The Act complied with.

Rawden Colliery.—Two men employed underground at this mine. The ventilation is good, and the Act complied with.

Cullen Bullen Colliery.—About 16 men are employed underground. The ventilation is good, and the Act in all matters complied with.

Genowlan Shale Mine.—About 20 men are employed underground, and served with 12,000 cubic feet of air per minute. This mine is being worked on the long-wall system, and the places are well built, with pack walls. The Act in other matters complied with.

Ivanhoe Colliery.—Twelve men employed at this colliery, and served with 6,000 cubic feet of air per minute. The Act in other matters complied with.

Irondale Colliery.—Six men are employed, and served with 5,000 cubic feet of air minute. The Act in all other matters complied with.

Lithgow Valley Colliery.—About 28 men are employed underground, and served with about 20,000 cubic feet of air per minute. The Act in all matters complied with.

Hermitage Colliery.—About 24 men are employed underground, and served with 19,000 cubic feet of air per minute. The Act in every respect complied with.

Eskbank Pit.—About 30 men and horses are employed underground, and served with 20,000 cubic feet of air per minute. The Act in all other respects complied with.

Old Tunnel (Eskbank).—Six men employed underground, and served with 5,000 cubic feet of air per minute.

Vale of Clwydd Colliery.—Thirty-two men and horses employed underground, and served with 17,000 cubic feet of air per minute. The Act in all other respects complied with.

Zig Zag Colliery.—About 28 men and horses employed underground, and served with 12,000 cubic feet of air per minute. The Act in other matters complied with.

The Vale Colliery.—About 30 men are employed underground. The ventilation is very good throughout the mine, and the Act complied with.

Oakey Park Colliery.—Twenty-eight men and horses are employed underground, and served with about 15,000 cubic feet of air per minute. The Act in all matters complied with.

Cooverwall Mine.—Two men employed. The Act complied with.

Maddix's Mine.—Two men employed. The Act complied with.

New South Wales Shale Mines (Hartley).—About 65 men are employed underground, and served with about 16,000 cubic feet of air per minute. During the last six months a large number of the men have been working on pillar work; great care has been taken by the manager and men to ensure safety. The Act in all respects complied with.

Coal Tunnel.—Five men working, and served with 6,000.

The Australian Kerosene Oil and Mineral Company (Katoomba), Ruined Castle.—About 60 men are employed, and served with 12,000 cubic feet of air per minute. The Act complied with.

Mort's Shale Mine (Katoomba).—About 50 men are employed, and served with 10,000 cubic feet of air per minute. The Act complied with.

BERRIMA DISTRICT.

The Australian Kerosene Oil Coy. (Joadja).—About 60 men are employed underground, and served with 12,500 cubic feet of air per minute. The Act in all respects complied with.

Box Vale Colliery (Mittagong).—Three men employed, and served with 3,000 cubic feet of air per minute. The Act in other matters complied with.

Great Southern Colliery (Berrima).—Six men are employed underground. The ventilation good, and the Act in other matters complied with.

ACCIDENTS IN MINES.

During the last six months ending 30th June, 1895, I have investigated four separate accidents included in this list. I have also examined a few other accidents which were not of a serious nature, and are not included in this list.

The first non-fatal accident occurred to a miner named Lewis Palmer, at the Metropolitan Colliery, on March 26th, who had his leg broken by a fall of stone at his working-face.

The second happened to a miner named Andrew Crystel, at the Metropolitan Colliery, on April 11th, who was hurt about the back by a fall of coal at the face of his bord.

The third was to a wheeler named Richard Gibson, at Corrimal Colliery, who had his arm broken by a full skip at the "flat" where he was working on May 31st.

The fourth occurred to a miner named William Glover, at the Vale of Clwydd Colliery, who was hurt about the back and legs by a fall of top coal at his working-face.

The tabulated list of accidents is hereto appended.

I have, &c.,

John Mackenzie, Esq.,

Examiner of Coal-fields,

Mines Department, Sydney.

JAMES ROWAN,

Inspector of Collieries.

TABULATED List of Non-fatal Accidents in the Southern and Western Districts of New South Wales Collieries investigated by the Inspector of Collieries during the half-year ending 30th June, 1895.

No.	Date.	Colliery.	Sufferer.	Occupation.	Remarks, &c., on the nature and extent of injuries.	Leg broken at his working-face.	Hurt by a fall of coal.	Arm broken, jammed by skips.	Back and legs hurt by a fall of top coal.	Non-fatal.
1	26 March ..	Metropolitan ..	Lewis Palmer..	Miner	Leg broken by a fall of stone.....	1	..	..	..	..
2	11 April ..	Metropolitan ..	A. Crystel	Miner	Hurt about the back by a fall of coal.....	..	1	..	..	..
3	31 May	Corrimal	Richd. Gibson..	Wheeler	Arm broken by a full skip.....	..	..	1	..	..
4	5 June ..	Vale of Clwydd	Wm. Glover ..	Miner	Hurt about the back and legs by a fall of coal..	..	..	..	1	..
						1	1	1	1	4

THE Half-yearly Report of the Inspector of Collicries on the state of the various Collicries in the Southern and Western Districts of the Colony of New South Wales, and Accidents therein, for the half-year ending 31st December, 1895.

The Examiner of Coal-fields,—

Wollongong, 5 February, 1896.

Sir,

In compliance with the requirements of clause 26 in the Coal Mines Regulation Act, 1876, I have the honor to transmit to you this my six-monthly report on the state of the various collicries for the half-year ending 31st December, 1895.

The total number of collicries under inspection in the Southern and Western Districts is:—

Western District	...	...	...	...	15 coal-mines, and 6 shale-mines.
Berrima	„	„	„	...	2 „ 1 shale-mine.
Southern	„	„	„	...	13 „
				30	7 shale-mines.
				= 37.	

PRESENT STATE OF MINES.

Metropolitan Colliery.—About 300 men are employed underground. The total quantity of air circulating in the mine is about 400,000 cubic feet per minute. The workings are divided into eight separate splits. All the bords and headings in the colliery are bratticed up to within a few feet of the working-faces. All the miners and wheelers in this colliery work with locked safety-lamps, and great care is exercised by the manager to ensure safety. The Act in every respect complied with.

Coal Cliff Colliery.—During the last half-year an average of 25 men have been employed underground, and served with about 20,000 cubic feet of air per minute. The Act in other respects complied with.

South Clifton Colliery.—About 100 men employed underground, and served with about 80,000 cubic feet of air per minute. The colliery is well ventilated throughout, and the Act in all other matters complied with.

North Illawarra Colliery.—An average of about 50 men are employed underground, and served with 18,000 cubic feet of air per minute. During the last six months work at this mine has been very slack, on account of dull sales for the coal. The Act complied with.

Bulli Steam Coal Colliery.—During the last six months this mine has only worked a few weeks, on account of no sale for the coal. When the pit was at work an average of about 15 men were employed, and served with about 3,000 cubic feet of air per minute.

Bulli Colliery.—During the last two months of the half-year ending this colliery has been re-opened, and about 20 men are employed underground, and served with about 20,000 cubic feet of air per minute. The Act in other matters complied with.

Hillend Colliery.—Two men employed underground, and served with about 1,000 cubic feet of air per minute. The 2 men supply coal for local purposes, and only work about half-time.

Bellambi Colliery.—During the last six months work has been suspended at this colliery. Only a few men are at work doing general repairs in the main heading and airways.

South Bulli Colliery.—About 200 men are employed underground, and served with about 48,000 cubic feet of air per minute in six separate splits. The Act in all other respects complied with.

Corrimal Colliery.—About 123 men are employed underground, and served with 32,000 cubic feet of air per minute. The face-workings are divided into four separate and distinct districts. The Act in all other matters complied with.

Mount Pleasant Colliery.—About 130 men are employed underground, and served with about 30,000 cubic feet of air per minute. During the last six months an air-shaft has been sunk on the north side of the main tunnel. Preparations are being made for a furnace being built at the bottom of the air-shaft. All is expected to be finished in about three months. The same will greatly increase the ventilating currents throughout the colliery. The Act complied with.

Osborne Wallsend Colliery.—About 180 men are employed underground, and served with about 35,000 cubic feet of air per minute. The Act and all other matters complied with.

Mount Kembla Colliery.—About 185 men are employed underground, and served with about 60,000 cubic feet of air per minute. During the last six months several of the airways have been shortened, which has increased the ventilation round a portion of the workings. The Act complied with.

BERRIMA DISTRICT.

Australian Kerosene Oil Company's Shale Mines, Joadja.—During the last six months an average of 50 men have been employed underground, and served with about 9,000 cubic feet of air per minute. The colliery is worked on the longwall system, and the ventilating currents brought in straight line with the working-faces. The Act in all other matters complied with.

Great Southern Colliery, late Berrima.—Six men are employed underground and served with 8,000 cubic feet of air per minute. The Act complied with.

Box Vale Colliery.—Two men employed underground, and served with about 2,000 cubic feet of air per minute. The Act in other respects complied with.

WESTERN DISTRICT.

Australian Kerosene Oil Company, Katoomba.—Mort's Tunnels.—An average of about 40 men have been employed during the last six months, and served with about 5,000 cubic feet of air per minute. *Ruined Castle.*—An average of 50 men are employed, and served with about 7,000 cubic feet of air per minute. The above tunnels are worked on the longwall system, and built with substantial packwalls. The Act in all matters complied with.

New South Wales Shale Mines, Hartley.—An average of about 50 men have been employed underground during the last half-year, and supplied with about 14,000 cubic feet of air per minute. *Coal Tunnel.*—Five men are employed getting coal for the retorts. The above tunnels are worked on the longwall system, and the bords built with substantial jack-walls. The Act in all matters complied with.

Oakey

Oakey Park Colliery.—About 30 men and horses employed underground, and served with 18,000 cubic feet of air per minute. The Act in all other matters complied with.

Vale Colliery.—About 26 men are employed underground, and served with 12,000 cubic feet of air per minute. The Act in other matters complied with.

Zig Zag Colliery.—Twenty-seven men are employed underground, and served with 15,000 cubic feet of air per minute. The Act complied with.

Vale of Clwydd Colliery.—Twenty-eight men are employed underground, and served with 15,000 cubic feet of air per minute. The Act complied with.

Esk Bank Pit.—Twenty-six men employed underground, and served with 18,000 cubic feet of air per minute. Old tunnel, 6 men employed, and served with 5,000 cubic feet of air per minute. The Act in all other matters complied with.

Lithgow Valley Colliery.—258 men are employed underground, and served with 20,000 cubic feet of air per minute.

Hermitage.—Twenty-two men employed underground, and served with 18,000 cubic feet of air per minute. The Act complied with.

Cooverwill Mine.—Two men are employed getting coal for the tweed factory. The Act complied with.

Irondale Colliery.—Five men are employed underground, and served with 5,000 cubic feet of air per minute. The Act in all other matters complied with.

Ivanhoe Colliery.—Eight men are employed underground, and served with 6,000 cubic feet of air per minute. The Act complied with.

Cullen Bullen Colliery.—About 46 men are employed underground, and served with about 15,000 cubic feet of air per minute. The Act in other matters complied with.

Rawden Colliery.—Two men employed, getting a few tons of coal weekly for local purposes. The Act complied with.

Maddox's Folly Mine.—One man employed. Act complied with.

Genowan Shale Mine.—About 30 men employed underground, and served with 12,000 cubic feet of air per minute. This mine is worked on the longwall system, and the air brought in straight line with the working-faces. The Act in all matters complied with.

King's Shale Mine.—About 10 men are employed underground, and served with about 3,000 cubic feet of air per minute. The Act in other matters complied with.

Capertee Shale Mine (near Glen Alice).—About 4 men have been employed during the last half-year driving a heading into the mountain to prove the extent and quality of shale; are supplied with about 500 cubic feet of air per minute. The Act complied with.

ACCIDENTS IN MINES.

During the last six months I have investigated 6 separate accidents, 1 of which was fatal, and 5 non-fatal. The first non-fatal happened a labourer named J. Lang, on 24th July, employed at the Vale Colliery, who had his back bruised by a loaded truck on the surface siding. The second non-fatal happened to a carpenter named J. Reid, at Corrimal Colliery, on 28th August, who had his foot crushed by a set of empty skips on the underground incline.

The third was a fatal accident which happened a miner named Edward Evans, at Coal Cliff Colliery, on 9th September, by a fall of roof, by which he was instantaneously killed. On the day following, 10th September, the District Coroner held an inquest on the body of deceased at Clifton, which inquest I attended, and fully agree with the verdict of "accidental death" as returned by the jury.

The fourth was non-fatal, and happened a lad named George Bell, on the 19th October, at Osborne Wallsend Colliery, who had his hand crushed by a skip underground.

The fifth was non-fatal, and happened a miner named John Miller, at the Metropolitan Colliery, on 25th October, who had his nose broken by a fall of coal.

The sixth was non-fatal, and happened a miner named Matthew Kean, who had his foot badly crushed by a fall of stone from the roof at his working-face. He was removed to Prince Alfred Hospital, where it was found necessary to amputate the foot above the ankle.

I have also examined a few other accidents which were not of a serious nature, and are not included in this report.

The usual tabulated list of accidents is hereto appended.

John Mackenzie, Esq.,
Examiner of Coal-fields, Newcastle.

I have, &c.,
JAMES ROWAN,
Inspector of Collieries.

TABULATED LIST of Fatal and Non-fatal Accidents in the Southern and Western Collieries of New South Wales, investigated by the Inspector of Collieries during the half-year ending 31st December, 1895:—

No.	Date.	Colliery.	Sufferer.	Occupation.	Remarks on Nature and Extent of Injuries.	Back Bruised.	Foot Crushed.	Killed by Stone.	Hand Crushed.	Nose Broken.	Fatal.	Non-fatal.
					
1	24 July..	The Vale	John Lang	Labourer ..	Back bruised by a coal-truck	1	..	..	..	..	..	..
2	28 Aug..	Corrimal	John Reid	Carpenter..	Foot bruised by a set of skips .....	..	1	..	..	..	..	..
3	9 Sept..	Coal Cliff	Edward Evans	Miner	Killed by a fall of stone .....	..	..	1	..	..	..	..
4	19 Oct..	Osborne Wallsend	George Bell	Skip-boy ..	Hand crushed by a full skip .....	..	..	..	1	..	..	..
5	25 "	Metropolitan	John Miller	Miner	Nose broken by a fall of coal .....	..	..	..	..	1	..	..
6	9 Dec..	"	Matthew Kean	"	Foot crushed by a fall of stone .....	..	1	..	..	..	..	..

GEOLOGICAL SURVEY OF NEW SOUTH WALES.

Progress Report for 1895 by the Government Geologist.

Sir,

I have the honor to submit the following Progress Report of the Geological Survey Branch for the year 1895:—

As usual my time has been divided between practical work in the field and the supervision in the office of the general work of the Branch under my control.

From the 18th to the 22nd February I was engaged in an inspection of the then recently-discovered Bulgandra (or Walbundry) reefs near Culcairn, in the Albury District. A report on this field was subsequently submitted, and forms Appendix 1 to this report.

On the 2nd April I paid a second visit to the Garangula Gold-field, and furnished you with a report dealing with the suggested resumption by the Government of the land on which the gold-field is situated (*vide* Appendix 2). On the 11th April I proceeded to the Talbragar River, north of Gulgong, and, in conjunction with Professor David, made a geological survey of what are known as the Talbragar Fish Beds. The results of that survey have been published during the year as an Introduction to Memoir No. 9 (of the Geological Survey of New South Wales) on "The Fossil Fishes of the Talbragar Beds," by Mr. A. S. Woodward, F.L.S., of the British Museum. This work is of special importance as establishing the occurrence of rocks of Jurassic age in New South Wales.

From the Talbragar I proceeded to Capertee, and inspected a site in connection with which an application had been made for aid out of the Prospecting Vote.

On 2nd May I again visited Mudgee, and made an inspection of the Apple Tree Flat Gold-field in connection with a complaint that part of the Gold-field Reserve which had recently been cancelled contained auriferous deposits occasionally worked by the miners.

On the 7th June I visited Wyalong, and inspected a number of areas which the Lands Department proposed to alienate.

From the 29th August to the 10th September I was engaged on a geological examination of the country to the east of the road between Narrabri and Moree. The information gained during this examination was of considerable importance, and in a subsequent report (*vide* Appendix 3) I had the honor to lay before you evidence proving that the Moree and Coonamble Bores, from which large supplies of artesian water of excellent quality had been obtained, were not, as previously supposed, in the Lower Cretaceous rocks but in sandstones and shales of the same age as the Clarence River Coal Measures and the Ipswich Coal Measures of Queensland. In view of this discovery it is evident that the area of our artesian water-bearing country is much larger than was previously supposed, as these Ipswich (? Triassic) Coal Measures extend a considerable distance to the eastward of the eastern boundary of the Lower Cretaceous basin as shown on the Geological Map of the Colony.

On the 15th October I furnished a report on the probability of obtaining artesian water at Grafton, on the Clarence River. This report forms Appendix 4 hereto.

On the 15th October I proceeded to Queensland, where I made an examination of the Ipswich Coal Measures in the type district. I also visited Roma and Texas for the purpose of examining the Blythesdale Braystones, or "intake beds," of the Lower Cretaceous basin; and I was engaged until the 23rd November in examining the country north and north-west of Inverell, and in mapping the eastern boundary of the Ipswich Coal Measures in that district, with a view of defining the limits of the newly discovered artesian basin. In a paper read (by permission of the Minister) before the Royal Society of New South Wales, on December 4th (and subsequently published in the Records of the Geological Survey of New South Wales, Vol. v, Pt. 1), I detailed the results of my observations in Queensland, and suggested the possibility of the Ipswich Coal Measures being continuous (under the Lower Cretaceous rocks) between Eastern Australia and Leigh's Creek, in South Australia. While in the Northern District I made a geological examination of the Ashford Coal-field, the results of which were published in Vol. v, Pt. 1, of the Records of the Geological Survey of New South Wales. The Ashford Coal-field is very limited in width, and the seam is inclined at a high angle; nevertheless, in view of the great thickness of the seam (about 27 feet), and the excellent character of the coal for steam or smelting purposes, there is no doubt that the deposit will be a valuable one in the future. The seam is of special interest, as being the most northerly occurrence of the Permo-Carboniferous Coal Measures in the Colony. It is an isolated deposit, and extends to within a few miles of the northern boundary of the Colony, near Bonshaw.

While in this district I also made an examination of the new discovery of diamantiferous drift near Boggy Camp, about 17 miles south-west of Inverell. The drift occurs under a high basalt hill, the underlying rock being granite. The diamonds are about equal in size and quality to those found on the Bingara Field. At the time of my visit forty-two loads of drift had been washed for a total yield of 600 carats, and the wash-dirt also yielded at the rate of about 13 lb. of tin ore per load. One load of wash-dirt gave the extraordinary yield of 515 diamonds, weighing in the aggregate 184 carats. There still appears to be a difficulty in obtaining a satisfactory market for diamonds of the small size found in New South Wales; and in view of the length of time which has elapsed since these quartz-pebble drifts were first prospected, there is reason for assuming that if diamonds of large size existed in them, some of them would have been discovered before this. The area of country covered by river drifts containing small diamonds is extensive, and I cannot help thinking that their source will ultimately be traced to volcanic pipes, analogous to those found at Kimberley in South Africa. Bearing in mind the positions and trend of the diamantiferous river-drifts of the Northern District, I am inclined to think that the belt of country lying to the east and south-east of Inverell, and between that town and the Northern Railway Line, is the most likely one in which to prospect for the source of the diamonds; but, unfortunately for the prospector, this area is covered to a considerable extent by basalt flows, which would effectually hide the volcanic pipes if they existed there.

On

On the 16th December I inspected a deposit of kerosene shale in the banks of Bundanoon Creek, near Exeter, and, with a view of enabling the deposit to be thoroughly prospected, I recommended the proclamation of a reserve covering it. On the 18th December I made a third inspection of the Garangula Gold-field in connection with the question of the resumption of the land by the Government. My report forms Appendix 5 hereto.

The following maps and publications have been issued from this Branch during the year:—

Geological Map showing the Stanniferous Leads in the Tingha and Elsmore Districts.
 Sketch-plan of the Jenolan Caves.
Records of the Geological Survey, Vol. IV, Parts 3 and 4.
Palaeontological Memoirs, No. VIII, Part 3, and No. IX.

During the year a considerable portion of the Geological Surveyors' time has been devoted to inspecting and reporting upon land for which aid from the Prospecting Vote had been sought. The details of the other work performed by them, including reports on mineral areas in various parts of the Colony, will be found appended hereto.

In September last Mr. G. A. Stonier resigned his position of Geological Surveyor, after ten years' service in the Department.

The reports of the Curator, Inspector of Caves, Assistant Palaeontologist and Librarian are submitted herewith.

Eighteen Institutions have been supplied with mineral collections during the year, and no less than 4,816 specimens have been assayed or analysed.

I have, &c.,

EDWARD F. PITTMAN,
 Government Geologist.

APPENDIX I.

Report on the Walbundrie Reefs.

Geological Survey Office, Department of Mines and Agriculture, Sydney, 23 February, 1895.

Sir,

I have the honor to report that I have inspected the auriferous reefs lately discovered in the Albury District, and known as the Walbundrie reefs.

Situation.

They are situated in the Parish of Bulgandra, County of Hume, about 40 miles north-west of Albury, on the road to Urana. The greater part of the land in the district has been alienated, and the first reef discovered in this instance was situated upon Portion 120, the property of Mr. Fagan.

Geological Formation.

The reefs occur in some low hills on the northern side of Billabong Creek. These little hills consist for the most part of micaceous schists and slates of probably Upper Silurian age, more or less impregnated with iron oxide, while in places, especially in proximity to the reefs, dykes of granite and felspar porphyry occur. The country on the southern side of Billabong Creek consists of level plains which have been formed of the silt deposited from the flood waters.

Depth of Made Ground.

The depth of this made ground is probably very considerable in places, and I was informed that a bore put down for water on Bulgandra Run penetrated to a depth of about 250 feet without reaching bed rock.

Probable existence of Deep Leads.

It is very probable that deep leads, fed by gold derived from the reefs in this locality, may exist below the surface of the plains, and it behoves the miners, therefore, to prospect carefully for the heads of such leads in the shallow ground, so that their course may be followed into the deeper country.

Names of Principal Reefs.

The five principal reefs inspected by me are known respectively as (1) the Goodwood reef, (2) the Lone Hand reef, (3) the Show Day reef, (4) the Welcome Find, and (5) Coonerty and Murphy's reef.

Goodwood Reef.

The Goodwood Reef was the first discovered, and more work has been done upon it than upon any of the others. It bears east and west, is nearly vertical (having a very slight southerly underlay) and varies in width from 18 inches to 5 feet. The upper part of this reef contains a considerable amount of slate which has, doubtless, fallen into the vein fissure from the walls, and it is also very much impregnated with iron oxide in places. It is probable that as greater depths are reached the reef will be found to consist of quartz with pyrites, and possibly other sulphides. Fairly coarse gold is visible in places in the workings along the reef. There are at present seven claims at work on the Goodwood Reef, and a depth of about 40 feet has been attained. The claims are held under Section 33 of the Mining on Private Lands Act of 1894, the miners having made their own terms with the landowner.

Results of Crushings from Goodwood Reef.

I was informed that the following results had been obtained from crushings:—From the Prospectors' Claim (Wade & Crawley), 4 tons yielded $\frac{1}{2}$ oz. per ton; 1 ton yielded 2 oz. 11 dwt.; and 4 tons yielded 15 dwt. per ton. In Fagan's Claim (No. 1 East), 6 cwt. of stone yielded 1 oz. 6 dwt. of gold. In Gibbon's (Doncaster Claim, No. 3 west of Prospectors) 4 tons yielded $\frac{1}{2}$ oz. per ton. From Voltien's (No. 4 West) 1 ton gave 5 oz., and 10 tons gave 2 $\frac{1}{2}$ oz. per ton. Total result of trial crushings, 24 tons 6 cwt. yielded 40 oz. 17 dwt.

The

The Lone Hand Reef.

The Lone Hand Reef is situated about 200 yards south of the Goodwood, and is also within the limits of Portion 120, Parish of Bulgandra. This reef strikes about north-east, and dips to the north-west at an angle of about 70 degrees. At the time of my visit it had been opened to a depth of 4 or 5 feet for a distance of about 30 feet. In this opening the reef was about 1 foot wide, and fairly coarse gold could be seen through the stone. Four tons were despatched to the battery on the day of my visit, and I have seen a statement in the newspaper since that the yield was at the rate of 8 oz. per ton.

The Show Day Reef.

The Show Day Reef is situated upon Portion 21, Parish of Bulgandra, also the property of Mr. Fagan. This reef bears north-east, is nearly vertical, and varies in width from 6 to 18 inches. It occurs along the line of contact between slate and a very decomposed rock—probably a decomposed felspar porphyry. Dykes of hard felspar porphyry also occur in proximity to the reef. Hewitt Bros. and Party are the prospectors, and I was informed that 35 tons of stone from their claim yielded 95 oz. of gold. There are five other claims sinking on this reef. In No. 1 South-west (Neal and Party) the reef is about 9 in. wide. In No. 2 North-east (Young and Son's claim) the reef is about 1 ft. wide, and I was informed that 5 tons had been crushed for a yield of 2 oz. 2 dwt. per ton. Noble and Party in No. 3 North-east claim have not found the reef as yet, but in No. 4 (Davis and Party) the reef has a width of 9 in.

The Welcome Find Reef.

The Welcome Find Reef is situated on Portion 8, Parish of Bulgandra, which is also private property. Driscoll, Strachan, and Party are the prospectors, and there is only one claim on this reef. The reef strikes North 10 degrees West, and dips West at about 50 degrees. It is situated in slate country, and its width varies from 9 in. to 4 ft. The shaft is down about 45 ft. Rather fine gold can be seen in the stone here and there, and very good prospects can be obtained by dollying, but no bulk crushing had been tried at the date of my visit.

Coonerty and Murphy's Reef.

Coonerty and Murphy's Reef is situated on Water Reserve 321, just to the south of the Lone Hand. Very little work has as yet been done on this reef, which bears about North-east, and has a dip to the North-west at about 80 degrees. The width of the reef varies from 2 in. up to 1 ft., and colours of gold can be seen here and there in the stone.

Machinery.

I believe that crushing machinery was conveyed to the ground a day or two after my visit, so that in a very short time a reliable test of the reefs will be made, it being estimated that there are 300 tons of stone at grass awaiting crushing. A good site for a battery can be found on Billabong Creek, in proximity to the reefs.

Summary.

In conclusion I have to report that present appearances are decidedly favourable, and although it is too early to speak confidently of the permanence of the field, there is fair reason to hope that as the workings progress in depth, the auriferous nature of the reefs will be maintained. As already stated, there is a reasonable probability that auriferous deep leads may exist in the neighbourhood.

At the date of my visit it was estimated that there were about 200 men on the field.

I have recommended the proclamation of a Gold-field Reserve in lieu of the reserves for water, travelling stock, etc., now in existence.

I have, &c.,

B. F. PITTMAN,

Government Geologist.

APPENDIX 2.

Second Report on the Garangula Gold-field.

Geological Survey Branch, Department of Mines and Agriculture,

Sydney, 10 April, 1895.

IN accordance with the Minister's instructions, I have made a second inspection of the Garangula Gold-field with the object of inquiring into the question of the resumption of the land for mining purposes, and I have the honour to report as follows:—

The auriferous deposits are situated upon Portions 200 and 202, Parish of Cunningham, County of Harden. The owner of the portions (Mr. Macansh) originally made applications for permits to remove the gold under Section 7 of the Crown Lands Act of 1884, but after the passing of the Mining on Private Lands Act of 1894, the permits could not be issued, and Mr. Macansh accordingly applied to convert the applications for permits into special leases under Section 23 of the Mining on Private Lands Act of 1894. There are two areas for which special leases have been applied, viz., Portions 200 and 202, of 640 acres each. Up to the present the leases have not been granted, but Mr. Macansh has made private agreements from month to month with the miners, whereby they are to pay him rent at the rate of 10s. per month per man after striking gold-bearing wash.

I understand that these rents have not been systematically enforced (although active gold-mining operations have been carried on for about ten months), but that it is the intention of Mr. Macansh to enforce them at an early date, and to demand a deposit or payment in advance, unless the Government decide to resume the land, his reason being the difficulty of compelling the miners to fill up the shafts after they have been abandoned.

The following statements were made to me by the miners with the object of showing why the auriferous land should be resumed by the Government:—

1. The alluvial deposits have not been thoroughly prospected, and new deposits may therefore be found.
2. Many of the reefs are likely to be permanent.
3. Much of the alluvial ground already worked would still give a small return, but the yield from such would not be sufficient to justify the rent demanded by the owner of the land.
4. If the land were resumed by the Crown many of the miners would keep a cow or a horse, but under present circumstances they are prevented from doing so by reason of the expense.
5. Only one battery of five head of stamps is allowed on the field by the land-owner. It has crushed 92 tons of stone, and it required four weeks and four days to do so. This is not sufficient for the requirements of the field.

6. Heads of families would erect houses if they could obtain a miner's right title for the residence purposes. At present they are compelled to live in tents and cannot keep their wives and families in comfort.
7. A school is wanted, and would probably be erected if Crown Lands were available.
8. Water is at present very scarce on the field. If the land were resumed dams could be built for conserving water, but there is no encouragement to do so now, as rent would be charged and the improvements would revert to the land-owner.
9. There is only one store on the field, and this is the property of Mr. Macanah. If the land were resumed other stores would be erected, and business generally would prosper.
10. There are many old miners on the field who have for years past helped by their labours to increase the revenue of the Colony, and these consider themselves entitled to the consideration asked for.
11. The miners consider that the gold-field offers a good position for a permanent village. The surroundings are favourable. The nearest village (Jugiong) is about 8 miles distant, while the town of Murrumburrah is 17 miles distant. The field, they state, is in the same auriferous belt as Parkes, Grenfell, Wambat, &c., and would form a good centre or depôt for miners' families.
12. The amount of rent demanded is objectionable; each miner is asked to pay £6 5s. per annum. Other charges increase the cost of living, they state, to £15 per year per man more than it would cost elsewhere.
13. Resumptions are made by the Department in the interests of agriculture, and it is only fair that something of the same kind should be done in the interests of mining.
14. Payable gold has been found here, and a large meeting of miners has carried a resolution in favour of the resumption of the land.
15. Mr. Macanah's land has been damaged by the mining operations, and it is only fair, the miners state, that the Government should recoup him by resuming it.
16. The reefs on the field are, according to the miners, important, and there are at the present time between sixty and seventy men at work upon them.
17. During the past ten months the field has supported, and is still supporting 400 men.
18. Fully 200 men have left the field since the enforcement of the rent has been threatened. If the rent be enforced, it is said that many men will return to Sydney to increase the ranks of the unemployed, whereas if the land were resumed a large increase of population would result."

The payable alluvial deposits hitherto worked may be said to be confined to two principal gullies, known respectively as Main Gully and Strawstack Gully. Each of these gullies has several short gullies or branches in which the alluvium has been worked, but the total length of the payable auriferous deposits on either gully has not exceeded three-quarters of a mile. It is clear, therefore, that the gold has not travelled far, and that the alluvial deposits hitherto discovered cannot be said to be extensive, notwithstanding the fact that during the past ten months there has been on the field a population of at least 400, and occasionally as many as 800 or 1,000, busily engaged in prospecting.

I have inspected the principal reefs which occur on the ridges between the two auriferous gullies already referred to as Strawstack Gully and Main Gully. These reefs have undoubtedly formed the source whence the alluvial gold was derived. The following particulars will serve to convey some idea of their extent and prospects.

Manley's Reef.—Average width, 5 inches. Three shafts have been sunk, their depths being 63, 67, and 42 feet respectively. Twenty-seven tons of stone were raised by two men in five weeks. Ten tons crushed at the Clyde Works yielded 1 oz. 4 dwt. 16 gr. per ton, and 16 tons crushed at the local battery gave 1 oz. 6 dwt. 14 gr. per ton.

The country rock consists of decomposed granite down to the bottom of the present workings. There are several other parallel reefs in Manley's Claim, the widest being about 1 foot, but the reef at present being worked gave the best prospects.

Hell and Party's Reef.—Two shafts, 63 and 75 feet in depth respectively. In the first shaft the reef shows from 1 to 5 inches in width; in the second it averages 2 feet. Fifty tons of stone have been despatched to Cunnigar, and are expected (by the owners) to yield from 15 to 18 dwt. per ton. In the deeper shaft the rock is becoming harder.

Cousin Jack's Claim.—Morris and Party. Shaft 80 feet in depth and several drives. Reef averages 10 inches in width. Sixty tons of stone have been raised and are now being crushed at the local battery. The country is getting hard at the bottom, but no blasting has as yet been necessary.

Perseverance Claim.—Morris and Party. This is probably on the same line of reef as the last. One shaft 70 feet deep, and drive 70 feet long. Average width of reef, 10 inches. No stone crushed as yet, but 50 tons at present at grass are estimated by the owners to yield at the rate of 12 dwt. per ton. The decomposed granite is beginning to give place to hard granite at the bottom of the shaft, but no blasting has yet been necessary.

The Conundrum Claim.—Adams and Party. Three shafts, 82, 90, and 51 feet deep respectively. The first was sunk on a reef dipping slightly eastwards, and having an average width of 10 inches. Thirty-seven tons from this reef were crushed at the local battery, and yielded 19 dwt. per ton.

The second shaft was sunk on a parallel reef a few feet east of the first and dipping westward, so that it is probable that the two will junction at a depth. This reef has an average width of 18 inches. The third shaft is on the same reef, but is situated further to the south. In all, 92 tons of stone have been raised from the three shafts and crushed at the local battery; the yield was at the rate of 16 dwt. per ton. There are two other small parallel reefs in this claim. The country rock at the lowest level is still decomposed granite.

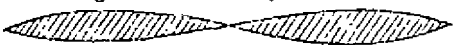
Lady

Lady Duff Claim.—English and Party.—Two shafts, 60 and 40 feet deep respectively, with drives. Reef averages about 12 inches in width. Country decomposed granite. Thirty tons of stone from this claim was crushed at the local battery, and yielded an average of 5 dwt. per ton.

Monte Christo Claim.—Emery and party.—Three shafts, 95, 80, and 40 feet deep respectively, also drives. Average width of reef, 9 to 10 inches. Twelve tons of stone were treated at the Clyde Works, and yielded at the rate of 1 oz. 9 dwt. 16 gr. per ton. There are at present about 50 tons at grass, estimated (by the owners) to contain over 1 oz. per ton. The decomposed granite appears to be giving place to hard granite in the lowest workings.

Jeffray and Party.—Four shafts, 45, 44, 32, and 14 feet deep respectively. There are five gold-bearing reefs in this claim, the largest of them averaging about 6 inches in width. Hard granite has been met in one shaft at a depth of 38 feet, and blasting had to be resorted to. No stone from this claim has been crushed as yet, and there are only about 3 tons at grass.

Constellation Claim.—Dubois and Party.—There are said to be twelve gold-bearing reefs in this claim, but it is probable that some of them will be found to junction. The largest of these has an average width not exceeding 9 inches, while the average width of the others is about 6 inches. No less than eight shafts have been commenced, the two deepest being about 50 feet each. Fifty tons have been despatched to the Cunnigar battery, and are estimated (by Mr. Dubois) to contain at the rate of 1 oz. 10 dwt. per ton.

The reefs are all very variable in width, occasionally thinning out to a mere thread and again increasing in width as they are followed horizontally or in depth, in other words they are lens shaped, thus  in horizontal as well as in vertical section. The reefs contain a little galena as well as pyrites. As already stated the country rock in which the excavations have hitherto been made consists of decomposed granite, which is easily worked and requires no blasting. Circumstances are therefore at present very favourable for economic mining, and the average yield of gold hitherto obtained by the batteries will pay, notwithstanding the narrowness of the reefs, so long as the character of the country rock continues the same. Indications are not wanting, however, that the favourable nature of the rock will not continue much deeper, and when the workings have extended to perhaps 100 feet or a little more the reefs will be found to occur in hard granite. In addition to this water will be met with, and the pyrites will be found to increase in quantity, rendering the gold more difficult of extraction. The conditions of mining will thus be materially changed, and it is questionable in my opinion whether the reefs will continue to be payable unless they increase in width or richness. Meanwhile there is no reason for assuming that any such increase will take place.

Section 40 of the Mining on Private Lands Act gives the Minister power to resume land where alluvial deposits containing gold of a payable character occur, but the Act contains no provision for the resumption of land on account of auriferous reefs. In the case of the Garangula Gold-field I am of opinion that the greater part of the alluvial gold, within the areas applied for as special leases by Mr. Macansh, has been extracted, and it is probable that by the end of twelve months from the present date, provided mining is carried on as at present, the alluvial gullies referred to will only afford employment for a few fossickers.

As already stated it is, in my opinion, doubtful whether the reefs will continue payable after the workings have penetrated the hard granite which is certain to be met with at a certain depth.

If it be considered, therefore, that resumption of the land should not be carried out unless there is good reason for believing that the Gold-field will be a permanently productive one, I do not think that the expenditure of such a sum as would be necessary to resume 1,280 acres of good agricultural land would be justifiable in this instance.

EDWARD F. PITTMAN,
Government Geologist.

The Under Secretary for Mines and Agriculture.

APPENDIX 3.

Report on the Country between Narrabri and Moree.

Geological Survey Branch, Department of Mines and Agriculture,
Sydney, 26 September, 1895.

Sir,

I have the honor to report that I have visited the Moree Bore, and have made a geological inspection of the country between Narrabri and Moree, and in the ranges to the east of the road between those two places.

Geological features, Narrabri to Moree.

The road from Narrabri to Moree passes over black soil plains, there being only one hill, a small basalt rise, where any outcrop of rock can be seen between the two towns. It will be understood therefore that the geological formation is very much hidden, and as these plains extend, with very little interruption, far to the westward, it has been a matter of considerable difficulty in the past to locate the eastern boundary of the Cretaceous basin—the evidence which would be afforded by the rocks being hidden by the level covering of Pleistocene and Recent soils. The basalt hill, already alluded to, and known as the Bald Hill, is situated close to the Galathera Tank, and from here to the Boggy Creek Hotel (a distance of 8 or 10 miles) the basalt occurs within a few feet of the surface, as proved by wells which have been sunk in a few places.

Woolabrar and Dobikin.

I was requested to report upon the probability of obtaining artesian water at Woolabrar, about 12 miles to the east of Boggy Creek Hotel, as the Railway Commissioners propose—in the event of the prospects being favourable—to have a bore put down there for supplying water for the railway from
Narrabri

Narrabri to Moree. Accordingly, in company with Mr. P. J. Makinson, Inspector of Public Watering Places, I drove to Dobikin Station, and thence to the railway (now in course of construction) at Woolabrar.

The road was still over black soil plains, but at Dobikin the plains are strewn with various coloured pebbles, consisting of agate, chalcedony, jasper, carnelian, lydian stone, &c. These have probably been scattered by flood waters, and have evidently been derived from a deposit of well-rounded pebble drift—probably of Pliocene age—which occurs at Woolabrar. The railway line runs in a northerly direction for about 5 miles through this deposit, which probably extends in an east and west direction for about the same distance.

Evidence of Wells on Dobikin Run.

There have been several wells sunk on Dobikin Run for the purpose of obtaining water. One of these is on Portion 26, Parish of Dobikin, and its position is shown by the letter "A" on the accompanying plan. The well has a bore at the bottom, the total depth reached being 350 feet without finding water. It was impossible to get down this well, but I made an examination of the spoil heap, and found that the rocks consisted of white and greyish sandstones, bluish-grey sandy shales, brownish clays, and nodules of clay ironstone; there were also thin seams of coal. Most of the rocks have crumbled or disintegrated readily on exposure to the atmosphere (owing no doubt to the quantity of moisture in them), and this I found to be a characteristic feature of the rocks as seen on the spoil heaps of all the wells in the district. By turning over the heap, however, I obtained fragments of solid rock in which were to be seen numerous impressions of *Taeniopteris Daintreei*, as well as another fossil plant, which has since been identified by Mr. W. S. Dun, as *Baiera*. *Taeniopteris Daintreei* occurs in the Clarence River Coal Measures, in the Ipswich Coal Measures of Queensland, and in the Mesozoic Coal Measures of Victoria. The presence of this fossil plant at Dobikin shows that the rocks there are the equivalents in age of the Clarence River and of the Ipswich Coal Measures.

Eastern Limit of Plains.

The plains extend to the eastward of Woolabrar for about 5 or 6 miles when they are succeeded by ranges of sandstone. These sandstones probably belong to the same series as the coal-bearing rocks underlying the plains.

There are two other wells on Dobikin Run, viz., at Woolabrar, on the eastern side of the railway line. I did not see these wells, but Mr. Taylor, the owner of Dobikin, informed me that they were sunk through similar rocks to those of the well last described, and that water was reached in them at depths of 90 and 130 feet respectively.

Moloney's Well, 14 miles E. of Moree.

I visited another well, known as "Moloney's Well," 14 miles east of Moree. The position of this well is shown by the letter "B" on the accompanying plan. Here again I found in the spoil heap similar rocks to those observed at the well "A" on Dobikin Run. They showed the same tendency to disintegrate on exposure to the atmosphere, and here again I obtained specimens of *Taeniopteris Daintreei*.

Well west of Terry-Hie-Hie Homestead.

At another well, $2\frac{1}{2}$ miles west of Terry-Hie-Hie Homestead, and marked "C" on plan, rocks similar in lithological characters and exhibiting the same tendency to disintegrate on exposure were seen, and in these I saw several indistinct specimens of what I believe to be *Taeniopteris Daintreei*, though they were too imperfect to warrant their being definitely named. Terry-Hie-Hie Homestead is by barometric measurement about 420 feet higher than Moree, but the ascent is so gradual as to be scarcely noticeable on the road.

Rocky Creek Carboniferous Rocks.

Near Rocky Creek Homestead (which is about 500 feet higher than Terry-Hie-Hie, or 920 feet above Moree) are seen beds of sandstone and blue limestone containing marine fossils, which have been determined by Messrs. Robert Etheridge, jun., and W. S. Dun, as of true Carboniferous age. Mr. G. A. Stonier, Geological Surveyor, was the first to collect *Orthis australis* and *Spirifera* from this locality, and I have now collected, in addition, *Productus*, *Rhynchonella*, *Bellerophon*, *Loxonema*, *Euomphalus*, crinoid stems, &c.

The rocks overlying these Carboniferous marine beds, and forming the mountain ranges around Rocky Creek, have all the appearance, when viewed from a distance, of the Hawkesbury sandstones, and those of the Clarence basin. I propose, however, to make a closer examination of these rocks at an early date.

Rocky Creek to Narrabri.

Apparently similar rocks are to be seen along the road between Rocky Creek and Narrabri. At about 27 miles from Narrabri this road passes over a gap in the range at an altitude of 1,550 feet above Moree. The zigzag road over the mountain is cut through a thick sheet of olivine dolerite, but on each side of this the mountains appear to be composed of the same (Mesozoic?) sandstone.

Well near Turrawan.

The same formation appears to extend for some distance to the south-east of Narrabri, and about 4 miles west of Turrawan Railway Station the owners of Tibbereena Run have put down a well to a depth of 50 feet in greyish-white sandstone (which crumbles readily on exposure) and brownish-clayey shales. No water was struck, but at the bottom of the well a seam of good bituminous coal, 7 inches thick, was penetrated. The position of this well is shown by the letter "D" on the accompanying plan. I could find no recognisable plant-impressions in the rocks from this well, but from their lithological characters it is probable that they may belong to the same series as those already described, though, on the other hand, they may be an extension northwards of the Permo-Carboniferous rocks of Gunnedah.

Age of Rocks in Moree Bore.

Judging from the very great lithological resemblance between such fragments of the rocks and coal from the Moree Bore as were available, and the rocks (containing *Taniopteris Daintreei*) and coal from Moloney's Well and the well on Dobikin Run, and bearing in mind the great depth of the bore, and the comparatively short distance which the two wells are to the eastward of the bore, it appeared to me that the evidence all pointed to the probability of the artesian water supply at Moree occurring, not in the Cretaceous formation, but in rocks which are the equivalents of the Clarence and also of the Ipswich Coal Measures, and which may be regarded as of Triassic, or at any rate not newer than Jurassic age.

Proof of the existence of an Artesian Water-bearing Basin of Triassic or Jurassic Age.

On my return to Sydney I made a careful examination of the drillings from the Moree Bore, which were collected by the Officers of the Works Department, under whose supervision the bore was commenced, and here I had the satisfaction of obtaining confirmation of the opinion previously formed, for in a sample of shale which was labelled as having been drilled from a depth of 810 feet I recognised several undoubted specimens of *Taniopteris Daintreei*.

The importance of this palæontological evidence is unquestionable, as it proves the existence of large supplies of artesian water in Triassic or Jurassic rocks, whereas we had no previous definite knowledge of the occurrence of artesian water in any other than the Cretaceous formation in New South Wales.

Proof of Similar Age of Rocks from Coonamble Bore.

A paragraph appeared in the *Daily Telegraph* of January 20th, 1894, stated that the Rev. J. M. Curran had reported to the Minister for Works that, in his opinion, the strata pierced by the Coonamble Bore were Triassic and not Cretaceous. I have made enquires at the Works Department, and am informed that there is no record of any written report to that effect having been received. I understand from Professor David, who spoke to Mr. Curran on the subject, that the latter gentleman stated that he had not obtained any definite palæontological evidence of the age of the rocks, and that his opinion was based on their lithological resemblance, and that of the indeterminable plant fragments to those of the Dubbo rocks, with which he was familiar. The Coonamble Bore was begun and completed by the Works Department, and I have not until recently had an opportunity of inspecting the samples of drillings which were collected from it. I have now carefully examined them, however, and am glad to be able to confirm, by palæontological evidence the opinion previously formed on lithological grounds by Mr. Curran. In a piece of shale from a depth of 327 feet in the Coonamble Bore I found several specimens of *Taniopteris*, while in a fragment of greyish-white sandstone from a depth of 1,211 feet I found a fairly distinct impression of *Thinnfeldia*, a fern characteristic of the Hawkesbury Series, and of the Dubbo Beds, which are regarded as of Triassic age, and which are also thought to be the equivalent of the Clarence series.

Gil Gil and Dolgelly Bores.

An examination of the drillings from the Gil Gil and Dolgelly Bores (north of Moree), shows that the rocks pierced there are, in their lithological character, very similar to those of the Coonamble and Moree Bores, and it is therefore highly probable that they are of the same formation.

Nyngan Bore.—Terabile Creek, near Castlereagh River.

In 1891, Mr. Robert Etheridge, junior, identified a specimen of the *Taniopteris Daintreei* in shale from the Nyngan Bore, and a few months ago another specimen of the same fossil plant was identified by Mr. W. S. Dun, in some rocks forwarded by Mr. W. L. R. Gipps, from Terabile Creek, 4½ miles from the Castlereagh River. The position of this find is marked by the letter "E" on the accompanying plan.

Gilgandra and Bourbah Bores.

The drillings from the Gilgandra and Bourbah Bores (the latter of which has a yield of over 1,100,000 gallons of water per day), also closely resemble in their lithological character the rocks which I have been describing.

Probable extent of Triassic or Jurassic Water-bearing area.

It is evident, therefore, that this Mesozoic Coal-field is of very considerable extent, and the Coonamble and Moree Bores, and probably also the Bourbah, Gil Gil, and Dolgelly Bores, are proofs of the fact that the area of our Cretaceous artesian water-bearing country is supplemented by a considerable area of water-bearing rocks of Triassic or Jurassic age, not previously known to exist.

Coal in the Triassic or Jurassic rocks.

It is open to question whether these Triassic (or Jurassic) rocks contain any *workable* seams of coal, for while in Queensland good workable seams are found in the Ipswich Coal measures, none that could be profitably worked are known in the Clarence carboniferous basin in our own Colony.

Extension of water-bearing rocks east of Moree.

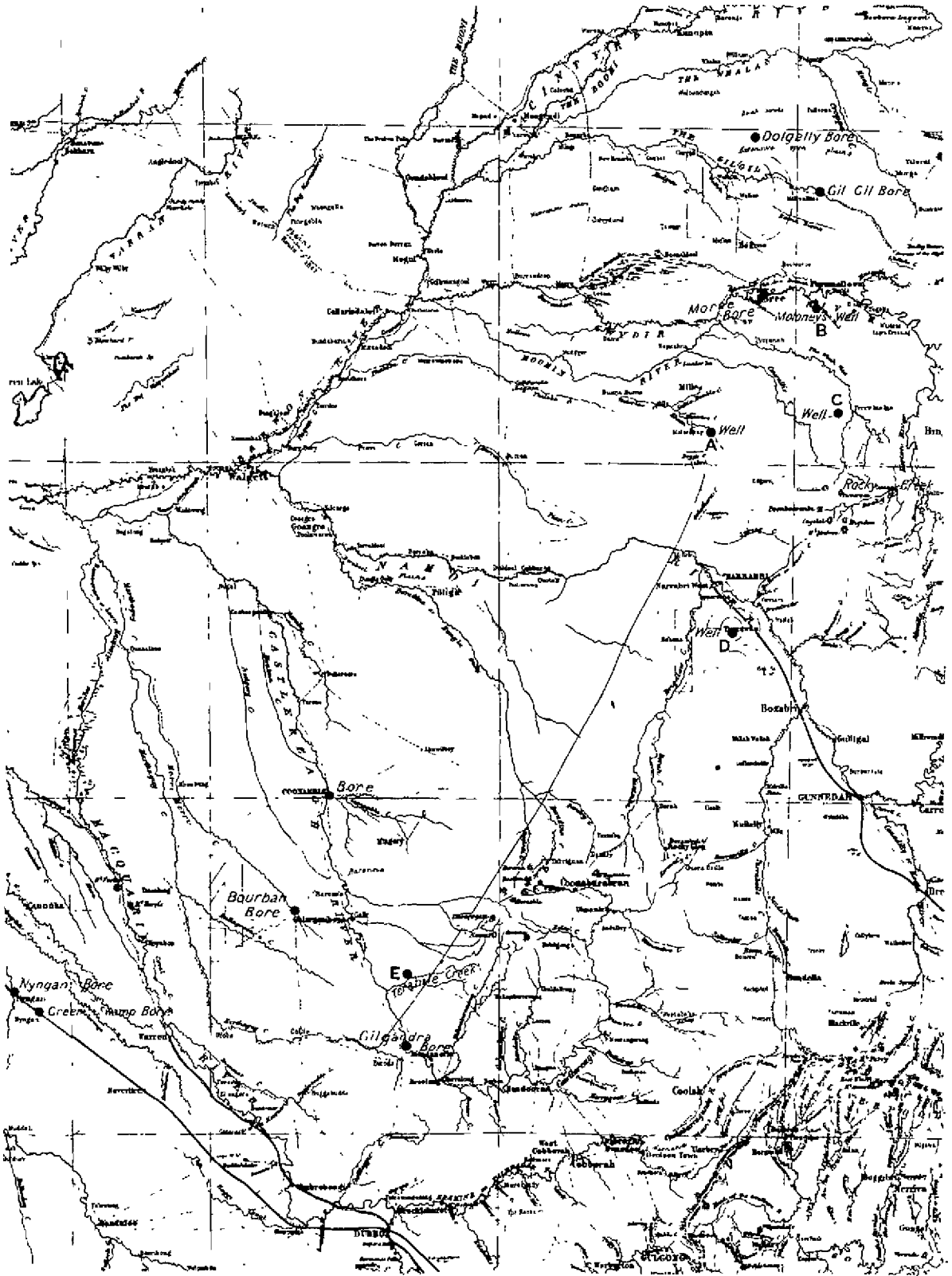
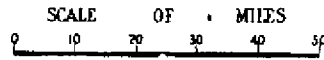
It is probable that bores for artesian water would be successful for at least 15 miles east of Moree, and I am of opinion that the bore which the Railway Commissioners suggest at Woolabrar, should have a fair prospect of success.

Desirability of obtaining a solid core with a drill.

It would be a very great advantage from a geological point of view, if in the next bore put down in this district a solid core could be obtained. This could probably be best effected by means of the recently introduced Calyx Drill. I understand that splendid work has been done by this drill in the Coal Measures of Victoria, and at a cost very much below that of the ordinary percussive drill. I have had the advantage of seeing a number of the cores obtained by the Calyx Drill in Victoria, and am of opinion that the rocks in the Moree District would be eminently suited to its action, while the geological information which would result from the production of a solid core would be of enormous importance in enabling us to more thoroughly understand the nature and limits of our underground water supply. In addition to this the question as to whether this newly recognised coal basin contains any workable seams of coal would be definitely settled.

PLAN

TO ACCOMPANY REPORT BY E.F. PITTMAN, A.R.S.M., GOVERNMENT GEOLOGIST,
on the country between Narrabri and Moree



Water in Ipswich Coal Measures.

The Ipswich Coal Measures in Queensland are water-bearing, the water having risen to near the surface in several instances, but it appears that only in one locality (*viz.* at Brisbane Racecourse or Eagle Farm), was true artesian water obtained, and in that instance the maximum supply was only about 8,000 gallons per diem, and the water was unfit for domestic use (*vide* "The Geology and Palæontology of Queensland" Jack and Etheridge, p. 322.)

Probability of water in the Clarence River Series.

The fact that the rocks in which the Moree Bore was put down, are the equivalents in age of the Clarence River Series, renders it probable that artesian water might also be obtained by boring in the Clarence basin. Fifteen years ago, in a report addressed to the late Mr. C. S. Wilkinson, I suggested the putting down of a bore near Grafton, with the double object of ascertaining whether workable seams of coal occur there, and of testing for artesian water (*vide* Annual Report of the Department of Mines for 1880, page 244.)

Summary.

The discovery of the fossil plant *Teniopteris Daintreei* in the Moree Bore (in which an artesian supply of over 3,000,000 gallons of very good water has been obtained from a depth of over 2,600 feet), proves that this bore is not in the Cretaceous formation, but in carboniferous rocks of Triassic or Jurassic age—the equivalents of the Ipswich Coal Measures and the Clarence River Series. The same fossil was found in the Coonamble Bore (which has a supply of artesian water amounting to over 1,800,000 gallons per day), in the Nyngan Bore, and at Terabilo Creek, on the Castlereagh River. The lithological characters of the drillings from the Gil Gil Bore (which has yielded a supply of about 100,000 gallons of water per day); from the Dolgelly Bore (from which a supply of 300,000 gallons per day has been obtained); from the Bourbah bore (which has a yield of over 1,100,000 gallons per day), and from the Gilgandra Bore, lead me to believe that they all belong to the same formation.

It is evident, therefore, that not only has a new source of artesian water been discovered in New South Wales, but that the area from which the supply will be available is of very considerable extent.

In conclusion, I would invite attention to the excellent quality of the water from the Moree Bore. An analysis by Mr. J. C. H. Mingaye, shows that it contains 49.16 grains of solid matter per gallon, and that over 40 grains of this consists of carbonates of soda and potash. The water has a distinct alkaline reaction, and its temperature as it issues from the bore is about 113 degrees Fah.

It appears to me, therefore, that it has qualities which render it peculiarly adapted for wool scouring, and in a district so remote from Sydney as Moree, the saving which could be effected in the cost of carriage of wool if it were first scoured, would probably be a matter of some importance.

I have, &c.,

EDWARD F. PITTMAN,
Government Geologist.

The Under Secretary for Mines and Agriculture.

APPENDIX 4.

Report on the probable occurrence of Artesian Water in the Clarence Coal Measures.

Geological Survey Branch, Department of Mines and Agriculture,

Sydney, 15 October, 1895.

Sir,

I understand that a request is being made from Grafton that a report be furnished as to the probability of artesian water occurring in the Coal Measures of the Clarence basin, and as I am about starting on a trip which may occupy some time, I venture to submit the following remarks in anticipation of the request referred to.

About fifteen years ago I made an examination of the Clarence and Richmond River basin, and suggested the putting down of a bore with the twofold object of testing the country for payable coal seams and for artesian water (*vide* Ann. Rept. Dept. Mines for 1880, p. 244). Subsequent examinations of this coal-field were made by the late Mr. C. S. Wilkinson, in company with Mr. W. H. J. Slee (Ann. Rept. Dept. of Mines, 1889, p. 202), and by Mr. (now Professor) T. W. E. David (Ann. Rept. Dept. Mines for 1891, p. 220).

The Clarence River coal-bearing series are considered on palæontological grounds to be the equivalents in age of the Hawkesbury Series of New South Wales, of the Ipswich Measures of Queensland, and of the Coal Measures of Victoria. No artesian water has ever been obtained from either the Hawkesbury Series of New South Wales, or the Coal Measures of Victoria, although a number of bores have been put down through both these formations in search of coal. In the Ipswich Coal Measures of Queensland several bores have been put down, but only in one locality (near the Brisbane Racecourse) has artesian water been met with, and in that instance the supply was only about 8,000 gallons per day, and the water was unfit for domestic use, by reason of the amount of soluble salts contained in it.

Quite recently however (*vide* papers 95/18091) I had the honor to report having found proof, of a palæontological nature, that the Moree and Coonamble Bores (in both of which large supplies of artesian water of excellent quality have been obtained) have pierced rocks which are the equivalents in age of the Clarence Series.

The fact, therefore, that good supplies of artesian water have been found in these Triassic or Jurassic rocks at Moree and Coonamble renders it reasonable to hope that similar supplies may be obtained in the lower sandstones of the Clarence Series—especially as the latter appear to occur in a complete basin—notwithstanding the absence of artesian water supplies in the Hawkesbury Series and the Victorian Coal Measures and the very poor supply obtained in one instance in the Ipswich Coal Measures.

The problem can of course only be solved in a practical way, *viz.*, by putting down a test bore, but in the meantime it may be stated that there is sufficient geological evidence to justify such a test, which, it need hardly be said, would be of very great interest.

I have, &c.,

EDWARD F. PITTMAN,
Government Geologist.

The Under Secretary for Mines and Agriculture.

APPENDIX 5.

Third Report on the Garangula Gold-field.

Geological Survey Branch, Department of Mines and Agriculture,

Sydney, 20 December, 1895.

Sir,

I have the honor to report that I have paid a third visit to the Garangula Gold-field, and, in company with Constable Wilson, the Mining Registrar, have inspected the chief workings on the field.

Not one of the alluvial claims on which it was stated that payable gold had recently been reported can, in my opinion, be regarded as a new discovery. They are all situated either in the midst of or adjoining old workings, and consist of small runs of auriferous wash in the form of feeders to the already worked main gullies, or patches which have been overlooked by previous workers. All the alluvial work now going on upon Macansh's private land is more or less in the nature of fossicking, and cannot, under any circumstances, be regarded as of a permanent nature. I see no reason for modifying the remarks on this subject made in my report of the 5th April last.

Adams Reef is the most important of the lode deposits on the field. It has averaged 16 or 18 inches in width (maximum width, 3 feet), and has been found rich in places. Adams and Party have crushed 241 tons in all for a total of 322 oz. of gold, and a parcel of 58 tons had just been put through the battery at the time of my visit. "Cleaning up" had not been completed, but Mr. Adams expected the yield to be at the rate of 25 dwt. per ton. The main shaft is now about 95 feet deep, or only 5 feet deeper than it was eight months ago on the occasion of my last visit. The party has been mainly engaged in stopping out the auriferous stone up to the surface. The sinking is now in hard granite.

Another reef has been discovered by T. Mott since my last visit to the field. It is situated between the Lady Duff and Manley's Reef, and has a width of from 10 to 16 inches in the workings at a depth of 100 feet from the surface. Sixty-five tons have been crushed from this reef for a yield of 75 oz. of gold.

I have, &c.,

EDWARD F. PITTMAN,

Government Geologist.

The Under Secretary for Mines and Agriculture.

APPENDIX 6.

Rumoured Discovery of Gold at Parramatta.

Geological Survey Branch, Department of Mines and Agriculture,

Sydney, 12 August, 1895.

At rather frequent intervals there have been rumours of the finding of payable auriferous deposits in the rocks of the Hawkesbury Series, thus a report of this nature caused a rush at Parramatta about a year ago, and there have been similar reports in reference to the occurrence of gold-bearing reefs at Springwood, Gosford, and Kiama within the last three or four years. All these rumours, however, proved upon investigation to be unfounded, and I have no hesitation in expressing my opinion that the present rumour in regard to the occurrence of a gold-bearing reef at Parramatta will not be substantiated.

The sandstones and conglomerates of the Hawkesbury Series are known to contain gold in small quantity, as was first pointed out by the late Rev. W. B. Clarke in 1860. Professor Liversidge also read a paper before the Royal Society last year giving the results of a number of assays of Hawkesbury sandstone, showing that much of it contained a trace of gold. This gold, however, exists in fine particles disseminated through the sandstones and conglomerates, and not in the form of concentrated deposits, such as auriferous reefs intersecting them.

Mr. Mingaye, Analyst and Assayer to the Department, who lives at Parramatta, informs me that he inspected the locality of the rumoured find yesterday, and he has handed me a specimen of the rock, which consists of grey micaceous sandstone of the Hawkesbury Series. He informs me that no reefs were visible, and that the exact spot where the gold is said to occur is kept a secret by the prospectors.

In conclusion I may state that from my observations of the Hawkesbury rocks generally I do not think it probable that they will be found to contain payable auriferous deposits, and, in any case, if an auriferous reef existed in the neighbourhood of Parramatta, it is extremely improbable that it could have remained undiscovered for so many years in such a populous neighbourhood.

E. F. PITTMAN,

Government Geologist.

The Under Secretary for Mines and Agriculture.

Progress Report of Mr. J. E. Carne, F.G.S., Geological Surveyor.

Sir, Geological Survey Branch, Department of Mines and Agriculture, 29 January, 1896.

I have the honor to hand you the following brief summary of work performed during 1895:—

In January I was engaged in writing reports on the Toolong and Bogong Gold-fields, and a second report on the chrome deposits of the Gundagai and Tumut districts.

In February I inspected and reported on the Bywong Gold-field.

In March I reported on Messrs. Harrison and Timmis' mine at Batlow, near Adelong, and examined prospecting sites at Queanbeyan, Foxlow, and Captain's Flat.

In April I inspected prospecting sites in the Gundaroo, Braidwood, Snowball, Yalwal, Bateman's Bay, and Brimbramalla districts; and land alienation area at Mogo.

In May I inspected Waldron's Swamp, near Moruya; Turquoise Mine, near Bodalla; and prospecting sites at Pankalla, and Mount Dromedary; supposed deep ground near Bermagui; and prospecting site in the Parish of Murrumbidgee, near Bermagui; examined country round Eden, and continued examination and mapping of the Pambula Gold-field.

In June I was occupied with reports and office work.

In July I was absent on leave.

In August I inspected the Tallawang Gold-field Reserve, and recommended curtailment of portions only. Inspected prospecting sites near Mudgee, Parkes, Forbes, Burrage, and Mount Werong. Examined land for alienation at Parkes, and Cheshire Creek, near Bathurst. Inspected supposed false bottom in the alluvial workings of Mount Werong. In

In September I assisted in running a section line across the Greta Coal Measures, and examined a large special area for alienation near Lake Cowal.

In October I examined prospecting sites at Dalmorton, Chandler's Creek, Mann River, Chambigne, and Coramba. Examined the recently discovered reefs at Coramba, Bucca, and Tallawndjah Creek, Orara River district, also a newly discovered cinnabar deposit on Yulgilbar Station, Clarence River. Began inspection of the Esk River and Jerusalem Creek auriferous sand leads between the Clarence and Richmond Rivers.

In November continued the above examination. Examined tripolite deposit at Wyrallah, near Lismore; the neighbourhood of Byron Bay and Ballina. Examined the Gundry Tin lodes at Rowlands' Plains, Wilson River; and Willi Willi Copper Mine, Upper Macleay. Inspected prospecting sites at Yankee Creek, near Mullumbimby, Bowraville, Nambucca River, Smith's Flat, Upper Macleay River, Port Macquarie, Coolongolook, and Paddy's Creek, near Bungwall.

In December I inspected prospecting sites at Copeland, Cobark, and Upper Gloucester River, the rest of the month being occupied in writing reports, &c.

At various times during the year I attended meetings of the Prospecting Board.

The following reports were handed you relative to work performed or completed during the year:—

Further report on the chrome deposits of the Gundagai and Tumut districts.

Report on the Toolong and Bogong Gold-fields.

Report on the Bywong Gold-field.

Report on an auriferous deposit at Batlow, near Adelong.

Report on the Big Hill reefs near Bateman's Bay.

Report on a deposit of cinnabar near Lionsville.

Report on the Coramba and Bucca Creek reefs.

Report on the auriferous beach sands of the Esk River and Jerusalem Creek, Clarence and Richmond Districts.

I have, &c.,

JOSEPH E. CARNE, F.G.S.,

Geological Surveyor.

The Government Geologist.

APPENDIX 7.

Further Report on the Chrome Deposits of the Gundagai and Tumut Districts.

Sir, Geological Survey Branch, Department of Mines and Agriculture, 12 March, 1895.

I have the honor to report that, in accordance with your instructions, I have examined the deposits of chromite in the Gundagai and Tumut districts which have been discovered since my previous inspection in 1892.*

Since that date the chrome mining industry has been inaugurated and developed into fairly large proportions. The export of chromite began in 1894, and during the year reached 3,034 tons valued at £12,336.

The first attempt to export this ore was in 1882, when the deposits at Bowling Alley Point, near Nundle, were opened up by Messrs. Blackall, Hunt, and others, of Tamworth. Mr. E. C. Hunt informs me that they shipped in the aggregate about 100 tons to Melbourne, Liverpool, and London; the highest price realised being 70s. per ton, which was not sufficient at that date to afford a profitable return on the outlay.

In the Gundagai-Tumut District chromite has now been found at intervals in the serpentine country, for a distance of about 24 miles southerly from the first deposit opened near Coolac, the most southern operations being within 8 miles of Tumut. Permits to mine extend to even a greater distance. There is no doubt that other deposits will be discovered from time to time in the belt of serpentine country which extends both north and south from the points mentioned, as well as in the area already partly explored. But the present workableness of discoveries in the southern extension—apart from quality—will depend entirely upon the distance from rail. In this direction also the country becomes more rugged and broken.

The most recently discovered deposits towards Tumut, such as the Emu, Mt. Miller, Keefe's, and McNerny's, do not at present afford indications of being equal in extent to the deposits nearer the Murrumbidgee River and Coolac, such as the Kangaroo, Carroll and Gillespie's, Quilter's, and Vulcan Mines, but as little more than preliminary prospecting has yet been begun, more extended work may belie the surface features.

Vulcan Mine.

The first mine opened in the chrome district was the Vulcan, formerly known as Wright's, and described under that name in my previous report.

About 1,200 tons of chromite has been raised from this mine, chiefly by an open cut of a most dangerous character, which is now being filled in preparatory to the adoption of a safer and more systematic method of extraction.

From the appearance of the remaining portions of the ore-bodies I am of opinion that my previous estimate of ore available in the then known bunches, viz., 2,250 tons, will not be exceeded, though it is quite possible that prospecting may discover other deposits in the vicinity.

Between the Vulcan and Quilter's Mount Helena Mine, a distance of about 5 miles, several bunches have been discovered, but chiefly of minimum grade at surface. No ore has yet been extracted from them.

Quilter's Mine.

Of the six deposits of chromite on Mr. John Quilter's property at Mount Lightning, described in my first report, three have since been opened, and 1,100 tons of ore despatched, mainly from bunches described under letters B and C.

Both these deposits when first seen presented very small surface outcrops from under the soil and loose slipped rocks, which had not been removed, hence an attempt to give a roughly approximate estimate of quantity based upon measurements of only partly exposed outcrops has proved altogether futile.

At B the ore has been extracted by means of an open cut about 50 feet in length and 20 feet deep, from the bottom of which a shaft was carried down 30 feet. An inspection of the lowest level attained—50 feet—was not possible as the shaft had been filled up in view of a safer method of extraction than that previously adopted.

It

It is reported, however, that the ore-body—which shows solid and thick in the open cut—gradually thins towards the bottom of the shaft.

At C a solid vein from 1 ft. 6 in. to 2 feet thick, appears to be going down. A little ore has been extracted from bunch A, where a face above ground is now exposed measuring about 14 feet high, and 12 to 15 feet wide. Bunch E near the summit of Mount Lightning, is not being worked. The two latter deposits—A and E—are of considerable extent, especially E, but unfortunately the grade is low, being below the minimum standard.

The ore from the working deposits is conveyed by gravity to a stage across the Murrumbidgee River, by means of a single wire cable, 1,300 yards long, the bags of ore being suspended to the cable by hooks with running blocks.

It would, therefore, appear advantageous—if the grade of the richer ore bunches will allow, and I am informed by Mr. Quilter that four consignments aggregating 80½ tons yielding from 49·8 to 56·5 per cent. of sesquioxide of chromium—that a grading floor should be laid down at the landing stage and the ore from the different deposits carefully blended to a uniform average grade (say) of 50 per cent. The direct return would naturally shrink in proportion to the fall in grade, but the shrinkage would be more than compensated by the larger amount of ore rendered available. Uniformity of quality would no doubt also be appreciated by users abroad.

Mount Mary Mine.

On the south side of Mount Lightning close to the Adjungbilly Creek, Messrs. Carroll and Gillespie are working the Mount Mary Mine on tribute from Mr. Quilter, in whose property it occurs. About 400 tons have been dispatched to Sydney averaging, according to the tributors, from 48 to 49 per cent.

The main bunch, which underlays to the west, has been worked hitherto in a most dangerous open cut, about 45 to 50 feet long, and from 20 to 30 feet deep. The ore-body under foot is solid and about 7 feet thick; whilst a wedge of ore remains in the upper workings 12 feet high and 10 feet broad. Evidently a considerable amount of ore is still available when a proper system of extraction is adopted.

Several smaller bunches have been more or less exposed by open cuts and shallow shafts higher up the slope of the mountain. In one instance a thickness of about 1 ft. 6 in. is exposed in a shallow shaft.

The most important of the new finds, however, has been found near the top of the ridge, where the soil has been removed for a small space, partly exposing an outcrop of solid ore for about 10 feet by 4 feet. Fifty feet south another small bunch occurs which may prove to be connected with the former; but no attempt has been made to uncover the entire outcrop, notwithstanding that a considerable expenditure has been decided upon, in the construction of a tramway to convey the ore from this deposit to the northern foot of Mount Lightning, a distance of about 50 chains. Sufficient fall is stated to be obtainable through a gap to enable the loaded trucks to run by gravity to the foot of the ridge, from whence the ore will have to be carted to the river, and conveyed across by cable or other means. The empty trucks will be returned by horse-traction. The impetus received in the descent of the ridge should, however, be sufficient to carry the loaded trucks to the river side, as the falling ground continues to within a very short distance of it.

The grade of the ore is stated to be good, but the statement appears to be based upon an assay of a sample only from the outcrop. To insure certainty from disappointment a more adequate test is desirable.

There is evidence of a very considerable quantity of chromite being available on Mr. Quilter's properties, especially if blending of the various grades be adopted.

Welch's Mine.

On the west side of the continuation of the serpentine ridge south of Adjungbilly Creek, in Portion 173, Messrs. Welch and Party extracted 220 tons from a deposit, which, unfortunately, appears to have pinched out entirely in the bottom of the open workings.

On Mr. Robert Owen's property, in addition to the Kangaroo Mine, Messrs. Givney and Thornycroft are engaged prospecting on behalf of Mr. Joseph Edwards, of Katoomba. So far twelve deposits have been opened which yielded 1,800 bags of ore, about 75 tons. The grade in several instances is stated to have been very close to the minimum. Four known bunches have yet to be proved. The largest yet found by the prospectors yielded about 21 tons.

Kangaroo Mine.

The Kangaroo Mine is situated in Portion 128, Parish Wagara, County Buecleugh. The proprietor, Mr. M. Constable, holds two leases of 80 and 40 acres, subject to terms agreed upon with the owner of the land.

About 1,230 tons of ore have been despatched to date (February 8th, 1895); the output of late being at the rate of 100 tons per week.

The ore-body has been proved horizontally for about 200 feet by two open cuts—following the irregularities of its contour—and by two shafts between the open excavations. Vertically it has been proved to the 30-ft. level. The main opening is about 75 feet long, 25 feet broad, and 30 feet deep.

The strike is a little west of north, and the underlay west. Since the new year the dangerous method of working by open cut, without timbering, has been abandoned; and under the new Manager, Mr. T. Coke-Hill, stulls have been put in and the ground made secure. Drives are now being extended both north and south; and preparation is being made for sinking a main shaft to test the deposit in a systematic manner.

The ore-body was originally narrow at surface (so I am informed), but opened to about 18 feet in widest part in sinking. At the present lowest stope, at the north end, about 6 feet of solid ore is exposed; and at the south end (of main opening) about 5 feet is showing, without reaching the hanging wall, which at this point is undercut by the swelling of the ore-body.

In the bottom there is a length of 54 feet by an average width of about 4 feet of solid ore.

At the surface, at the extreme south end of the main opening, the ore bunch seems to be divided by a block of country. About 45 feet from this point a shaft has been sunk 25 feet into the deposit. Thirty feet further south another shaft has been sunk 30 feet in ore rather mixed with country; 10 feet from this is the second open cut, about 15 feet long and 12 feet deep, in which about 5 feet of ore is showing at both ends, but rather mixed with country.

The quality of the ore in the Kangaroo Mine has so far proved consistently good, as may be judged from Mr. Constable's statement that, as regards the 1,230 tons despatched, the lowest average in the account sales of any consignment was 53 per cent., and the highest 57 per cent. Thirty-one men are at present employed on the mine.

Between the Kangaroo and Emu Mines, near Mr. P. Kiley's Homestead, the serpentine belt, so far as examined, appears to attain its maximum width, and in places forms level or gently undulating downs. The frequent presence of small chromite rubble in rain gutters in the surface soil attests the proximity of deposits which future prospecting will doubtless reveal. Several outcrops have already been discovered on the estate, and from one of them, known as the Zigzag Mine, about 100 tons of ore were extracted. It is, however, reported that the ore pinched out, which is borne out by the fact that the mine was abandoned about a month prior to my visit. I did not see the site, as it was, unfortunately, overlooked by the person guiding me, evidently owing to its having been abandoned.

Emu Mine.

The Emu Mine is held as a Mineral Lease of 20 acres, on Brungle Creek, Parish Wyangle. Operations were begun on this property about a fortnight prior to inspection, and considerable progress had been made, under the supervision of the owner, Mr. M. Constable, in preparing roadways, shoots, &c., and uncovering the two known ore deposits. Unfortunately the largest outcrop—on the south side of a low spur—soon proved only a surface skin, which yielded not more than about 15 tons of ore. Timbering was being prepared for driving alongside a joint in which a little ore was still showing; but the prospect of the ore-body going down under-foot with a southerly dip seems brighter than the inducement offered for driving the tunnel into the hill, where the rock was becoming excessively hard and tough.

The second bunch of chromite occurs a few feet above Brungle Creek, and close alongside the Tumut-Tomorrowmak road. Here an opening has been made in the north-western side of the above-mentioned spur, in which about 6 feet by 3 feet of solid chromite has been exposed under-foot, the longest axis having a north and south direction, which corresponds pretty closely with the side of the ridge from this point. Hence a shaft will be necessary instead of a tunnel as first contemplated. Until the ore-body has been further exposed it would not be safe to venture an opinion as to its probable extent.*

The Emu Mine offers the advantages of accessibility, a good Government road, and permanent water. If the deposits prove extensive, advantage could perhaps be taken of the latter for dressing the snalls up to market grade, and thus save at small cost a present loss in working, equal to about one-sixth of the output in some cases.

The distance from the mine to the nearest railway station—Gundagai—is about 19 miles; and the cost of carriage is to be 10s. per ton, the lower rate in this case being due to the superior road.

At the time of inspection, fourteen hands were employed, and this number will be increased if the developments warrant it.

Mount Miller Mine.

This mine is situated on the south side of Brungle Creek, close to the Emu Mine. It is held as a 20-acre Mineral Lease by Messrs. Griffiths, Kelly, and Party.

The only bunch of ore yet discovered occurs at an elevation of about 200 feet above the Tumut-Tomorrowmak road, near where it crosses Brungle Creek. An open-face working has exposed an ore-body about 2 feet 6 inches thick in the widest part, which appears to be going down, but considerably mixed with the country on the top and on the east side. About 8 feet of the deposit has been extracted, as the face was carried forward horizontally. Operations so far can only be regarded as preliminary prospecting, and not sufficiently advanced to justify any prediction as to permanency of deposit.

A sample from the outcrop yielded 48.13 per cent. of chromium sesquioxide at the Departmental Laboratory; others are reported up to 51 per cent.

Keefe's Mine.

Between Brungle and Bumboleec Creeks chromite has been discovered on Mr. Keefe's property, but little has yet been done to prove it, and no work was in progress at the time of inspection, because—so Mr. Keefe informed me—the mine was under offer to an investor. At this site a chromite bunch is represented by broken blocks at the surface for about 6 feet by 2 feet 6 inches, but no attempt has yet been made to ascertain its actual longitudinal extent by removal of the soil. On the west side of the outcrop is a small opening about 5 feet deep, but the appearance of the ore at this level could not be seen because of the presence of about 4 feet of water in the hole.

About 3 feet from the bunch on the east side a shaft has been sunk about 16 feet deep; a little ore was at surface which had been extracted from it, and more was showing in the side of the shaft, but it appeared to be too much mixed with country to be of a marketable grade. The ore in the surface outcrop, however, is of good quality.

Mr. Keefe informed me that he had other "shows" but that no attempt had yet been made to prove them.

M'Inerny's Mine.

Close to Bumboleec Creek on the south side, at about 8 miles from Tumut, Mr. James M'Inerny has several men employed prospecting on the side of an old Mineral Lease, about 150 yards north of the south-west corner of Portion 351 in the Parish of Mundongo.

The outcrop of a small bunch was discovered at this site by W. Piper in September last on a low spur falling into Bumboleec Creek. Attention was first directed to a bunch on the west side, but only a small quantity of low-grade ore was obtained when it pinched out. At the time of inspection a little better prospect was being developed on the eastern fall, where a bunch 7 feet long, with an average thickness of from 12 to 15 inches has been uncovered for a depth of about 5 feet. The ore-body is very irregular, and apparently of minimum grade; the southern end is broken and mixed with country. If a payable deposit of chromite should be discovered in this locality, the carriage to rail would be from 23 to 30 miles. In winning and dressing the ore day-labour has been found most advantageous where the chief aim has been to maintain a high average grade. In one mine contract labour was employed for a time but has since been abandoned in favour of day-labour with efficient supervision. At the Kangaroo Mine

The

* I have since been informed by Mr. Constable (March 8th) that a shaft has been sunk 16 feet at this site, in which there is 4 feet of ore going down; the bunch had also been proved for 16 feet horizontally, and was still showing in each end.

the following method of preparing the ore for market is adopted. The ore, as it comes to the dressing floors from the mine, is divided into "firsts" (clean ore) and "seconds" (mixed ore and country). The "firsts" ore is broken into pieces about 3 inches in diameter, and filled into bags direct. The "seconds" ore and country is broken by hand and picked, the residue being screened and again picked. The filled bags average about 24 to the ton. At least one-sixth of the ore raised is lost as smalls, a loss which it might pay to obviate where water is plentiful, by use of coarse jiggs, or possibly by box-head sluices. A trial with one of the latter set at a high angle would prove whether the fragments of serpentine rock could be removed by sluicing—the specific gravities of chromite and serpentine being 4.3.5 and 2.5.7 respectively. I am indebted to Mr. M. Constable for the following statement of price obtainable for chromite delivered in Sydney, viz., 70s. per ton for 50 per cent., and 2s. 6d. per unit over that percentage. It is difficult to ascertain the lowest saleable grade, as buyers "fight shy" of ore yielding less than 48 per cent. of sesquioxide of chromium, and much prefer not to deal with ore carrying less than 50 per cent. The fall in value per unit below 50 per cent. is very rapid. The cost of carriage by team in the Gundagai District has, so far, averaged from 10d. to 1s. per ton per mile. Railway freight depends upon the extent of the consignments, the following being the ruling rates:—

Ore in 120 tons, Gundagai to Sydney,	13s. per ton	} Minimum rate.
„ next 60 „	12s. „	
„ over 180 „	11s. „	

The shipping rates do not come into consideration, as the price quoted is for delivery in Sydney, where the chief buyers are Messrs. Dalgety & Co. and Gibbs, Bright, & Co.

The following figures represent the approximate yields from the different mines to date, February 10th, 1895:—

	Tons.
Kangaroo Mine ..	1,230
Vulcan „ ..	1,200
Quilter's „ ..	1,100
Mt. Mary „ ..	600
Welch's „ ..	220
Zig Zag „ ..	100
J. Edwards' „ ..	75
Total ..	4,525

According to the literature of the subject, the chief chrome supply of the world appears to be drawn from Asia Minor. America obtains about half her requirements from the State of California, where, according to the State Mineralogist,*—"Ores producing less than 50 per cent. cannot be handled and shipped to compete with those from the Mediterranean. Owing to the 'pockety' nature of the deposits it is difficult to determine anything about their extent except by actual work, and the deposits or pockets are usually soon exhausted." * * * * * The bunches and connecting stringers are arranged in such an exceedingly irregular manner that no rule can be laid down for tracing the ore bodies."

In connection with the chrome industry in the Gundagai and Tumut Districts, the feeling of uncertainty which now prevails as to the permanency of the deposits, consequent upon the rapid exhaustion of several promising-looking bunches, is aggravated by the method of mining, viz., open cut—which reveals nothing until the bottom drops out of the mine. Where the bunches are small, such a system is the only one necessary and possible, but when the deposits afford indications of extent, systematic prospecting by shafts and drives should be adopted at the outset to determine the vertical and horizontal extent in each case. The prosecution of such necessary testing would not only set at rest any uncertainty on the score of extent but also afford an immediate supply of ore for despatch, and enable further operations to be regulated strictly in accordance with the amount available.

Chrome mining in the districts in question has now been advanced to a stage which enables a fairly clear opinion to be formed of the nature and mode of occurrence of the deposits, and the experience of the past year teaches that they in no way differ from those of other countries which have been described as "pockety" and "bunchy," irregular and uncertain. Therefore, it seems imperative if the chrome industry is to be advanced and maintained as a profitable commercial undertaking that systematic prospecting must be kept well ahead, not only of actual winning, but also of actual discovery, so that new finds may be made available as the old give out, and thus prevent frequent cessation of work.

With resolute grasping of the fact of comparatively small but numerous and wide-spread deposits, coupled with systematic prospecting and proving, careful blending of ores and uniformity of grade, and by saving and concentration of smalls where practicable, there can be no doubt that the chrome industry of the Colony will be maintained on a vigorous and profitable scale.

In addition to the localities mentioned in my first report, chrome deposits have been found in the serpentine country lying between Attunga and Manilla, and are probably connected with those nearer Barraba. Samples from several deposits have, however, proved of low grade. A chrome bunch was also opened by Mr. C. S. M'Glew, on a M.L. of 40 acres, about 3 miles south-east of Moonbi railway station, but it soon gave out.

I have, &c.,

JOSEPH E. CARNE, F.G.S.,
Geological Surveyor.

The Government Geologist.

APPENDIX 8.

Report on the Toolong and Bogong Goldfields.

Geological Survey Branch, Department of Mines and Agriculture,

Sydney, 18 March, 1895.

Sir,

I have the honor to hand you the following brief report upon the Toolong and Bogong diggings and their immediate surroundings, together with a sketch plan showing the principal physical and geological features, tracks, &c., believing that such may prove of service in drawing attention to this comparatively little known tract of country, the possibilities of which, I believe, are considerable from a mining view.

The

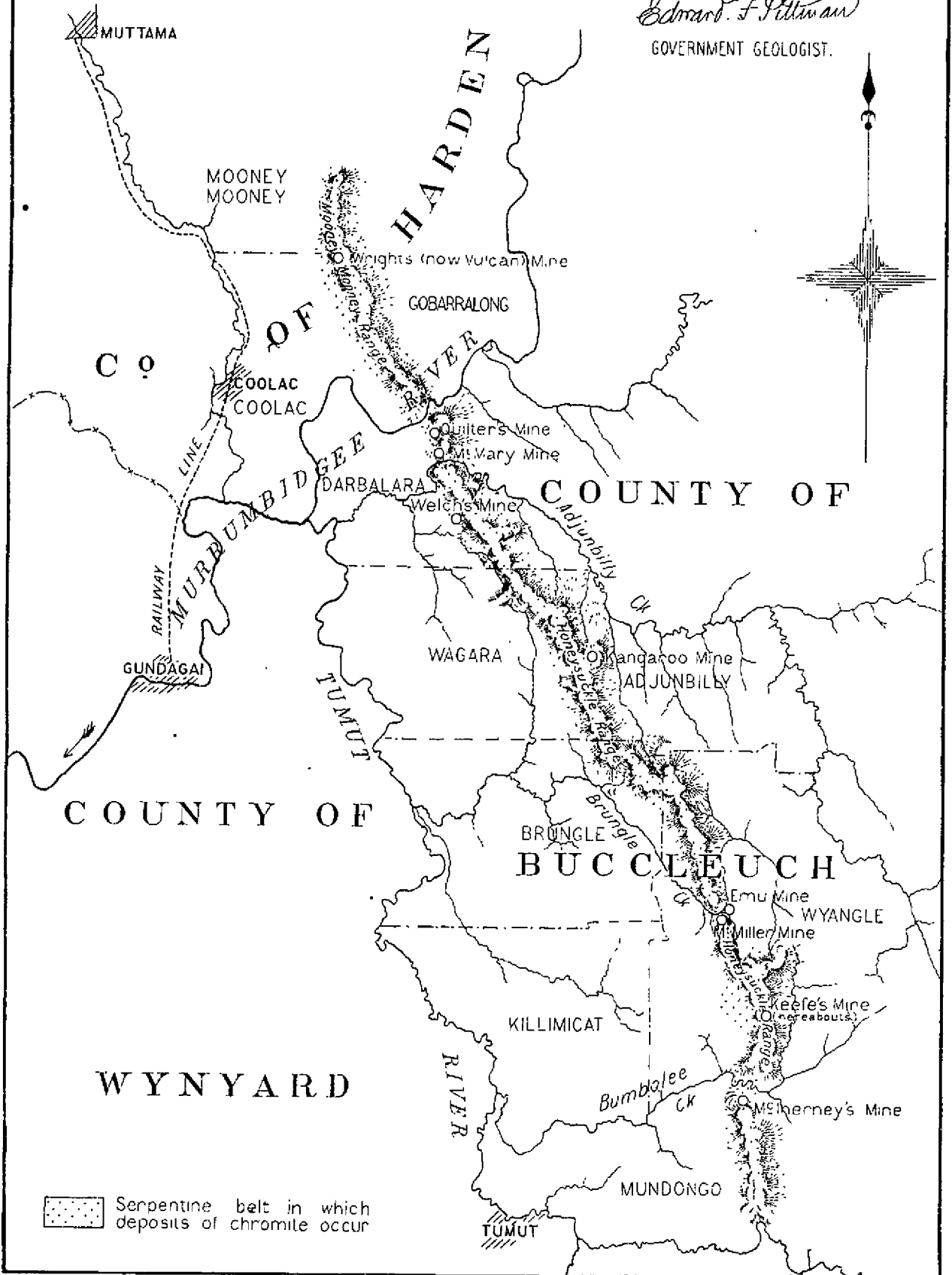
PLAN


TO ACCOMPANY SECOND REPORT BY
J. E. CARNE, F.G.S., Geological Surveyor.

on the deposits of Chromite in the Gundagai and Tumut Districts

Scale in Miles
0 1 2 3 4 5

Edward F. Pittman
GOVERNMENT GEOLOGIST.



 Serpentine belt in which deposits of chromite occur

(Sig 24)

The Rev. W. B. Clarke, in his *Southern Goldfields*, 1860, describes generally portions of the area under consideration, and alludes to the occurrence of coarse gold in the heads of the Tumut River, which have their source within it.

Dr. R. Von Lendenfeld and Mr. J. Stirling, F.G.S., have also mentioned certain localities in the neighbourhood, but only in connection with evidences of glacial action.

Situation.

Toolong Diggings are situated in the bed of Dargals Creek, a short tributary of the Tooma River, one of the affluents of the Murray, which it joins near Weleragang.

The nearest settlement is the village of Tooma, on Tumberumba Creek, about 25 miles west-north-west. Tumberumba is distant 40 miles *via* Tooma, whilst Kiandra on the north-north-east is distant about 30 miles; Corryong, in Victoria, is about 40 miles from Toolong—these are the chief points of approach. The nearest railway station is Gundagai, distant *via* Adelong about 100 miles. A good Government road extends from Gundagai to Tooma; from the latter to Toolong the track is very rough and steep for a considerable portion of the way, but bullock teams are now taking loading to the diggings.

Toolong Diggings have an elevation of about 3,300 feet above the village of Tooma, and are themselves about 1,300 feet lower than Big Dargal Mountain, on the east of which it is situated. The gold lead is located in a semicircular valley, formed by a bend in the range extending from the Big Dargal, near the Tooma River, southerly to the Inkbottle Mountain, and thence north-easterly to the river again.

Bogong Diggings.

The Bogong diggings are situated about 15 miles south-easterly from Toolong, on and alongside a low foot-hill between Smith's Lookout and Grey Mare's Bogong, about 15 miles in a direct line north from Kosciusko.

Physical Features.

Between Toolong and Bogong the country forms part of the extensive elevated tablelands of the Snowy Mountains region. Above the general level of the area in question low ranges rise with occasional prominent peaks, such as Big Bogong, Grey Mare's Bogong, Round Mountain, Mangar, Big Dargals, and others.

The tablelands consist of open undulating country, well grassed and watered; peaty swamps are of frequent occurrence. The most elevated areas are densely covered with a dwarf eucalypt of the malee species; frequent fires have, however, destroyed large patches of it. Lower down mountain ash grows into splendid proportions suitable for building and other purposes.

The drainage system of this elevated tract naturally becomes abruptly precipitous as the fall to the north and west is approached. The Tumut River, which has its source near the Big Bogong, rapidly falls into a narrow gorge from 1,500 to 1,600 feet deep, quite inaccessible in places. Its main heads, known as the Gulf and Doubtful Creeks, of which there are four, have equally precipitous channels; nor does the main stream become more approachable until it nears Tumut.

The Tooma River also rises in the Muniung Range near Big Bogong. This stream has a rocky precipitous fall from near Toolong to Possum Point, where it gradually enters rich alluvial flats in the low country.

Geological Features.

The geological features are distinctly plutonic, granite and gneiss rocks predominating; the latter is most typical in its characteristics, the banded arrangements of the quartz grains in some instances having the appearance of rubbly quartz veins.

Intermediate igneous rocks occur as occasional dykes of diorite as at Toolong and Bogong; two typical specimens were determined by Mr. Card, A.R.S.M., as pyroxene-hornblende diorite.

Volcanic rocks are represented by a wide basalt plateau between the Round Mountain and the 15-mile, on the Tumut River, and by cappings on Round Mountain, Bald Mountain, and two other locations north-west and south-west of Round Mountain. These isolated patches of basalt no doubt once formed part of an extensive sheet extending to the country round Kiandra, where other outcrops occur, and from which they were subsequently separated by the erosion of the Tumut River and its tributaries.

Sedimentary rocks are represented by slates and schists along the Tumut River, and extending to Kiandra. Narrow belts also occur near Toolong and Big Bogong, and at Yellow Boy Creek. No fossils have yet been found in these rocks so far as I am aware, but from the occurrence of a thin intercalated bed of limestone (containing fossils of an Upper Silurian facies), outcropping in a most marked rampart-like manner on the slopes of the slate ridges on the east side of the Tumut River, south of Lobb's Hole, they may be classed as Silurian.

Pliocene drifts occur under the basalt cover, near the 15-mile, and elsewhere. The present working drift at Toolong probably belongs to the later Pleistocene and Recent.

Discovery.

Gold has been mined in the bed of the river at Toolong each summer since 1887, when it was first discovered by Messrs. J. and D. Caholan. Conflicting statements, however, are extant as to the actual discoverer of the Dargal's Creek Lead. Messrs. Caholan claim the credit, which is disputed by F. Allen. However, in 1893, as a result of the latter's prospecting, a syndicate was formed to take up a 5-acre lease in the western branch of the creek, about half a mile from the river. This lease was granted. The syndicate, however, began operations at the creek mouth by the commencement of a tail-race through a granite bar which occurs at that point. Soon after a second lease was applied for by Lublin and Party, just below the junction of the creek branches, but the discovery becoming known it was opposed at the Warden's Court at Kiandra, and refused, whereupon miners pegged out the whole of the creek bed as claims, with the exception of the first lease, and thus defeated the object of the discoverers, viz., to work the whole lead by ground sluicing. Mining began practically in December, 1893, and was carried on until winter began to set in, when most of those engaged obtained exemption on account of the rigorous nature of the climate. A few claim-holders (about 30), however, erected winter quarters and made use of the snow-water. Some portions of the lead are reported to have been covered 7 feet deep in snow.

The

The return of summer was impatiently awaited by a large number of miners who had been attracted by the reports which appeared from time to time, but who were prevented from reaching the locality until a portion of the snow on the ascent from Possum Point had melted. About October several hundred men had arrived; of these, about 300 found an opening at Toolong, whilst others settled on the river. At the time of my visit on the 29th January, about 250 men were on the different workings.

As the Dargal's Lead is very limited, not being more than about three-quarters of a mile long by 1 chain wide, it will be nearly if not quite worked out before the ensuing winter.

The stripping varies from 3 to 7 feet, including from 1 to 3 feet of surface peaty matter, which has to be cut with hay knives.

The wash is from 2 to 5 feet thick, patchy, and of varying width; a little gold occurs through the whole thickness, but generally only the bottom foot is worked. Boulders and large pebbles, well water worn, of fine siliceous schist, gneiss, and granite form a large proportion of the wash.

The richest portion of the lead occurs about the middle of its length, which is opposed to the general rule; usually the heaviest gold, especially when coarse, lies nearest the source at the head of the lead. The present exception may possibly be due to the torrent-like force of a stream, fed by melting snow on a steep slope, which transported the coarse gold, and almost entirely carried the finer particles into the river. The "scour" produced by the same force would also account for the absence of gold in the "pot-holes." The well-worn surfaces of the boulders and pebbles would also hardly have been produced in so short a transit from the parent rock to present site unless under exceptional circumstances of wear and tear.

The bed-rock (gneiss) becomes very jointed and uneven as the lead approaches the river, rendering it very difficult to scrape the bottom; frequently blasting has to be resorted to to enable the joints to be cleaned out.

Box-head sluices are in universal use, the water supply being drawn from the creek itself.

The gold is coarse; nuggets, 3, 5, 8, and 11 oz. have been found. In outward appearance the nuggets are solid and of good quality, but the appearance is deceptive, for nearly all coarse pieces have been found to contain drusy cavities filled with dross, most probably resulting from decomposition of pyrites. The average Mint Returns of Tooma gold prove it to be worth about £3 14s. per oz. in its natural condition; after melting, in which the loss is somewhat heavy, it is worth about £3 18s. per oz.

The western branch of Dargal's Creek contains little payable gold. A little tinstone has been found in the wash at this point.

That portion of the range in which Dargal's Creek rises, lying directly at the head of the lead, consists of a very fine-grained metamorphic rock, in which mica is so largely developed as to produce a foliated or schistose structure; on the east, close to the head of the west branch, typical gneiss occurs. Pyritous quartz veins occur at the foot of the range between the two branches, in which tourmaline is abundant, but no gold can be obtained from them. Close to the head of the main lead—or eastern branch—a thin leader has, however, been discovered, in which gold is freely visible. A sample taken from a small quantity obtained from a shallow shaft yielded at the rate of 11 oz. 14 dwt. 11 gr. of gold per ton. The thickness of the lead varies from a quarter to one inch.

Close by, on the east of Dargal's Creek, is another short creek and flat known as Broadway Flat, draining from the same area as the former, and presenting exactly similar features, excepting that it opens into a fairly broad low flat at and near its mouth. It is reported that nothing more than colour of gold can be obtained from it, but even a most cursory examination renders it at once apparent that sufficient prospecting has not taken place to justify this verdict. A few pot-holes have been put down at rare intervals. The experience of the Dargal's Creek miners is that several "duffer" holes were afterwards included in payable paddocks in that lead. The gold of the locality being coarse and scattered is easily missed in random holes. To properly test this or any similar flats in the neighbourhood, trenches or paddocks—where not too deep—or lines of shafts at short intervals, connected by drives, is absolutely necessary. The difficulty of working Broadway Flat, if proved payable, will be the absence of sufficient fall to the river; the widest part of the flat is but a few feet above the river level.

On the opposite side of the Tooma River a small lead near the Toolong Station Homestead is affording work for a few men. Still further north-easterly towards Round Mountain other parties are at work in small creeks near Ogilvie's Creek. In all the drainage channels in this locality gold can be obtained, and no doubt from time to time payable patches will be discovered. Close by the workings the highest point still retains a small cap of basalt; water-worn boulders and pebbles on the slopes of the hill remain as evidence of the drift which once was preserved under a wide extension of the basalt flow; and which, most probably, was the immediate source of the gold in the more recent and present drainage channels.

Between Round Mountain and the 15-mile, on the Tamut River, an extensive sheet of basalt occurs overlying drift. The highest point of the plateau is about 1,750 feet above the river bed. On the eastern fall, about one mile from the 15-mile crossing, sluicing operations were carried on some time ago by the Golden Crown Sluicing Company. At the present time, two parties are at work further South, in what is called the Gulf, whilst in the beds of the main tributaries, as well as in the bed or banks of the river itself, a considerable number of men find a living. The difficulty presented by the drift outcrop from under the wide basalt sheets is essentially the great elevation, making the necessary water supply almost impossible, or at least a costly undertaking. A scheme to procure water from the Tooma River was projected by one of the sluicing companies on the eastern margin of the basalt area, but it was little more than initiated before abandonment, it is understood for want of funds.

Still, even under present conditions, it is reasonable to surmise that profitable employment will be afforded for a considerable number of men at lower levels on the falls from the basalt areas into the river and the tributaries at its head, particularly the Gulf Creeks. Here water is procurable for ground or box-sluicing purposes during the better part of the year, if not continuously.

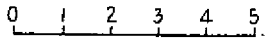
On the eastern side of the river, between the 15-mile and Kiandra, schist and slate rocks predominate. The most characteristic feature of these formations is the occurrence in them of conspicuous outcrops of quartz reefs, many of huge proportions; and though leads have been worked in several places in which quartz boulders and rubble form the major part of the wash, little attention appears to have yet been paid to the reefs.

SKETCH MAP.

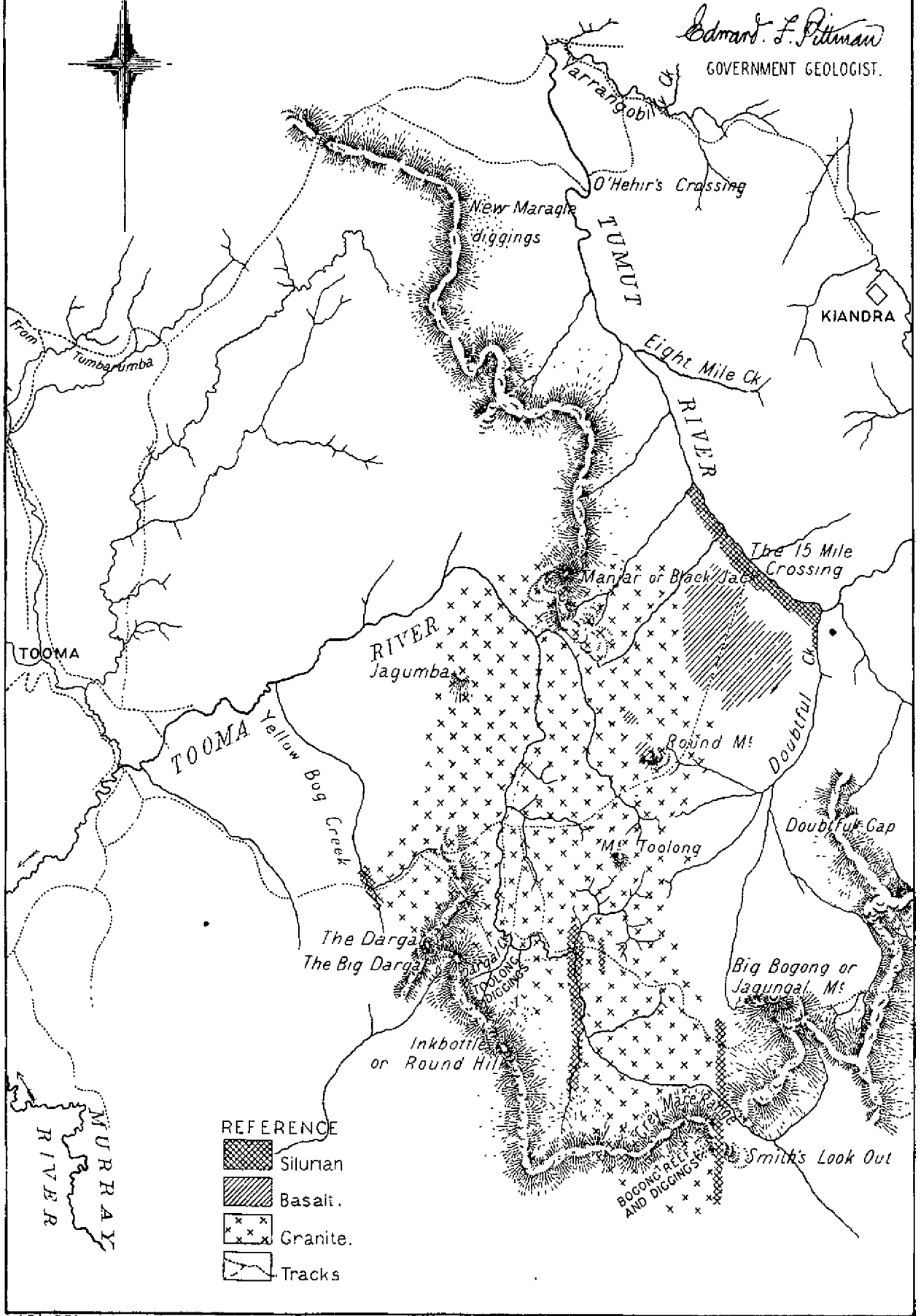
To accompany report by J.E. CARNE, F.G.S., Geological Surveyor.

ON THE TOOLONG AND BOGONG DIGGINGS. COUNTY OF SELWYN

Scale in Miles



Edmund F. Pittman
GOVERNMENT GEOLOGIST.



- REFERENCE
-  Silurian
 -  Basalt.
 -  Granite.
 -  Tracks

Leaving Toolong for the Bogong Diggings, the track follows the river for about 2 miles. Most promising-looking flats occur about this point, and continue as the river takes a sharp turn to the south through what is known as Pretty Plain. At the turn the Bogong track crosses the river. Here a change of country is encountered; the gneiss gives place to a belt of slate about $\frac{1}{2}$ a mile wide, with a north and south strike. The slate in places is fissile, in others, compact and siliceous. Quartz veins are numerous; one crossing the river at an angle with the strike of the slate carried pyrites, but yielded only a trace of gold.

Near Big Bogong another belt of slate, or, more correctly, schist, with quartz veins occurs, striking north and south. Both these beds of sedimentary rock are well worth prospecting for reefs, especially near the junction with the gneiss.

Grey Mare's Bogong is situated about 4 miles south of Big Bogong, and the diggings are located on the side of a low spur or foothill on the east side of the mountain, and between it and Smith's Lookout. Alluvial gold was discovered at this site by W. Williams and party in January, 1894, just at the junction of the gneiss and the schist. The same party, by following up indications in the surfacing from the lead, discovered a very promising reef in the adjacent gneiss-spur. This reef has undoubtedly been the source of the gold in the lead.

The elevation of the lead is about 5,250 feet above sea-level. The general level is here gradually rising to its maximum as Kosciusko is approached.

The Bogong Lead is very short and narrow, affording only six claims, which originally employed about thirty miners. At the time of inspection, however, the three unexhausted claims provided work for only nine men. The claim at the head of the lead, embracing the unworked ground between it and the reef, will afford work for some considerable time yet. Scarcity of water was retarding operations at the time mentioned, but provision was being made for utilising the next snow-water on a more extended scale.

In the face opposed to the head of the lead about 5 feet of wash is resting on agneissic bottom, and overlying the wash is about 7 feet of alluvium. The "channel" of the lead is heading direct for the reef. The wash rubble consists of gneiss and quartz, with occasional boulders of diorite.

The top claim has so far yielded 111 oz. of gold, the next below 27 oz., and the rest of the claims about 30 oz. a total of 168 oz. to February, 1895.

Prospectors were at work near Big Bogong and Kosciusko; near the former a little gold was obtained by a solitary miner a couple of years back.

Bogong Reef.

Messrs. Williams and Party's Bogong reef strikes N. 12° W. in typical gneiss, and dips west at an angle of 44° from the horizontal. It varies in width from 1 to 10 feet in the course of about 150 yards from south to north. The Prospectors' Claim consists of 8 acres (lease applied for); outside of this area the reef has not been found northerly, though three parties have been engaged prospecting for it; to the south, in Harnett and Party's ground, it becomes very thin and broken, and mixed with the country. Several small openings have been made exposing the reef, and a shaft was started to catch it on the underlay at about 40 feet; at 34 feet water made rather freely, and the contractors abandoned the work without any genuine attempt to bail the water out; about 9 feet was standing in the shaft when inspected.

The sinking was in soft, rotten gneiss, the banding or foliation of the latter being on so large and distinctive a scale as to impart a parallel vein-like appearance to the quartz layers.

The reef-stone has been tested by two large samples—each 6 lb. weight—in the departmental laboratory with the following results:—

1. 3 oz. 14 dwt. 1 grain per ton.
2. 4 „ 13 „ 21 „ „

Dolly tests from the reef and rubble also show very fair prospects. In a portion of the stone arsenical pyrites is present in some quantity, which will necessitate concentrating appliances.

Altogether the Bogong reef, in Williams and Party's Claim, presents a very promising aspect, and is well worthy of systematic testing, and if proved payable will give an impetus to reef-prospecting in the district.

Climate.

The climate of the area under consideration has so far prevented continuous work being carried on during winter months, but judging from the greater elevation and more vigorous climate of numerous mining camps in the United States, where operations are continuous, there is no reason why Australian miners should not become acclimatised to such conditions as prevail in the Snowy Mountains of this Colony; and, in fact, as before stated, some thirty or more have already wintered at their claims. It need hardly be added that during summer and autumn the climate is most bracing and delicious.

The presence of gold has already been proved in numerous places over a wide-spread area, and, though possibly comparatively poor and patchy in occurrence, yet there is every reason to believe that it will be found in sufficient quantities in the most favourable localities to maintain a fair mining population. For able and energetic prospectors, I believe this locality offers a field of fair promise, especially if the testing be thorough, as indicated in the description of Broadway Flat.

Through the courtesy of the Manager of the Bank of Australasia at Curryong (Vic.), Mr. A. I. Lukins, of Tooma, and Mr. S. Ramsay, of Tumbarumba, I am enabled to state very closely the amount of gold obtained from Toolong, Bogong, and immediate surroundings, viz., 900 oz., up to the beginning of February of this year, the value of which, in its natural condition, would be £3,330.

I have, &c.,

JOSEPH E CARNE, F.G.S.,
Geological Surveyor.

The Government Geologist.

APPENDIX 9.

Report on the Bywong Gold-field.

Geological Survey Branch, Department of Mines and Agriculture,

Sir,

28 February, 1895.

I have the honor to report that in accordance with your instructions of the 13th instant, I visited Bywong, near Bungendore, and inspected the recently discovered reefs, to which a rush was just setting in owing to the publication of a rich return obtained from a small parcel of stone from Messrs. Lowe and Party's Claim.

In my report, which I have the honor to hand you herewith, the different claims have been chiefly described as they occur from South to North, without regard to their relative importance, and only those have been mentioned in which at least a moderate amount of work has been performed.

A sketch plan is attached showing the geological formation of the locality, and the approximate position of the most important reefs. A statement has also been prepared, showing the amount of stone crushed to date, with yields, &c.

The recently discovered reefs extend over an area of about 3 miles by 1 mile, bearing N.N.E. from Mac's Reef, in the Parish of Bywong, County of Murray, about 10 miles from Bungendore.

Considerable interest attaches to Bywong because of the expressed belief of the late Rev. W. B. Clarke, in a report dated 1st June, 1852, "that gold in profitable quantities will hereafter be found in some part of the district of which Bywong Hill is the centre."*

Though Mac's Reef, about 3 miles S.S.E. of Bywong Hill, yielded some small rich shoots of gold when first opened up some twenty-nine years ago, and Brook's Creek, several miles to the north-east, a fair amount of alluvial gold, it can hardly be said that Mr. Clarke's prediction has yet been fulfilled, hence the interest attaching to the present find.

For some time past the neighbourhood of Bywong Hill has been receiving considerable attention at the hands of prospectors, several of whom have been aided from the Prospecting Vote, but their efforts were not crowned with success until Messrs. Robins and Cartwright struck gold in their present claim in April last. Following this discovery a number of claims were pegged out and prospected more or less persistently for a time; most of them, however, were abandoned prior to Messrs. Lowe and Party's discovery of the present rich shoot in their second shaft about the middle of December last. The publication of the yield from a small quantity of rich stone treated about the beginning of the month, caused the present rush, which was not justified by the circumstances.

Physical Geography.

The reefs chiefly occur in gently undulating country on the eastern fall of the ridge which trends between Mac's Reef and Bywong Hill. At Mac's Reef the country is more rugged. This ridge forms the water parting between the Yass River on the west and its tributary (Brook's Creek) on the east. Its elevation is from 500 to 700 feet above the former.

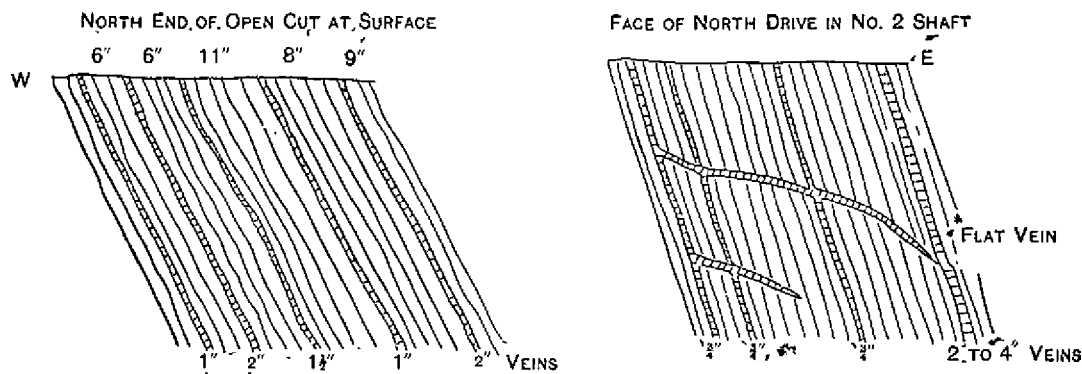
Geology.

From the sketch map it will be seen that the reefs occur in the Silurian formation, which is here represented by fissile, metamorphic, and sandy slates, and schist. On the west, near the Yass River, a mass of intrusive granite occurs.

Gundaroo Syndicate, G.L. 14, 5 acres.—Little Wonder Reef.

Gold was discovered in this reef about twelve months ago by Messrs. Cartwright and Smith, who sold to the present holders.

The gold-bearing formation consists of a number of thin parallel quartz leaders, occurring in the cleavage of slate country, and separated by varying thicknesses of the latter, as shown in the accompanying sections to scale.



The strike of the veins is about north and south, and the dip at an angle of 65° from the horizontal.

The prospectors sank a shaft 48 feet deep—30 feet following the reef on the underlay—and drove south 60 feet along its course.

From

* Vide Southern Gold-fields, 1860, p. 233.

From this shaft, and an open cut alongside, 14 tons of picked stone were extracted, which yielded as follows:—

9 tons, treated at the Clyde Works	...	...	...	3 oz. gold per ton.
5 " " Captain's Flat	...	...	...	15 dwt. "

Since obtaining possession the Gundaroo Syndicate sank a vertical shaft (No. 2) about 80 feet south of No. 1, and at 45 feet struck the reef in a crosscut 22 feet west. In sinking this shaft a cross vein from 2 to 3 inches thick was discovered, and followed to its junction with the main meridional veins. So far as traced it has not only proved barren itself, but apparently cuts off the gold in the main line. At the junction the country and veins turn from about 20° E. of N. to 20° W. A drive is now being put in north to meet the south drive in No. 1 shaft; a section of the present face is shown above. At the time of inspection the syndicate had just completed a crushing at their three-head stamp battery, made up as follows:—

5½ tons picked stone from No. 1 shaft	} Yield—16 dwt. per ton.
4½ " " " No. 2 "	...	...
15 " " mixed stone and rubble, No. 1	...	...

In mining, the quartz leaders, being rubbly, break into small fragments; and by discarding the larger pieces of country, about 1 ton in 4 is available for the battery. Picking and dressing could, perhaps, be done by boys at moderate cost; but it remains a question for actual test whether such a small proportion of payable stone can be profitably extracted in country which, though not actually hard, yet requires drilling and blasting.

Williams' Reef.

This reef is situated about 6 chains south-west of Mac's Reef, and takes its name from the original prospectors—Messrs. Williams and Party—who held it for about twelve months before abandonment. During this period a little gold is stated to have been obtained by cradling the fine material and dollying specimens. The site is now held by the Gundaroo Syndicate as four men's claim in abandoned ground.

Ten tons of stone from the reef used by the Syndicate to charge their battery plates is estimated to have yielded about 5 dwt. per ton. An average sample from lowest level, selected by myself, yielded only a trace of gold on assay. At the present time the reef is being reprospected on tribute. The shaft is down 24 feet, with a drive 10 feet north from that level. In the face of the latter a bunchy quartz vein, from 6 to 12 inches thick, is showing; but there is no appearance of it in the south end of the shaft. The course of the reef is about N. 30° W.

Mac's Reef.

This well-known reef was originally opened about the middle of 1866, and worked in claims for some distance along its course to a reported depth of from 70 to 80 feet. At intervals since its first abandonment attempts have been made to work different portions, but apparently unsuccessfully, the latest being by means of a tunnel at the north end, near Portion 49, which was driven nearly 400 feet for about 60 feet of backs. Very little actual proving appears to have been achieved by this costly undertaking.

Mac's is a well-defined reef, from 2 ft. 6 in. to 3 feet thick, striking about N. 20° W., and dipping easterly at an angle of 63° from the horizontal. It affords evidence of extension to considerable depths.

J. M'C. Brady holds the northern end, including tunnel, as a registered claim, and Messrs. Pringle, Lawler and Party 1,200 feet along the line of the principal old workings.

The latter party are at present opening a payable "shoot," which was discovered timbered up in a shaft (known as "Noakes'"), about 30 feet from surface. This shoot dips south at an angle of about 45°, and is but a few feet thick. A parcel of about 40 tons is now being put through the Gundaroo Syndicate's battery.

Noake's Shaft, 110 feet deep, is the latest and deepest on the reef; but no driving has been done at that level, where the reef is about 2 ft. 6 in. thick, between well-defined walls. It is the intention of the present holders to test the reef by driving to catch the payable "shoots" which were worked nearer the surface, if they should go down or make again with depth. From such a large, well-defined body of stone as that exposed in Noake's Shaft and Brady's Tunnel a yield of only a very few pennyweights of gold per ton should be remunerative if worked on a sufficiently large scale. It is therefore very desirable that whilst driving for the anticipated "shoots," practical test should be made, by means of the local battery, of the body of the reef passed through in the proposed drive for the purpose of ascertaining whether it contains sufficient disseminated gold to render it more advantageous to treat it as a whole for a small yield than to pick out the shoots for a larger return.

T. Cartwright and J. Hurley's Claim.

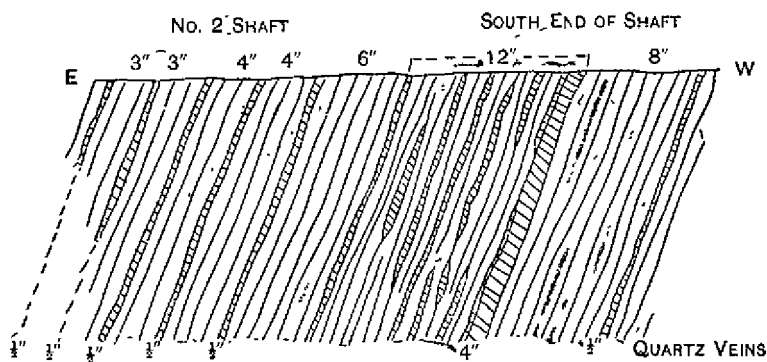
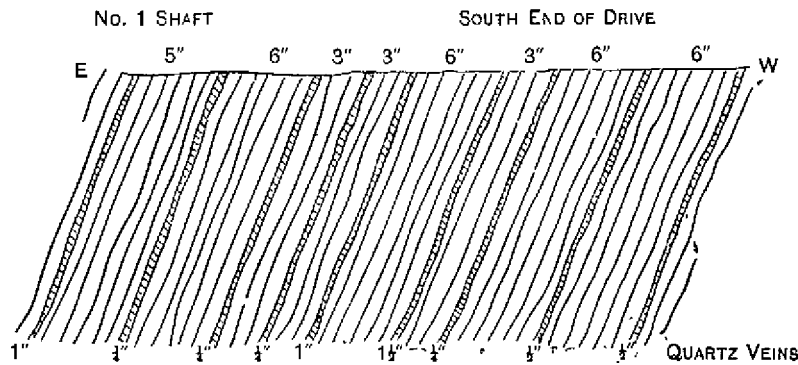
About 7 chains north-east from Noake's shaft Messrs. Cartwright and Hurley are sinking on two small quartz leaders, from 2 to 3 inches thick. In the cleavage of the slate casing of the veins, fine "paint" gold is occasionally seen. Nothing, however, has yet been struck of importance.

"Lone Hand Mine."

About 10 chains north-easterly from Mac's Reef is M'Cabe and Party's Lone Hand Claim of six men's ground. The strike of the auriferous leaders is about N. 35° W. in sandy slate, and the dip easterly. No. 1 shaft has been sunk 25 feet, and driven south 5 feet; the veins thin perceptibly as they go down. No. 2 shaft has just been started about 60 feet south; in it a larger rubbly vein is exposed, which strikes to the west of No. 1 shaft.

From

From No. 1 shaft, and an open trench extending south 21 feet, 8 tons of picked stone were crushed at the local battery for a yield of 17 dwt. per ton. The following sections will fully illustrate the thickness and mode of occurrence of the auriferous leaders in this claim:—



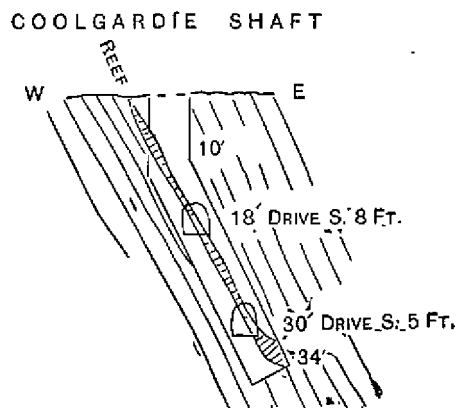
Coolgardie Mine.

About 70 chains north of the Lone Hand Claim is Messrs. Giles and Party's Coolgardie Claim of four men's ground, at present held as a prospecting protection area.

Gold was discovered in December last in the loose rubble on surface, and traced to the outcrop of a reef about 4 inches thick, having a strike of N. 15° E, and an underlay to the east of 65° from the horizontal.

In sinking the vein continued thin and rubbly down to 25 feet, where it thickened to 12 inches. At the present lowest level, 34 feet, a bunch of quartz is showing in the north end of shaft about 2 feet 6 inches thick, but is pinching rapidly both vertically and horizontally to the south. At 18-ft. and 30-ft. drives of 8 feet and 4 feet respectively were put in south. At the 34-ft. level there is an appearance of a hanging wall, but none of the footwall. The best stone hugs the hanging wall.

The prospectors have supported themselves since the discovery by dollying specimens. About 4 tons of picked stone have been bagged to date, but no crushing has yet taken place. A crosscut west would most probably cut other auriferous leaders.



Butt and Party.

Butt and party are sinking about 200 yards south of the Coolgardie shaft, in the direction of the strike of the vein in the latter, and though down 29 feet have not yet cut the reef; they will shortly crosscut in search of it.

J. F. Cox and Party.

Adjoining the Coolgardie and Butt's claim on the west, J. F. Cox and Party have just begun opening on a broken rubbly vein, striking about N. 20° W., and dipping east. The thickness varies from 6 to 12 inches, but so far prospects are only obtainable from the loose rubble, and not from the actual reef.

Clancy and East.—

About 5½ chains north-easterly from the Coolgardie Mine Messrs. Clancy and East have applied for a 2-acre lease on Portion 215. At the time of inspection no work was in progress, and a little water was in the shaft. I was, however, informed by Mr. East that the shaft was started last September on a rubbly quartz reef, averaging about 5 inches in thickness. The gold found at surface was lost at 12 feet, but picked up again in the drive 15 feet from bottom of shaft.

A shallow gully close by on the south of shaft has been prospected for a short distance for alluvial gold. One report is to the effect that 4 oz. of gold were won from it, but Mr. East states that nothing beyond prospects were obtained.

North of Portion 215 is a block of Crown land, about 63½ acres in extent; in this, at about 20 chains north of Clancy and East's Shaft, Lowe and Party's and Erenshaw and Party's claims occur. Between Clancy and East's and the latter claims a good deal of prospecting was originally done by Giles and Party, who abandoned the ground prior to Lowe and Party's discovery of payable gold. The intervening ground is now held as claims by Messrs. Cadogan, Murphy, Whalan, Boswell, M'Alister and Parties.

In Cadogan and Party's claim, in south-west corner of the Crown land, two shallow holes show a rubbly quartz vein striking about north and south.

Boswell and Party's claim embraces Giles and Party's abandoned prospecting shafts, 10 and 17 feet deep. In a new shaft started close by a quartz leader, from 2 to 3 inches thick, has been followed down 6 feet.

In the claims held by the other parties mentioned, surface prospecting for reefs was in progress.

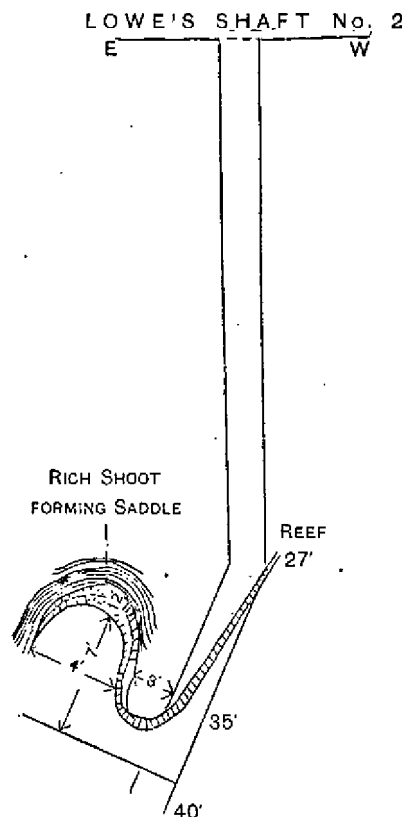
Lowe and Party.

The rich gold recently obtained from Messrs. Lowe and Party's claim was the cause of the present rush. This claim consists of a gold lease (G.L. 13) of 4 acres. The reef strikes north and south, and underlays east.

In the first shaft, sunk in July last, on the underlay, Mr. Lowe states that the reef was 2 feet thick at the surface, but pinched to 1 or 2 inches at 27 feet, at which level this shaft was abandoned. Six tons of stone raised during sinking yielded 8 dwt. per ton at the Clyde Works.

The present working shaft was started 75 feet north of No. 1 shaft, and the rich "shoot" struck it at the 30-ft. level. The reef was struck at 27 feet and followed on the underlay to 40 feet. Sinking was not being continued, as the reef had passed into the hanging wall at 35 feet.

In the shaft the reef when first struck was rubbly and broken; at 35 feet it passed on to the hanging wall, formed a synclinal trough about 3 feet across, and then rose rapidly about 4 feet and formed an anticlinal fold or saddle about 4 feet wide and 12 inches thick—as shown in the following section to scale—and pinching out to a thread at the eastern flap of the saddle.



The anticlinal fold dips to the north, and if the south face, from which the rich stone is being obtained, continues to rise at its present rate, the gold-bearing saddle will probably reach the surface in the party's ground.

The

The south drive following the saddle has been extended about 18 feet. Gold was showing freely in the face at the time of inspection. Five tons from the tunnel have yielded 59 ozs. 8 dwts. of gold, and about 8 or 10 tons were at grass.

The reefs at Bywong all occur in the cleavage of the country, and hence follow with it the puckering and folding of the latter. In connection with Lowe's Reef an interesting feature is presented in the folding of the country, and the production on a mimic scale of a "saddle reef," a feature which at once gives rise to a conjecture that repetitions may occur at lower levels, as in the case of the famed Bendigo reefs. If not, then the reef stone in Lowe's shaft, in all probability, terminates vertically at the end of the eastern flap of saddle.

As the folding is on a small scale a few feet of sinking should suffice to test the interesting question raised, and the possibility of a recurrence of the above features renders further sinking very desirable and interesting.

Erenshaw, Whalan, and Party.

This party hold a mining tenement of 2 acres adjoining Lowe and Party on the south, in which two parallel veins occur about two chains apart. No. 1 vein, on the east, strikes N. 10° W., and No. 2, on the west, N. 10° E.; both underlay to the east. Work was begun on the claim in April, 1894, on the east vein, and a shaft sunk 42 feet on the underlay. The reef was very jumbled and broken, with a 1 to 3-inch leader carrying gold; 5 tons 15 cwt. crushed at the Clyde Works yielded about 5½ dwt. per ton, and 6 tons at the local Huntingdon Mill yielded 6 dwts. per ton. One hundred feet south, on the same line, Giles and Party sank 24 feet and drove 20 feet without result. A considerable amount of trenching was also done in the direction of strike, but to no purpose.

No. 2 shaft, on the west reef, is 20 feet deep on the underlay, the latter being 55° from the horizontal. The reef is from 6 to 8 inches thick at surface, and thickens to nearly 3 feet at the 20-foot level, though it is here a little mixed with country. A crosscut has been driven 8 feet to the west, and two thin quartz leaders cut. No bulk tests have yet been made of the stone in this reef.

Brewer, Turner, and Party hold six men's ground adjoining Lowe and Party's claim on the north. Three shafts, from 14 to 35 feet deep, have been sunk, and a fair amount of surface trenching, but so far no gold bearing reef has been cut, though barren ones occur.

East, Johnson, and Party have applied for a 4-acre lease adjoining Lowe and party on the east, and have just commenced work on a parallel reef 6 chains east from Lowe's shaft. This reef strikes N. 10° E., and is 15 inches thick at 5 feet deep.

J. Murphy and Party hold the adjoining claim on the north, and have sunk 6 feet on the same reef, which here is from 6 to 15 inches thick. The underlay is east at about 69°.

Robbins, Cartwright, and Party.

This claim consists of a 10-acre gold lease (G.L. 1) on Portion 213. Messrs. Robbins and Cartwright are the original prospectors of the locality; indeed a number of abandoned shafts in the neighbourhood attest their perseverance, as others do that of Messrs. Giles and Party.

Gold was discovered in this claim in April last, since which two shafts have been sunk 50 and 25 feet deep, at about 30 feet apart, on a reef which is of a bunchy character, the largest bunch being at surface between the shafts, where a thickness of 5 feet is attained. The reef strikes N. 15° W., and underlays east at an angle of about 56° from the horizontal. At the bottom of the 50-foot shaft the reef is 2 ft. 3 in. thick in the north end, but pinches to almost nothing at the south end, as might be expected in a reef of this character.

The 25-foot shaft is being struck vertically to strike the reef on the underlay; at the present time a crosscut is being put in at the 25-foot level to catch the reef. Thirty tons of stone raised from the 50 feet shaft, and from the surface bunch, treated at the local Huntingdon Mill, yielded 8 dwt. 13 gr. of gold per ton; and six tons of similar stone treated at the Clyde Works yielded 19 dwt. 19 gr. per ton.

A little arsenical pyrites occurs in the stone, which will probably increase in quantity with depth. Several specimens of quartz containing it were roasted by Mr. Cartwright, with the result that beads of gold were liberated wherever the pyrites occurred. The concentrates from this reef are, therefore, likely to be of considerable value.

Adjoining the above claim, Donnelly and Party have a 10-acre lease, embracing a 15-foot shaft sunk by a previous prospector on a north and south vein. In the south end of the abandoned shaft a quartz block 2 feet deep and 18 inches thick pinches to a rubbly vein 6 inches thick in about 6 feet of sinking.

In Portion 212 the same party hold another 10-acre lease, in which two shafts have been sunk 17 and 26 feet respectively. In the 17-foot shaft gold was carried down in a rubbly vein for about 9 feet, when it broke away to the east, and was found in a drive 6 feet east from the bottom of shaft. Five tons of stone from it yielded 6 dwt. per ton at the local mill.

Bywong Reef.

This reef (perhaps better known locally as Johnston's Reef) is being worked by the Bywong Gold-mining Syndicate, which began operations a little over two years ago. The reef, machine, and dam sites are held as G.Ls. 4 and 5, of 13 acres and 5 acres respectively. The reef crosses a surveyed road along the north boundary of Portion 52, but the necessary permission to mine under it has been obtained.

Two shafts have been sunk about 40 feet apart; the southernmost, 73 feet deep, is not now used, as the stone became poor in that direction. The main working shaft is 65 feet deep, but the lower 5 feet has been filled up. Connection between the two shafts has been established at the 40-foot level. The course of the reef between them is about N.W. and S.E., but at the main shaft an elbow is formed, and the course alters to 13° north of west at the 40-foot level, and to due west at the 60-foot level. The reef has been followed about 38 feet in the latter direction. In the drive at the 40-foot level stopes have been carried up about 16 feet, but several feet of stone yet remain to be stripped, as the reef is here from 10 feet to 14 feet thick. Towards the south, however, it narrows to about 3 feet, and becomes poor, not yielding more than 2 or 3 dwt. per ton. Rich shoots are stated to occur in certain parts of the reef, but the average yield from all the stone raised to date, about 370 tons, has been 6½ dwt. per ton.

Arsenical

Arsenical pyrites is present in the veinstone close to surface, and is saved in the blanketings, but, so far, no quantity of it has been treated. Excellent results are, however, obtainable by roasting and amalgamation of test samples.

The cap of the reef has been traced south for about 100 feet by small trenches. At about 35 feet west of the main shaft an outcrop of large irregular blocks and jumbled veins of quartz occurs, which is being removed by an open cut. At this point, and at the 60-foot level, there is some indication of a turn in the reef to its normal north-west course.

In October last a 5-foot Huntingdon Mill was erected on the claim by Mr. Johnston, the present Manager, chiefly in connection with the mine, though also available for public use.

About 50 chains north-west of the Bywong shaft, in Portion 133, Johnston and Party hold a prospecting license, and are engaged extracting a trial crushing from a series of thin parallel veins by means of trenches. The veins, which occur a few inches apart, strike about N. and S., and dip rather flatly to the east.

About 40 chains south of the Bywong mine 5 tons of stone were raised from a 14-foot shaft by Messrs. Byrne and Turner, which yielded 5 dwt. per ton at the local mill—a return not regarded by them sufficiently encouraging to continue operations; this ground has, however, lately been repegged.

M. Millyn and Party and J. H. Millyn and Party each have claims close to the south-west corner of Portion 53, on a reef which has just been exposed in a few shallow openings. The strike is N. 10° W., and the dip east. The thickness varies from 6 to 12 inches. Colours of gold are obtainable from the rubble.

About 6 chains south from J. H. Millyn and Party's claim, the discovery of rich alluvial gold was reported in most exaggerated terms; a subsequent visit elicited the fact that a few colours only were obtained while trenching for the southern continuation of the above reef.

Crushing Plants.

As before stated, a 5-foot Huntingdon mill at the Bywong Reef is available for public use, the terms being as follows:—

Small parcels under 10 tons, as per arrangement.
10 tons to 20 tons, 22s. 6d. per ton.
20 " 30 " 20s. "
30 tons and upwards, 15s. "

Near Mac's Reef the Gundaroo Syndicate has erected a small testing plant of three stamps, which I believe will also be available for testing reefs other than those in which the Syndicate is directly interested.

If the re-prospecting of Mac's Reef proves satisfactory, it is the intention of the present holders to erect a large crushing plant.

Water and Fuel.

Permanent water (Yass River) occurs 2 miles west of Mac's Reef; an adequate supply could perhaps be obtained at Donnelly's Creek at about 1½ mile. For the north end of the field, near Lowe's Claim, a supply for domestic purposes is obtainable from tributaries of Brook's Creek, known as Gum Creeks, which head close to the claims. Here also a larger supply could easily be conserved.

Timber for ordinary mining purposes and for fuel is abundant.

SUMMARY.

From the attached statement it will be seen that, leaving out the Bywong (Johnston's) Reef returns, the quantity of stone crushed from the most recently discovered reefs during the past ten months has only amounted to 175½ tons, which yielded 142 oz. 2 dwt. 18 gr. of gold, and of this amount 59 oz. 8 dwt. were obtained from 5 tons of stone.

The total average yield from the whole field during the past two years was 9 dwt. 19 gr. per ton.

At the time of inspection not more than 100 tons, if as many, were at grass on the entire field, including Mac's Reef.

Payable stone, so far as at present proved, is confined to six claims, and in at least two of these it has yet to be verified whether it exists in sufficient quantity to pay for extraction.

Prospects are obtainable in numerous leaders in a number of other claims on the field, but sufficient exploratory work has not yet been performed to justify any prediction as to their richness.

The largest bodies of stone occur in Mac's, Johnston's, and Robbins' and Cartwright's Reefs. The richest in Low and Party's Reef.

From a careful examination of the locality I am of opinion that the conditions which prevail in the majority of instances, viz., thin rubbly veins separated more or less by country, are not promising for permanency; also, that the winning of the available stone in these affords more legitimate scope for small parties of miners than for the more extended and systematic exploitation of companies.

I am also of opinion that other similar veins will be discovered in the vicinity.

Both north and west of the present claims very large reefs outcrop at surface, which do not appear to have received the attention they deserve. Instead of napping surface blocks or opening small holes in such bodies, cross-cutting at intervals is recommended, with special care of prospects from the walls or junction with the country, for frequently payable leaders occur alongside otherwise barren bodies of stone.

Alluvial.—In perhaps nearly all the shallows, flats, and narrow channels in the neighbourhood of the reefs colours of gold are obtainable, but the prospect of payable leads of any importance seems remote within the area in question.

In conclusion, it is to be hoped that the outcome of the rush will be the systematic prospecting of a more extended area radiating from Bywong Hill. At the present time operations appear to be too closely confined to the immediate vicinity of the lately discovered reefs.

I have, &c.,

JOSEPH E. CARNE, F.G.S.,
Geological Surveyor.

The Government Geologist.

CRUSHINGS of Stone from Bywong Reefs since the opening of Johnston's (Bywong) Reef in 1893 to February 27th, 1895.

Owner.	Mine.	Quantity.	Yield per Ton.		Total Yield.	Crushing Plant.	Remarks.
			tons.	oz. dwt. gr.				oz. dwt. gr.
Cartwright and Smith	Little Wonder	9			27 0 0	Clyde Smelting and Chlorination Works.	Picked stone.
Gundaroo Syndicate	"	25	0 15 0	0 16 0	3 15 0	Captain's Flat	Part picked, part mixed, stone and rubble.
McCabe and Party	Williams' Reef	10	0 5 0	0 17 0	2 10 0	"	Clean stone.
Lowe and Party	Long Hand	8	0 17 0	0 8 0	6 16 0	"	Picked stone and rubble
"	Lowe's Reef, G.L. 13	6	0 8 0	7 0 0	2 8 0	Clyde Smelting and Chlorination Works.	From No. 1 shaft.
"	"	1	7 0 0	12 17 0	7 0 0	Parke and Lacy's works	Picked stone from "Saddle reef."
Erenshaw, Whalan and Party.	M.T. 77	4	0 5 12	0 5 12	62 8 0	Clyde Smelting and Chlorination Works.	No. 1 shaft, east reef.
Robbins, Cartwright and Party.	G.L. 1	6	0 6 0	0 8 18	1 16 0	Johnston's local Huntingdon Mill.	50 ft. shaft and surface outcrop.
"	"	30	0 8 18	0 10 19	13 6 0	"	"
"	"	6	0 10 19	0 6 0	5 18 18	Clyde Smelting and Chlorination Works.	"
Donnelly and Party	G.L. 5	5	0 6 0	0 5 0	1 10 0	Johnston's Huntingdon Mill.	"
Darne and Turner	Claim	5	0 5 0	0 6 10	1 5 0	"	"
Bywong G.M. Syndicate	Bywong Reef	370	0 6 10		120 5 0	"	Less 50 tons treated at Clyde Works.

Total quantity, 545½ tons. Total yield, 237 oz. 7 dwt. 18 gr. Average yield per ton, 9 dwt. 19 gr. Total value at £4 per oz., £1,069 11s. Average yield, exclusive of Lowe and Party's five tons of rich stone, 7 dwt. 16 gr. per ton. Total quantity crushed from new claims (exclusive of Bywong Reef) since April, 1894—175½ tons, yielding 142 oz. 2 dwt. 18 gr. (including 59 oz. 8 dwt. from five tons of Lowe and Party's rich "shoot").

APPENDIX 10.

Report on an Auriferous Deposit at Batlow.

Geological Survey Branch, Department of Mines and Agriculture,

Sydney, 25 March, 1895.

Sir,

I have the honor to state that in accordance with your instructions I inspected the auriferous deposit worked by Messrs. Harrison & Timmis, near Batlow, in Portion 113, Parish of Hindmarsh, County of Wynyard.

Batlow is situated on the Adelong-Tumberumba Road, about 18 miles from the former and 22 miles from the latter. It is, perhaps, better known locally as Reedy Flat, after the auriferous lead which was discovered here many years ago.

The geological formation of the district is chiefly gneiss, though less foliated masses approach the ordinary granite type. Included in the above are patches of chlorite and micaceous schist and slate. The gneissic and chlorite rocks are very similar to those enclosing the well known Adelong reefs.

Southerly, near Bago, basalt occurs covering auriferous drift. Patches of rich soil on some of the ridges near Batlow afford evidence of the decomposition of a similar cover.

Messrs. Harrison & Timmis' mine is situate about one mile west of Batlow, and about 400 yards east of Adelong Creek. Being on alienated land it was originally held under permit, but since the abolition of the latter title, the whole portion has been converted into a lease by the owner, Mr. Harrison. Locally the mine is known as "Walsh's Dyke," after the discoverer, P. Walsh.

From the mine a small gully, known as Fine-gold Gully, trends north-westerly to Adelong Creek, a distance of about 400 yards. The bed of the gully, from the creek up to the mine site, has been worked and reworked repeatedly since the first discovery of gold in the district.

About ten years ago a tunnel was driven from the head of the gully southerly into the ridge, for a stated distance of 300 feet. The end of the drive is estimated by the owners to be about 110 feet below the face of the present open workings. Subsequent operations have partly filled and partly covered the tunnel; but judging from a portion of the tip material still remaining in situ, the rocks passed through near the face were unaltered gneiss and slate with unoxidised pyrites. The resemblance to the enclosing rocks at Adelong is very marked. Mr. Timmis informed me that a trial of 5 or 6 tons of stone from the tunnel level yielded 4 or 5 dwt. per ton, a result which was evidently not sufficiently encouraging to induce further prospecting.

Some years later P. Walsh obtained fair prospects in the surfacing above the present workings, and a ground sluice trial was made on a small scale which resulted in a few dwt. of gold only. Walsh, however, began a shaft at the site of his first prospect, and in a few feet succeeded in striking a thin leader or shoot, from which he eventually obtained about 1,000 oz. of gold before it pinched out about two years later. The remains of his shaft and drives are still visible in the beds of the present workings.

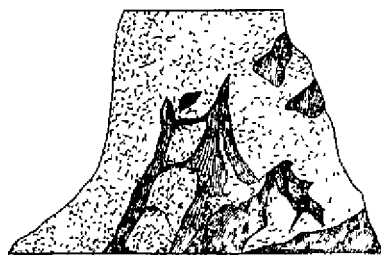
Three years ago Messrs. Harrison and Timmis began operations by bringing a water race from Gilmore Creek, and commencing sluicing operations near the mouth of the tunnel at the head of the gully. Under such a method naturally only the surface soil and the softer portions of the auriferous material have been removed; the harder being forked into heaps awaiting further treatment if found payable. Owing to the extent of the weathering, and the deposition which has taken place at this point, the softer portion has, so far, proved a not inconsiderable part of the whole.


The auriferous material consists of the country rock—gneiss—at and near contact with irregular patches of schist, which occur as enclosures in the gneiss. All gradations can be seen from true gneiss to true schist, and in places an inextricable mixture of both gives the mass a brecciated appearance. Where much brecciated, the isolated blocks of gneiss are so decomposed and soft as to crumble readily between the fingers. Such masses also have a spotted appearance from the decomposition of disseminated pyrites; in washing a prospect cubes of limonite (after pyrites) are obtained in some quantity with the free gold. An assay of a sample of the cubes thus obtained yielded at the rate of 2 oz. 18 dwt. 18 gr. of gold per ton in the Departmental Laboratory.


In other parts of the mine similar rock occurs, but not in a sufficiently advanced state of decomposition to yield its gold contents under sluicing power; it, however, afforded the best results during a crushing test of the different classes of material available in the mine. The



WALSH'S DYKE NEAR BATLOW.
(South face of open workings)



 Gneiss

 Schist

Diagram, illustrating occurrence of schist enclosures

The schist is mostly so decomposed as to be readily worked by the sluice; cubes of limonite also occur in this rock, as indeed they do throughout the whole mass under consideration.

Associated with the above rocks, are more siliceous masses in which quartz occur in patches, and strings both in the gneiss and schist. The quartz is generally honeycombed owing to the decomposition of the originally included pyrites, in these cavities gold is occasionally seen. Through this class of stone cellular gossany kernels and thin veins occur without quartz. (A sample of the above from the present working face yielded 3 oz. 5 dwt. 8 gr. of gold per ton.)

If hand specimens are readily obtainable in which all the characteristic features of the deposit are represented.

In two places the schist in the face has the appearance of an intrusive dyke; in another, a mass of greenish-gray fine grained gneiss, which possesses tolerable hardness, adds to the deceptive dyke-like appearance. A closer inspection, however, of these rocks reveals their true origin.

The auriferous portion of the mine is estimated to be about 120 feet in the widest part, the height of the face is about 60 feet from the bed of the sluice.

The gold appears to be confined to that portion of the country containing schist masses, and the various gradations between the two.

As the hard unaltered material obtained from the tunnel (110 feet), yielded but 4 or 5 dwt. of gold per ton, it can hardly be taken into consideration in view of the greater cost of mining. The question then which presents itself, is what depth of comparatively soft weathered material may be expected. As the present face is about 60 feet, half of the distance between it and the tunnel may be safely assumed, which would give a depth of 85 feet, by a width of from 50 to 100 feet for the virgin ground. In addition to this would be the remaining 25 feet under the present sluice bed, and the large quantity of broken material forked from the sluice. How far south the auriferous material extends is a matter of conjecture only as no prospecting has yet been done to prove it. There is no doubt, however, that there is already exposed a considerable body of low grade material, which will probably pay to work if treated on a large scale with cheap and efficient motive-power and crushing appliances. In September, 1892, the Chief Inspector of Mines, Mr. W. H. J. Slee, F.G.S., recommended that a test of 5 tons of stone from the mine, should be made under the auspices of the Prospecting Board at the Clyde Smelting and Chlorination Works. The result of the test made in a Huntingdon Mill at the above works, was 4 dwt. 2·4 gr. of free gold per ton; and 51 lb. of concentrates equal to 387—assaying at the rate of 1 oz. 13 dwt. 23 gr. per ton. Owing to the nature of the material a large proportion passed away as slimes in the sludge—only about 2 tons of tailings resulting, which assayed at the rate of 3 dwt. per ton. No test appears to have been made of the slimes.

The total gold contents may be stated pretty closely as follows:—

Free gold	dwt. gr.	
In concentrates	4 2·4	per ton.
In tailings	3·6	"
	1 10	"
	6 dwt. 16 gr.	

At the local battery three other parcels were subsequently treated, in all aggregating 40 tons; the results being 3½, 4½, 7½ dwt. per ton, the latter from the soft spotted rock before alluded to. A general average of the 45 tons treated would be about 5 dwt. of free gold per ton.

Though gold is occasionally seen in the quartz, yet there is abundant evidence of the major portion of it having been liberated from the disseminated pyrites by decomposition or oxidation. As before stated, a sample of solid cubes of limonite obtained from the softer portion of the deposit yielded gold at the rate of 3 oz. 5 dwt. 8 gr. per ton.

There is nothing in the stone in its present condition to prevent amalgamation; the chief cause for special care will be the fineness of the gold particles. Ample plate surface at a low angle and good lengths of blanketings will be requisite. The latter would probably also save a good proportion of the uncrushed limonite cubes.

The method of working by sluice at present adopted, however cheap, is neither effective nor satisfactory; and the soft material only being attacked, and the loss owing to the fineness of the gold aggravated by the force of the water necessary and the steepness of the fall. The latter could and should at once be remedied under any conditions, as the gold is being carried down the tail-race even into Adelong Creek. At intervals the bed of the gully itself is cleaned up, 160 oz. of gold being obtained on the last occasion. Dish prospects, almost equal to the sluice itself, are obtainable at the present time from the tail-race below the boxes. The results obtained in a Huntingdon Mill at the Clyde Works, and in the local stamp battery, appear to demonstrate the fitness of either for treating this class of material; the chief care, as before stated, being the plates and blanketings. In the latter respect the local battery could be considerably improved. The chief desideratum is cheap motive power, and this is already provided by the water-race. At the present time—end of summer—the water supply is equal to two sluice-heads (12 inches x 2 inches), but Messrs. Harrison & Timmis state that for at least nine months of the year five sluice-heads are available at a pressure of from 300 to 500 feet. With this supply the local water-wheel might, if necessary, be utilized, but a greater percentage of power would be secured in a turbine wheel.

Light stamps, if adopted, would only be required, as none of the material is actually hard.

Before any large expenditure is incurred in the erection of necessary machinery, I would recommend that an efficient bulk test be made at the local battery of the different grades of stone in the mine, which are readily distinguishable, with special care of plates and blanketings; and if the results thus obtained bear out the previous average of 5 dwt. of free gold per ton, I see no reason, under the conditions which prevail, why this mine should not be made a profitable concern for a number of years to come, if advantage be taken of the full extent of available motive power to work on a large scale.

I would also recommend that a little prospecting, by trenching, be carried out at the south end to prove the extension of the auriferous material in that direction.

Attached is a sketch by Mr. P. P. Hammond of the mine made from a photograph and a diagram illustrating the occurrence of the schist enclosures. I have, &c.,

JOSEPH E. CARNE, F.G.S.,
Geological Surveyor.

The Government Geologist.

APPENDIX II.

Report on Big Hill Reefs near Bateman's Bay.

Geological Survey Office, Department of Mines and Agriculture,

Sydney, 7 August, 1895.

Sir,

I have the honor to report that in April last I paid a brief visit to the above locality, in connection with applications for aid from the Prospecting Vote.

The reefs are situated in the Parish of Goba, County of St. Vincent, about 3 miles south-west of the village of Bateman. They occur low down the western slopes of Big Hill which I believe corresponds with Sugarloaf Hill of the County Map.

The surrounding country consists of stony ridges, more or less covered with loose shingle and scrub, and with abundant timber of excellent quality for mining and other purposes.

The geological formations consists of slates and sandstones probably of Silurian age. Northerly these rocks disappear under the Carboniferous formation between Bateman's Bay and Ulladulla. Southerly they form the prevailing rocks through the Coast districts, being broken in a few places only by intrusions of granite, as at Moruya, Mount Dromedary, Bega, &c. Westerly they give place to the auriferous granites of Braidwood and Araluen.

At Mogo, about 5 miles south of Big Hill, basalt occurs in elevated isolated patches which mark the course of an old Tertiary lead. Alluvial gold was profitably mined in this locality years ago, in the recent drainage channels through which the Tertiary drift had been naturally ground-sluiced and its auriferous contents concentrated, as weathering and denudation removed the basalt cover.

Within a radius of about 30 miles from Bateman's Bay quartz reefs have been opened from time to time, as near Moruya, Bimbibi near Mogo, and close to the present reef, where the site of an old stamp battery is still visible, though now overgrown with young timber. The Brimbramalla reefs, about 30 miles north-easterly, occur in the same formation. At each of the places mentioned gold has been obtained in fairly rich but very limited patches. The rough and scrubby nature of the intervening country renders systematic prospecting naturally a slow and tedious process; and the difficulties have been intensified by the want of confidence engendered by repeated failure of discovered reefs to realise anticipations based upon yields from small rich shoots.

The principal reef at Big Hill is known as Fullerton's, after the discoverer and owner, who had been prospecting single-handed for a considerable time prior to his discovery of payable stone, about two years ago. The announcement of the result of his first crushing caused a rush to the locality, and the discovery of a number of other reefs in the immediate vicinity. The outcome, however, has so far been very disappointing. Fullerton's main reef has not been profitably opened outside of his claim, which is of limited extent, viz., 1 acre 2 roods 22 perches.

Several of the reefs appear large and well-defined at surface but pinch rapidly both horizontally and vertically; and so far as tested the larger bodies of quartz have proved unworkable, the bulk of the stone being barren, whilst the thin streaks, generally near one or the other of the walls, are not sufficiently rich for extraction alone. Aid from the Prospecting Vote has been granted for testing three of the most promising reefs at a depth.

Fullerton's, Fitzgerald Brothers, and Batt's are the only reefs on the field from which stone of a payable quality has been raised.

Fullerton's main reef has an average thickness of from 4 to 5 feet down to 90 feet; which is the depth of the shaft. It strikes N 60 degrees E, and underlays south-easterly. I was informed by Mr. Fullerton that drives along the course of the reef had been put in from the lowest level for distances of 12 feet and 45 feet respectively, but I was unable to inspect below 60 feet on account of water. Work in this shaft had ceased about two months prior to my visit; the reason given by the Owner being the troublesomeness of the surface water. From the reef 347 tons of stone were crushed for a yield of 520 oz. of gold, exclusive of the blanketings which I understood were then being treated in Sydney. Some stone from the lowest level, which was lying at the surface, was highly charged with ordinary iron pyrites, some of which was in massive bunches.

About 70 feet south-east of the main shaft a second shaft had just been started on a small parallel reef near the boundary of the claim. At 20 feet its thickness varies from 3 to 6 inches. Gold was freely visible in ferruginous cavities caused by decomposition of pyrites.

Batt and Party had sunk on the last-mentioned reef just outside Fullerton's boundary, to a depth of 65 feet and had stoped from the 55-foot level to the surface for a short distance along the reef, which in this claim, varies in thickness from 4 to 6 inches. Thirty tons of stone thus obtained yielded 1 oz. 5 dwt. of gold per ton at the local battery. The reef was still showing in the bottom of the shaft, but as the country was hardening the owners did not regard further operations as really payable.

On the west of Fullerton's claim several shafts have been sunk without payable results. On the east J. Bishop holds a claim—of six men's ground—and has sunk 65 feet on a reef striking about north-east. Its thickness varies up to about 18 inches. Fourteen tons of stone from the 45-foot level yielded 15 dwt. of gold per ton; a second crushing, however, yielded about 4 or 5 dwt. per ton. The best indications are in the north-east end of the drive from the above level, but as the reef at this point is pitching steeply in its course, water is very troublesome.

Close by, on the north-east of Fullerton's Mine, George Green holds a claim which was originally prospected by Duffy Bros., who sank two shafts 50 feet and 30 feet deep respectively, and crushed 10 tons of stone for a yield of 7 dwt. per ton. The reef strikes about north-east, and is from 12 to 14 inches in thickness, but swells and pinches at intervals. Other reefs occur in the end of the small spur forming the claim; one of them of fair size, but quite barren. Green had started a tunnel from a small gully about 300 feet distant, on the east, for the purpose of cutting the main reef at about 80 feet from the surface, which would be only a few feet lower than the present shaft workings. This attempt, however, was abandoned in favour of testing at a depth from the main shaft, assisted by the Prospecting Board. At the end of July a depth of 70 feet was attained, and the reef was reported to have pinched out, but sinking was being continued alongside a well-defined wall or joint.

Fitzgerald Bros.' reef, before-mentioned, lies north of Fullerton's. It strikes N. 30 degrees E., and dips easterly. Its thickness varies up to 6 or 8 inches to a depth of 60 feet. At this level drives have been extended about 80 feet along the course of the reef, and stopes carried up about 25 feet; 130 tons of stone extracted and crushed to the end of April yielded about 2 oz. of gold per ton.

A few chains south of the above mine is Messrs. Dickson and Laughton's reef. Between the two claims is a narrow saddle-reef, but the reefs are distinct. Dickson and Laughton's reef strikes N. 15 degrees

degrees E., and is vertical, or nearly so. In this claim a tunnel was carried in about 10 feet on the southern slope of the ridge, exposing a solid quartz reef 4 feet thick. At this point a shaft was sunk 40 feet, from the bottom of which a north drive has since been commenced under aid from the Prospecting Vote. If a payable shoot should be struck, this drive will give about 80 feet of backs under the top of the ridge. At 20 feet in the drive 3 feet of quartz was showing in July, the date of the last report. So far, the best results obtained from this claim have been 2½ dwt. of gold, per ton, from 8 tons of stone crushed. The reef is large and well-defined, and well situated for economic working by tunnel, under which circumstances a very few dwt. per ton would yield remunerative returns.

About 200 yards south-east of the above claim is Messrs. Fitzgerald, Guy, and Thomas' Reef, which strikes about N. 20 degrees E. Two shafts have been sunk, about 100 feet apart, to depths of 75 and 40 feet respectively. I was unable to descend the former, owing to water and the absence of ladder-ways, but the Owners reported the reef to be from 7 to 9 inches thick, but very broken and uncertain. From the bottom of the shaft a drive was put in, north, 21 feet. One hundred tons of stone raised during operations yielded from 4 to 5 dwt. of gold per ton.

No. 2 shaft (40 feet) was sunk about ten months ago, and driven, south, 13 feet, and 10 tons of stone raised yielded from 3 to 4 dwt. per ton. As an instance of the abruptness of the pinching in some of the Big Hill reefs, the appearances at the bottom of this shaft may be mentioned. In the south end of the shaft and the 13-foot drive from it, about 3 ft. 6 in. of solid white quartz is showing, whilst at the north end no trace of quartz is seen in the solid slate country.

North of Fitzgerald Bros.' Mine another party was at work, but the time available did not permit of an inspection.

On the east side of the Bateman and Moruya Road, about three-quarters of a mile south-east of Big Hill reefs, Messrs. Duffy and Christensen were down 18 feet on a 3-foot reef, striking N. 15 degrees E. This reef also affords a good instance of pinching; in the north end of the shaft it is about 3 feet thick from the surface down, whilst in the south end the vein-stone was only just showing on the east wall at 18 feet deep. This vein is curiously cross-jointed horizontally with thin fillings of soft flucan between the blocks. Colours of gold were seen in several specimens at grass, and fine specks were also detected in a small dolly test. The stone nearest the walls prospected fairly well, but an average sample was poor. Numerous other claims were originally held adjoining or close by those described, and a certain amount of prospecting was done upon them; but attention was only given, during the limited time at my disposal, to those which were at work at that date.

Judging from the uniform general characteristics of the reefs already opened in the district, it does not appear hopeful that any sensational finds will be made of an extensive or permanent character; but the indications are sufficiently good to justify a confident prediction that many reefs similar to those already discovered will be found in the intervening country as prospecting extends—as it should—from the already fairly-trying centres.

I have, &c.

JOSEPH E. CARNE,
Geological Surveyor.

APPENDIX 12.

Report on a Deposit of Cinnabar near Lionsville.

Sir, Geological Survey Branch, Department of Mines and Agriculture, 3 January, 1896.

I have the honor to report that, in accordance with your instructions, I have inspected the recent discovery of cinnabar on Yulgilbar Station, Clarence River.

The deposit occurs about 5 chains from the south-west corner of Portion 15, Parish Ewengar, County Drake, and about three-quarters of a mile west of the Clarence River.

The nearest settlement is Lionsville, distant about 7 miles in a south-west direction.

The discovery was made by Laurence Fox about twelve months ago through picking up a loose surface specimen of the matrix containing cinnabar. Actual prospecting began in February last.

A previous discovery was recorded in this district in 1891 at Horseshoe Bend, about 16 miles lower down the course of the river, and about 3½ miles south-east of Lionsville. This site has been surveyed as M.L. 5, of 40 acres, in the Parish of Carnham. Mr. Geological-Surveyor David reported on this deposit about March of the same year, and recommended aid from the Prospecting Vote for proving it. The occurrence is briefly described as* "a dyke, 12 feet wide, of felspathic rock, allied to serpentine containing cinnabar, distributed irregularly in spots and minute veins. This dyke has intersected the granite of the district at this locality, and is likely, I think, to be permanent to a considerable depth."

The present report will be limited to a brief description of the country rocks, nature and apparent mode of occurrence of the Mercury ore, present and suggested future prospecting, &c.

To attempt an estimate of the richness of the deposit or of the quantity of ore likely to be available at the present initial stage of exploration would be unfair, even if not altogether impossible. Sufficient data, however, will be adduced to justify the opinion that the prospects are decidedly encouraging, and far superior to those afforded by any previous discovery recorded in the Colony.

Previous Discoveries and Mention.

The localities of previous discoveries with reference to reports thereon may be briefly summarised as follows:—

Locality.	Authority.
Near Rylstone, Cudgegong River, county Roxburgh	Rev. W. B. Clarke, Min. Statistics N.S.W., 1875, p. 201.
Mookerawa, and Great Waterhole of Ophir, County Westmoreland...	Prof. Liversidge, Min. of N.S.W., p. 52.
† Clifton Mine, Boorook, County Buller	" "
Wagonga, County Dampier.....	" "
Moruya, County Dampier.....	" "
Calton Hill, Dungog, County Durham	" "
Grove Creek, Abercrombie Mountain, County Georgiana.....	" "
Near Scone, County Brisbane	Mr. Dickson.
Spring Creek, near Bingara, County Murchison	T. W. E. David, Ann. Rept. Dept. Mines, N.S.W., 1891, p. 234.
Horseshoe Bend, Clarence River, County Drake	T. W. E. David, Pros. Board Papers, 91-279.

Whilst writing this report a sample of galena and zinc blende with cinnabar has been brought to the Geological Survey Office for assay with a statement that it was obtained from Sunny Corner, Mitchell, County Roxburgh. General

* T. W. E. David, Prospecting Board Papers, 91-279.

† These occurrences are evidently based on verbal or non-published reports; hence the references are non-committal. —J. E. C.

General Geological Features.

The country at the cinnabar deposit consists of hornblende, granite, felsite and augite-diorite, whilst in the immediate neighbourhood serpentine is largely developed.

The sedimentary rock of the district consists of altered slate, which has been referred to the Devonian formation by the late Government Geologist, Mr. C. S. Wilkinson.* The gold reefs of Lionsville occur in the latter where it has been intruded by granite dykes.

The special feature of the most important mercury mines of the world, viz., association of igneous rocks with sedimentary strata is absent in the present case. So far as yet proved the mercury ore is confined to the igneous rocks.

Prospecting Operations.

At the time of inspection in October last prospecting operations had just been resumed after a short respite. Two shafts have been sunk 20 feet and 50 feet respectively about $3\frac{1}{2}$ chains apart on a line bearing W. 15 degrees E. and S. 15 degrees W. These shafts are on distinct veins, which have an east and west trend.(?)

From the 50 feet shaft a line of shallow surface-openings has been extended for about 29 chains in a direction 25 degrees north of east. These openings have been made wherever any of the characteristic fine-grained felsitic and chalcedonic matrix appeared at surface. In some instances the openings have been on loose and isolated boulders; in others, however, there is evidence of veins *in situ*, but not sufficiently pronounced to allow of a definite strike being determined for the complete line. It appears more likely that these veins are numerous. Traces of cinnabar were detected in most of these openings; but nothing approaching payable ore.

A second line of shallow openings has been made along a well-defined outcrop of similar rock. This line bears E. 5° S. from a point 80 links south of the 50 feet shaft. The openings extend for about 16 chains east from the shaft; the outcrop, however, can be traced at least twice that distance to the Clarence River, near the west bank of which it forms a bunch or "blow." Some years ago this bunch was prospected for gold. Cinnabar could not be detected here, though numerous freshly broken specimens were examined. I was informed, however, by Mr. T. Bassetti, one of the shareholders of the Cinnabar Mine, that that mineral could be identified upon crushing and washing the samples of the rock.

At the spot marked (C) on plan an opening 7 feet deep has been made in the outcrop referred to, and from that level a small opening or drive has been put in about 4 feet south. At the extreme north and south limits of the opening and drive hornblende granite is exposed, the intervening rock being felsite, both being much weathered and decomposed. The peculiar feature here represented is the horizontal banding or marking of the rotten felsite by finely divided particles of cinnabar. The decomposed felsite is about 7 feet thick, and carries a small percentage of mercury—about one half per cent.—throughout that thickness. This site is one of the most favourable for prospecting.

Detail of prospecting and appearance of ore in the workings.

The main 50 feet shaft being timbered for about 20 feet from surface an examination of the appearance of the ore-veins near the surface could not be made for the purpose of comparison with those presented in the shallow openings above described. Below the timbering the discoloration obscured all traces, if any existed, of the ore to within a few feet of the bottom. In the south-eastern end of the shaft, thin veins of cinnabar traverse irregularly about 1 foot of felsite country. In the north-western end a little cinnabar was just beginning to show at the bottom of the shaft.

Specimens of cinnabar were taken out at the upper levels several inches thick; the individual veins, however, at the 50-feet level have narrowed to about 1 inch at thickest. Little importance attaches to this pinching or thinning, because of the capricious occurrence of the cinnabar. Bunches of greater thickness are certain to be met with at intervals where vughs or cavities have been formed in the country.

From the 50 foot level a start has just been made to cross-cut southerly in the direction of the 20-feet shaft. The first shot had broken off a thin skelp from the side of the shaft, which revealed thin veins and faint impregnations of cinnabar traversing and colouring the felsite country. The actual thickness of the ore-body at this point cannot, therefore, be determined until the drive has been extended. A cross-cut in the opposite direction would also, perhaps, reveal an extension of the cinnabar in the country.

At the 20-feet shaft, the cinnabar, quartz, and calcite form the filling of a contact fissure between an intrusion of augite-diorite and the felsite. The cinnabar in the best specimens averages, perhaps, 1 inch in thickness in this vein.

The appearance of the ore in the small opening marked (c) has already been described. In the shallow openings, as has been mentioned, traces only of cinnabar have as yet been exposed.

Probable Mode of Occurrence of the Cinnabar.

As far as the limited amount of prospecting will allow of an opinion being formed, it appears probable that three or more parallel bands of felsite occur, containing veins and impregnations of cinnabar.

The ore-band on the 50-feet shaft is evidently distinct from that in the main line of outcrop, which strikes about 52 feet south of the shaft, because the felsite in that outcrop, as exposed at the opening marked (e) is but 7 feet thick, between well-defined hornblende granite walls.

A third band is represented at the 20-feet shaft, and possibly a fourth in the most northern line of openings.

Nature of the Country or Enclosing Rocks.

Characteristic specimens of the country rock were selected and forwarded to the Geological Survey Office for petrographical examination and determination. The following notes upon them have been kindly supplied by the Curator and Mineralogist, Mr. Card, A.R.S.M. :—

"Three types of rocks are comprised—

- "(a) Fine grained felsite of a greenish colour, weathering brown when fresh. This is the principal cinnabar-bearing rock, the ore occurring in veins and spots closely associated with quartz, and, to a less extent, calcite. These three minerals—cinnabar, quartz, and calcite—are of secondary origin; they do not occur in fresh, unaltered felsite, but their presence is always correlated with a general alteration of that rock. Pyrites is very generally present, but does not appear to possess any significance with regard to the origin of the cinnabar ore. " (b)

* Ann. Rept. Dept. Mines N.S.W. for 1889, p. 202.

- "(b) A holocrystalline rock-marked "country." This consists of quartz, felspar, orthoclase, and much oligoclase (?) hornblende and a little magnetite, may be classed as hornblende-granite. A much altered form of this rock is of great interest, in that the alteration has been accompanied by an introduction of cinnabar, which occurs in small particles within the decomposed felspar, and more abundantly along the divisional planes of the hornblende.
- "(c) Two specimens of fine grained augite-diorite from No. 2 shaft."

Mr. Card's opinion as to the secondary nature of the cinnabar and associated minerals in the felsite and hornblende-granite, derived from microscopic examination of selected specimens is entirely confirmatory of the decision I arrived at in the field.

Though the cinnabar is mainly confined to the felsite bands, yet evidence is not wanting, macroscopic as well as microscopic, of a certain amount of impregnations of the granite itself.

The calcite and quartz occur in veins as well as impregnating the mass of the altered felsite. Small vugs occur which are lined with crystal faces of the calcite. It is noticeable that when the cinnabar occurs as a vein, no matter how thin, it is entirely associated with the quartz, and separate from the calcite. In no instance in the vein-specimens collected could cinnabar be detected in the calcite. The quartz filling the veins has a translucent appearance passing almost into clear glassy transparency near the metallic vein minerals. Its outer surfaces form a series of mammillary curves covered with free terminating crystals. On these the calcite has been deposited. Part of the calcite is dark greenish-black, the colouring matter may be due to chlorite from decomposition of hornblende.

The felsite in its normal condition is very fine-grained and greenish in colour, breaking with a cherty conchoidal fracture. Pyrites is fairly abundant in it. Where decomposition has been set up the texture of the rock has become more coarsely crystalline in appearance owing to the replacement of portion of the fine felspathic material by crystalline calcite. The extent of the replacement may be judged from the following determination of the lime in an average specimen of the felsite from the bottom of the 50 feet shaft=Lime (CaO) 11.70% equal to carbonate of lime 20.89%.

Nature of the Ore.

Associated with the cinnabar is an almost tin-white material, weathering bronze, containing copper, antimony, and sulphur. The copper carbonates, which occur in small quantity in the upper levels, have resulted from the oxidation of this mineral. The association of the latter with the cinnabar is too intimate to allow of the perfect separation necessary for adequate test for mercury in it. A complete analysis, however, of the mixed ore has been made by the Analyst to the Department, Mr. J. C. H. Mingaye, F.C.S. with the following results:—

Chemical Composition.

Metallic Mercury	...	...	...	...	...	43.68
„ Copper	...	...	...	...	...	6.87
„ Antimony	...	...	...	...	...	4.44
„ Arsenic	...	...	...	...	...	trace
„ Iron	...	...	...	...	...	.45
Alumina	...	...	...	...	...	trace
Lime (CaO)	...	...	...	...	...	1.26
Magnesia (MgO)	...	...	...	...	...	.21
*Gangue	...	...	...	...	...	30.46
Sulphur	...	...	...	...	...	11.46
Carbonic Acid	...	...	...	...	...	.44
Moisture at 100° C	...	...	...	...	...	.25
						99.52

Fine silver at the rate of 9 oz. 6 dwt. 4 gr. per ton } No tellurium or
 Fine gold a trace (under 2 dwt) ... } selenium detected.

* Chiefly silica

The copper-bearing mineral penetrates the vein quartz in wedge or cone shape forms. Mr. Card, who examined all the selected specimens prior to my return, suggests that it may be a mercurial fahlerz; further exploration may furnish sufficiently pure specimens for actual determination.

The first specimen of cinnabar from the Yulgilbar deposit assayed in the Departmental Laboratory yielded:—

- Metallic mercury, 60.70 %.
- Silver, 6 oz. 10 dwt. 15 gr. per ton.
- Gold, a trace (under 2 dwt. per ton).

This sample represented the highest grade ore in the principal vein near the surface of the main 50-foot shaft. The following samples were selected by myself from a band of decomposed felsite about 7 feet thick, in the small opening at the spot marked (c) on plan.

[4057] "Picked." Decomposed felsitic material forming horizontal pink layers from 1 to 2 inches thick in a vertical section of about 3 ft. 6 in.:—

- Metallic mercury, .48 %.
- Copper, a minute trace.
- Neither gold or silver.

[4058] "Average." Decomposed felsitic material being an average sample selected from the full thickness in the above section:—

- Metallic mercury, .50 %.
- Copper, a minute trace.
- Neither gold or silver.

From the pink colour of the horizontal layers a much higher yield would have been anticipated from the "picked" sample than from the average of the whole thickness.

The

The cinnabar in the soft decomposed felsite must be in a very fine state of division, for its presence is only detected by the faint pinkish tinge imparted to the matrix. Possibly portion of the cinnabar may have been removed during the decomposition and weathering, as a sample of undecomposed felsite, having a pink tinge from included cinnabar from No. 2 shaft, yielded as follows:—

[4056] "Lump."

Metallic mercury, 1.58 %.
Copper, a minute trace.
Neither gold nor silver.

Hence it is reasonable to expect a higher yield from the undecomposed felsite at a depth at the spot marked (C) on plan.

Origin of the Cinnabar.

Field observation and microscopic examination alike agree as to the deposition of the cinnabar from solution in siliceo-calcareous waters which percolated through definite cracks or fissures, and soaked laterally into the country as the corroding solutions attacked its more soluble constituents, and replaced them chiefly from the calcium or lime salts in solution.

It would, however, be premature to offer an opinion as to whether the mercury salts had a deep seated extraneous source or were originally leached in minute quantities from the contiguous or underlying granite and redeposited in the way described.

Ore at Grass.

Some of the richest patches of ore have been bagged, but little care has been taken with the bulk of the stone raised from the shafts, hence any estimate of quantity of workable ore—fixing 5 per cent. as the maximum in this case—would be very approximate only. It is certain, however, that a fair proportion of the above grade ore could still be culled from the waste.

Further Prospecting.

The crucial question at the present moment however, is, what quantity of workable ore is likely to be available in the mine; a question which requires a practical answer such as systematic prospecting alone can give.

The sites most likely to afford a solution to the query would be the present shafts (A and B) and the site marked (C) on the accompanying plan. The prospecting should be in the direction of deepening the above shafts (including C), driving along the course of the veins, and crosscutting to ascertain the thickness of ore-bearing country.

Conclusion.

I am of opinion from the mode of occurrence that the cinnabar is likely to continue to great depths, but whether in sufficiently concentrated form to pay for extraction prospecting alone can prove.

The conditions of occurrence differ from those of the very few paying mercury mines of the World, yet the prospect of developing a paying deposit of moderate extent is decidedly encouraging and certainly superior to any yet obtained in the Colony.

As the existence of a mercury mine in Australia would be of first importance in such a gold-bearing country, I am of opinion that a share of the cost of proving comes well within the scope of the Prospecting Vote.

I have, &c.,

JOSEPH E. CARNE, F.G.S.,

Geological Surveyor.

The Government Geologist.

APPENDIX 13.

Report on the Coramba, Bucca Creek, and adjacent Reefs.

Geological Survey Branch, Department of Mines and Agriculture,

31 December, 1895.

Sir,

I have the honor to hand you the following report on the lately discovered reefs in the vicinity of Coramba Mountain, County of Fitzroy.

The discoveries are in the Parishes of Moonee and Comlaroi, in the southern portion of the Orara Gold-field East Extension, which was proclaimed on the 28th October, 1881.

Taking the bearings from the Coramba King mine, the Warden's Office at Nana Creek Reefs lies about 4 miles north-west; Woolgoolga, about 14 miles north-east; and Coff's Harbour, 9 miles south-south-east. The two latter being on the seaboard.

General Geological Features.

Proceeding from Grafton—which lies about 40 miles a little north of west from Coramba—the formation consists of Clarence (Triassic) Coal Measures as far as Bagawa. Very characteristic mural escarpments of the middle beds (Hawkesbury Series) form the most conspicuous physical features of the country passed through.

Near Bagawa the basal rocks of the district appear; these have been described in connection with the Nana Creek reefs, by the late Government Geologist as Devonian slates and sandstones.* This classification I believe was based on stratigraphical and lithological grounds, as no fossils, as far as I am aware, have been found in these rocks in the district.

Intruding the Devonian formation at Coramba is a mass of granite, in which some of the principal reefs occur.

The following note by Mr. Card, A.R.S.M., Curator of the Mining and Geological Museum, on the petrographical examination of specimens of the country at the Coramba King, Lady Elsie, and Evening Star Mines is of interest:—

"The igneous rocks intruding the country rock consist of granite and (perhaps) porphyry. Evidence of crushing is very pronounced in one or two, as for instance [740], in which the twin lamellæ of the felspars are seen to be faulted. The rock from Coramba King [738] contains a little brown hornblende, stretched and bent by the crushing forces. With this exception minerals of the ferromagnesian group are absent."

The Bucca Creek and Tallawudjah Creek reefs occur in the Devonian formation. A sample of the hardened country in Sharpe and Morrow's No. 2 claim, at Tallawudjah Creek, is thus described by Mr. Card, after microscopic examination:—"This is a compact rock of sedimentary origin, and consists essentially of angular fragments of quartz and felspar." The

* Ann. Rept. Dept. Mines for 1889, p. 203.

Coramba.

The first discovery at Coramba was made about eighteen months ago by some selectors in the vicinity, whose attention had been drawn to the probable proximity of reefs by the occurrence of numerous specimens of gold-bearing quartz in the rich alluvial flats, which they were cultivating on the bank of the Orara River, into which the Coramba Mountain channels drain on the west. Though M.T. 1 was the original prospecting claim on the field, the Coramba King Claim was the first to reward their efforts, and as regards thickness and length of outcrops it is the most important of the immediate group, though, perhaps, surpassed in average richness by some of the smaller reefs.

At least three parallel reefs occur in close proximity on the western slope of the Coramba Mountain, and between the Coramba King and the Lady Elsie reefs is another which has not yet been proved. This middle line passes through the Coramba King and adjoining leases.

Coramba King Reef.

The main (Coramba King) reef strikes about N. 38 E.; and underlays south-easterly at an angle of from 43 to 45 from the horizontal. At the 55-foot level the underlay suddenly alters to 57°.

The thickness varies from 2 feet to 6 feet along its crop. At the 55-foot level, where the dip suddenly becomes steeper, the thickness increased to 8 feet. At the surface of this shaft the reef was but 10 inches, but rapidly thickened in a few feet.

Along its southern strike the outcrop of the reef has been traced from the Coramba King (G.L. 9), through the G.Ls. 6 and 7, M.T. 1, G.L. 8, and into G.L. 11, a distance of about 30 chains.

The middle reef strikes N. 30° E, and underlays south-easterly at an angle of 43° from the horizontal.

The Lady Elsie reef strikes N. 30° E, and underlays south-easterly at an angle of 78° from the horizontal. In thickness it varies from 3 to 14 inches.

Between the outcrop of this reef and the Coramba King line there is a distance of about 5 chains, and a gradual ascent of about 150 feet to the latter.

Northerly from the Coramba King main shaft a break in the reef has apparently occurred, for notwithstanding a considerable amount of labour expended by the discoverers in sinking and driving across the line of strike, at a point where several large blocks of loose quartz were discovered in the soil, the channel of the reef has not been cut. The failure of the efforts to pick up the reefs in the crosscut drives has given rise to a belief that a fault at this point has thrown it out of its course, the surface evidence of this displacement being obliterated by the accumulated debris of soil and slipped shingle from the higher levels.

As the outcrop of the reef undoubtedly occurs about midway between the main shaft and the prospecting works referred to, the surest and most economical method of tracing the reef, and proving the existence or otherwise of a fault, is to sink at this point into settled country, and then follow the reef on its northerly course.

In the adjoining lease on the north-east (G.L. 14), at a distance of about 10 or 12 chains from the outcrop mentioned above, a reef has been exposed in several shallow openings, which, through having a slightly different strike (N. 35° E), is very probably the continuation of either the main or middle reef. The reef in G.L. 14 has a thickness of about 1 ft. 3 in., and underlays south-easterly at an angle of about 50° from the horizontal.

Between this outcrop and the most northerly Coramba King workings loose blocks of kindly-looking banded quartz are to be seen in and near a small creek. It is therefore more than probable that the main reefs will shortly be traced continuously through the intervening space.

From the large loose blocks of quartz lying just below the point where the trouble occurs in the Coramba King Claim the richest returns have been obtained. The largest of these blocks must have weighed several tons.

The output from the Coramba King Mine to the date of my visit, in October, was as follows:—

	oz.	dwt.	gr.	
2 tons "from loose, slipped blocks," treated at Parke and Lacey's	8	15	0	per ton.
3 tons from reef,	2	6	0	"
76 tons from reef, treated in local battery	0	10	21 ³ / ₄	"
4 tons from main shaft (picked from 6 tons), Parke and Lacey's	10	0	0	"
6 tons from surface, treated at Parke and Lacey's	1	12	0	"

The reinstein is a free milling ore, comparatively non-pyritiferous down to the lowest level mentioned (55 feet) in the main shaft; in the adjoining claims, however, arsenical pyrites is more abundant at the surface. On the whole line there is evidence that below the water-level, if not before, the proportion of contained pyrites will be sufficiently appreciable to render special care of the concentrates a matter of importance.

The Coramba King Mine is at present held in conjunction with G.Ls. 6 and 7 on the same line and G.L. 17, which adjoins the above mine on the north-west, and contains a parallel—middle—reef (?), which has yet to be proved. The total area of the above lease is 18 acres.

Timber for all purposes is abundant, and permanent water—the Orara River—is within 1 mile. The main shaft has an elevation of about 475 feet above the river-bed; the falling ground between will render transport easy and expeditious, either by horse or steam traction.

In the adjoining claim (G.L. 7) on the main line two shallow shafts and two open cuts have exposed the reef, which here has a thickness of 5 feet. 120 tons of stone from these workings are reported to have yielded 53 oz. of gold, equal to 8 dwt 2 gr. per ton. Taking this yield in conjunction with the bulk test from the adjoining Coramba King Claim, viz., 76 tons for 41 oz. 7 dwt. of gold, a return equal to 9 dwt. 16²/₃ gr. per ton of quartz has been obtained from 196 tons, which should be a fair test of the average value of the stone near the surface.

On G.L. 6, which adjoins G.L. 7, little proving has yet been done, and no crushings have taken place. One shaft, 30 feet deep, has been sunk on the reef, about 20 feet from the north boundary.

Adjoining G.L. 6 is M.T. 1 of 4 acres 1 rood 24 perches, which is now being tested by means of a tunnel under aid from the Prospecting Vote. As before stated, this is the original prospecting claim of the locality, and so far the owners have reaped no benefit from their labours, for after starting two shafts the tunnel test was adopted.

One of the shafts was started to cut the reef on the underlay, but had not reached it when the tunnel was begun. The other shaft follows the reef on the underlay for about 28 feet, and exposes about 2 feet of quartz. Between the two shafts an outcrop exposes 3 feet of quartz. The crosscut prospecting tunnel, which starts from the south-west corner of G.L. 6, will give from 150 to 160 feet of backs when the reef is struck, besides cutting the parallel middle reef, which outcrops west of the main reef.

No test has yet been made of the stone raised from the underlay shaft or open cuts.

Adjoining M.T. 1 on the south is G.L. 8 of 4 acres. An opening on the reef at the boundary of the two claims reveals a thickness of about 6 feet of quartz. Practically little or no real prospecting has been done in this claim, though the outcrop of the main reef is well defined all through it. Excellent tunnel sites, which would afford a large amount of backs, are available in these southern claims.

G.L. 11 of 10 acres, which joins the last-mentioned lease, has its southern boundary against the east line of C.Ps. 62 and 63. A little trenching has been done on this claim, exposing loose blocks of quartz; the presence of a good deal of slipped rock and soil, however, covers the outcrop of the reef.

There is evidence of earlier prospecting in this area; a shallow vertical shaft has been sunk upon a reef striking N. 17° E., and having a thickness of from 12 to 18 inches. This shaft is just at the boundary of Portion 62.

The Lady Elsie Reef.

The Lady Elsie Mine consists of G.Ls. 10 and 25, the workings being in G.L. 10.

The reef strikes N. 30° E., and underlays south-easterly at 78° from the horizontal below the 46-foot level, down to which it is nearly vertical. It averages from 3 to 14 inches in thickness in hard country. The maximum thickness was showing at the lowest level attained, viz, 63 feet. Two drives either way along the reef from the 43-foot level had been extended 36 and 52 feet respectively. In the face of the south drive the reef had pinched out, but the hanging wall was well-defined. As the quartz occurs in lens-shaped blocks the reef is sure to widen and pinch at intervals, and even to leave blank spaces like that described. A tunnel was being driven to connect with the south drive for ventilation.

The Lady Elsie stone contains a fair amount of pyrites and occasional crystals of zincblende; due care should be paid to the blanketing or other method adopted for saving the concentrates, as they are likely to be of considerable value.

The following parcels of stone from the reef had been treated prior to my visit:—

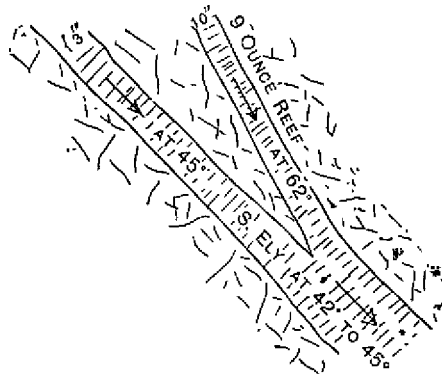
8½ tons yielded	2½ oz. per ton	} Equal to a fraction over 2 oz. 13 dwt. 13 gr. per ton.
17½ " "	2½ " "	
13½ " "	3 oz. 7 dwt. per ton	
7 " "	2 oz. " "	

Goldspring Reef.

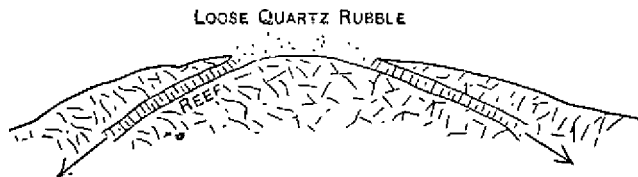
Near the Orara River, on Portion 59, a small reef named the Goldspring has been opened by two shafts 20 and 26 feet deep respectively, and 26 tons of stone raised from them yielded 13 oz. 5 dwt. of gold at the local battery. The reef varies up to 9 inches in thickness, but is very irregular in occurrence.

Evening Star Reef.

At the south-west corner of Portion 15, Parish of Comlaroi, on the west of the Orara River, is the Evening Star Mine, G.L. 24, of 6 acres. Two reefs junction in this lease, and one of the points of contact exposed in the workings, where a rich 9-oz. shoot joins the main reef, is shown in the following rough sketch section. The former was the first reef discovered in the mine; its thickness is about 10 inches. The main reef being about 15 inches thick. These reefs strike about N. 65° E., and underlay after junctioning south-easterly at 42° to 45° from the horizontal. The thickness at this point is 3 feet:—



On the south-western strike, a short distance from the furthest shaft in that direction, denudation has exposed the top of an anticlinal fold or "roll" in the reef, after the manner depicted in the following rough sketch section:—



On the surface between the two outcrops was a quantity of loose quartz rubble, a portion of which is said to have yielded payable returns at the Battery. The

For a distance of over 300 feet along the outcrop, gold can be readily detected with the unassisted eye, on breaking specimens from the reef. The surface openings are shallow—not exceeding 10 feet—but they serve to expose a solid reef for over 200 feet, and smaller openings reveal its extension for about 330 feet. About 100 feet northerly from the main reef the cap of a parallel vein had just been discovered about 18 inches below the surface. Gold was visible in specimens, but sufficient soil had not been removed to allow of the thickness, strike, and dip being determined with a reasonable amount of accuracy.

From 8 tons of rubble and casing from the different surface openings in Tayler's Reward Reef, 23 oz. of free gold were obtained by washing. The washed stone, with the addition of 7 tons from the reef direct, were sent to Mort's Dock for treatment, with the result that 14 tons 7 cwt. yielded 98 oz. 10 dwt. 19 gr. of smelted gold, in addition to the 23 oz. mentioned above.

Estimating the original quantity at 15 tons, the yield would be equal to 8 oz. 2 dwt. 1 gr. per ton, irrespective of the concentrates, which are reported to have yielded at the rate of 10 oz. of gold per ton at Climo's Works, but the proportion is not known. This reef certainly offers one of the best surface shows I have seen, and there is every reason to predict a successful development.

Perseverance Reef.

Close by the Reward claim is the Perseverance Mine, G. L. 33, of 6 acres, which embraces a very flat reef discovered in June last. This claim has been opened by tunnels in a very erratic manner following the reef on the underlay. In the main tunnel the underlay steepened suddenly, and at the time of my visit the face was covered with water, which prevented a proper inspection. The reef so far as seen, appeared very broken and rubbly, though larger blocks of quartz which had been taken from the face testified to greater solidity. The vein appeared to vary in thickness from a few inches up to about a foot. Gold was freely visible in specimens. The owner was putting a quantity of the rubble and flucan through a most primitive sluice made from a cabbage palm stem. About 15 tons had yielded in this simple treatment about 1 oz. of gold per ton. 14 tons 7 cwt. of the washed stone was then awaiting crushing at Mort's Dock, the result of which I am now informed was 89 oz. 14 dwt. of smelted gold.

Gold Lease 36.

In G. L. 36, adjoining the Reward claim on the west, several flat leaders were exposed in the bank of the creek, ranging from 2 to 6 inches in thickness. One ounce of gold is stated to have been washed from less than a dish of the rubbly stone in these veins, and 70 lb. of stone from a leader in a 9-foot shaft close by yielded 7 dwt. of gold. Leases have been pegged out adjoining each of the above claims, and prospecting was proceeding, but at that early date nothing special had been discovered outside the mines mentioned. There is every reason, however, to expect other finds in the vicinity.

Tallawudjah Creek.

I also visited some recently-discovered gold-bearing reefs on the west side of Tallawudjah Creek, in the Parish of Bagawa, County Fitzroy, about 4 miles west from Nana Glen Post-office.

Sharpe and Morrow's Reef No. 1.

The prospectors of this particular locality are Messrs. Sharpe and Morrow, who have applied for two leases. In the claim nearest the creek a 6-inch reef has been opened to a depth of about 30 feet in claystone country. This reef strikes about north-east and south-west, and underlays south-easterly at an angle of 53 degrees from the horizontal. Another 6-inch vein occurs in the same claim, having a strike of north 5 degrees east, but the crop only has been exposed.

Sharpe and Morrow's Reef No. 2.

In the Prospectors' No. 2 Claim, a short distance to the west, another reef is being opened by means of a tunnel, which, however, was only in a few feet at the time of my visit. The reef strikes north 25 degrees east, and is nearly vertical. The thickness varies from 6 to 9 inches. If it should prove payable the tunnel will give about 95 feet of backs at the back boundary of the claim. A parallel reef occurs close by on the east, about 12 inches thick, but no work had been done upon it.

Currajong Reef.

South of the above claim is Messrs. Seghors and Party's Currajong Reef, which strikes north 20 degrees west, and averages about 5 inches in thickness. The veinstone prospects well, but the country is hard, consisting of highly-altered sedimentary rock. Two shafts have been sunk 15 and 20 feet respectively at a distance of 12 feet apart. In one of these two veins are showing in one end about 10 inches apart, one about 2 inches thick, and the other 6 inches.

A parallel vein has been exposed in two small openings about 3 chains west of the above, having a strike north 30 degrees east and a thickness of about 1 ft. 5 in.

Fairy Queen Reef.

Jarrett and Pick's Fairy Queen reef has been opened to a depth of about 10 feet, exposing a thickness of from 5 to 8 inches of quartz. It strikes north and south, and underlays east at an angle of 42 degrees from the horizontal. Gold was seen in numerous specimens from this vein.

Between the Fairy Queen and Currajong reefs numerous small leaders occur, from which fair prospects can be obtained, and several parties were engaged prospecting in the vicinity. So far no bulk tests have been made from these reefs. Dolly tests, however, in most instances give encouraging results.

Conclusion.

I am of opinion that the Coramba District, radiating from the mountain of that name, offers considerable inducement to prospectors, though their preliminary efforts are liable to be trammelled and retarded by the dense undergrowth and vines and the great depth of soil in many parts. Still, evidence is not wanting in road cuttings and rocky creek channels of numerous quartz veins and leaders, some of which may prove auriferous.

Alluvial.

Alluvial.

Though the locality mentioned is a promising one as regards reefing, yet the chances of payable alluvial leads are not so bright. The most likely spot which came under my observation, for the occurrence of payable alluvial, is the small channel and alluvial flat which drains from the Evening Star Mine to the Orara River. This ground would be bouldery and wet and is undoubtedly worthy of a test. The site is on conditionally purchased land. Taking all the facts into consideration, there is every reason to hope for a successful future for the gold-mining industry at Coramba. It cannot be denied, however, that there is a very prevalent feeling of distrust in the permanency of any reefs in the north-coast country, mainly owing to the short vertical lengths of the gold shoots in the Nana Creek Gold-field. It is, however, difficult to imagine a sudden termination, vertically, to such horizontally lengthy shoots as are already exposed in the Taylor's Reward and Coramba King reefs. Nor can the depths to which the Nana Creek reefs have been tested be accepted as conclusive evidence of complete impoverishment with depths. The system, or rather want of system, adopted in working payable shoots in New South Wales, is a feature which expresses itself more and more upon the attention of those whose duty it is to examine mines for which aid is asked from the Prospecting Vote. With a very few worthy exceptions, when a paying shoot is being worked, a hand-to-mouth policy is adopted, with no thought of the morrow. Not a single foot beyond the daily crushing requirements are the shafts and levels extended, until, suddenly the "bottom drops out of the mine;" in other words, the paying shoot ends, and then the reaction from good dividends and high expectation to frequent calls and deadening despondency, closes the mine before the blank, unproductive, spaces have been pierced; and so, perhaps, later on others reap where they have not sown over much.

In legitimate mining one of the first and most vital principles is systematic prospecting, concurrently with actual winning of pay stone. The shafts and levels should be kept persistently ahead of actual stoping. The cessation of prospecting directly pay stone is struck, is, undoubtedly, the most prolific cause of sudden collapse and disappointment in mining. It is satisfactory to know that in several of the Coramba reefs systematic prospecting is in progress, which it is earnestly to be hoped will not end with the striking or proving of *one* pay shoot, but continue with, and in advance of, the actual stoping.

At Bucca Creek where systematic mining has not yet been begun, and practical experience is wanting, a splendid chance awaits skilful management, which should be secured at the outset.

Crushing Plants.

A public battery, working ten head of stamps, has been erected on Portion 62 on the Orara River, and, judging from remarks current on the field, has given general satisfaction to all parties. This battery is a great boon to the owners of the small reefs and to the proprietors of the larger ones, as it enables them to properly test their claims before incurring the expense of crushing plants. If, however, the gold in the Coramba King line of reef is proved to maintain the average (or even a couple of dwts. less) obtained from 196 tons from the surface, viz., 9 dwt. 16 gr. per ton, down to reasonable depths, it is manifest that rapid treatment on a large scale will yield the best results from such a large body of stone.

As regards the requirements of Bucca Creek, a ten-head battery at the present time would be of equally great advantage to the small holders and prospectors, whilst enabling the owners of main reefs to adequately prove their properties before deciding on the extent of the requisite crushing plant.

Though within about $3\frac{1}{2}$ miles in a direct line from the Coramba Battery, the country between it and the Bucca reefs is of such a nature as to offer considerable difficulties to transport. The nearest point of the Orara River lies about $2\frac{1}{2}$ miles south-west from the reefs, but numerous tributaries approach much closer in that direction.

The branch of the Bucca Creek on which the reefs occur, or the main channel can be readily made to serve all purposes of water supply by means of storage dams.

I hope shortly, through the courtesy of the Warden's Clerk at Nana Creek, to submit as an addenda to this report, a complete return of the results of crushings from the various reefs from the time of the discovery to the end of the year.

I have, &c.,

JOSEPH E. CARNE, F.G.S.,
Geological Surveyor.

APPENDIX 14.

Report on the Auriferous Beach Sands of the Esk River and Jerusalem Creek, in the Parish of Esk, County Richmond.

Geological Survey Branch, Department of Mines and Agriculture,

Sir,

29 January, 1896.

I have the honor to hand you the following report on the auriferous sand "leads" in the vicinity of the Esk River and Jerusalem Creek, in the Parish of Esk, County Richmond, together with general notes on the nature, extent, and probable source of the auriferous beach sands of New South Wales, and the methods of working adopted.

Previous mention.

Mr. Geological-Surveyor Stonier, F.G.S., reported on the auriferous sands near the Evans River, about 8 miles north of Jerusalem Creek, and briefly alluded to the locality now under consideration.*

Mr. E. F. Pittman, A.R.S.M., examined the auriferous beach sands between the Richmond and Tweed Rivers.†

Mr. C. S. Wilkinson, F.G.S., F.L.S. (late Government Geologist), described those near the Richmond River heads, as well as the auriferous basalt of the same locality.‡

Mr. J. C. H. Mingaye, F.C.S., M.A.L.M.E. (Analyst to the Department of Mines), read a paper on the occurrence of gold, platinum, and tin in the beach sands of the Richmond River District.§

The most accessible approach to the Esk and Jerusalem Creek mines is *via* the Half-way House, on the Chatsworth-Woodburn road; whilst the auriferous areas north of Jerusalem Creek are more readily reached from Woodburn *via* Evans or Little River.

From

* Ann. Rept. Dept. of Mines, N.S.W. for 1894, pp. 129-131.
Mines, N.S.W. for 1889, p. 263.

† Ann. Rept. Dept. of Mines, N.S.W. for 1880, p. 245.
§ Jour. Roy. Soc. N.S.W. for 1892, Vol. XXVI, p. 363-70.

‡ Ann. Rept. Dept. of

From the Half-way House, about 12 miles from Chatsworth, a track has been partially cleared to M'Auley's "lead," a distance of about 7 miles east. Several coaches pass the Half-way daily, to and fro between Chatsworth, on the Clarence River, and Woodburn on the Richmond; hence, communication with the beach diggings is readily accessible. A bi-weekly mail from the Esk Post Office, Half-way House, runs along the "leads" as far north as Jerusalem Creek Heads, collecting as well as distributing mail matter.

Physical Geography.

The Parish of Esk, with the exception of its north-west corner, where the dividing range between the Clarence and Richmond coast waters crosses it, consists of a tract of level forest land merging gradually into broad, marshy, almost treeless flats along the sea coast which forms its eastern border. It is difficult to define the boundary between the sea and land-made deposits, because the loose sand derived from the weathering of the massive sandstones of the adjacent high lands on the west, is mingled with the sea-worn sand which has been drifted inland by the action of the wind. It is clear, however, that numerous shallow inlets of the sea penetrated at one time well inland towards the Dividing Range. But there is not sufficient ground for the belief entertained by some of the miners, that the foot of the present range represents the original shoreline prior to the deposition of the auriferous sands.

Between the range and the coast (a distance of about 9 miles due west from M'Auley's Lead), the sandstone bed-rock can be seen *in situ* on the low ridges and in road cuttings. The most eastern outcrop noticed being about 3 miles east of the Half-way House.

The coast country between the Clarence River and Jerusalem Creek Heads is enclosed on the west in semi-circular form by the Dividing Range as far south as Tobbimoble, and thence easterly by high lands to the Clarence Heads. The bay-like appearance of this low area partially enclosed by a rim of high land, doubtless gave rise to the belief above stated as to its marine origin.

Geological Features.

The geological formation represented in the coast country between the Clarence and Richmond Rivers consist almost entirely of Clarence (Triassic) Coal Measures. Mr. Stonier describes a small outlier of slate at Bullock Creek, between Jerusalem Creek and the Evans River, as probably of Lower Carboniferous age, but this classification is based solely on stratigraphical position.

About half-a-mile south of Evans River Heads, the coast section exposes a massive escarpment of sandstone with conspicuous current bedding, overlying sandy shales containing an inferior coal-seam, about 1 foot thick, just above high-water mark. The high downs of this locality are formed of the above sandstone, large bosses of which are seen outcropping at intervals. The highest beds of the Dividing Range west of the Esk River, also consist of the same massive sandstone; these form the middle beds of the Clarence Coal Measures, and are regarded as the geological equivalents of the Hawksbury Series.

Igneous rocks are represented by a felsitic dyke which intrudes the Coal Measures just south of the Evans River. From the strike of this dyke it is extremely probable that the reef on which the ill-fated S.S. "Cahors" was wrecked (about 2 miles south-easterly), is a hard boss of the same rock which has resisted the wearing action of the sea more successfully than the enclosing shales and sandstones.

On the Dividing Range at Tobbimoble and near Doubleduke Peak, south-west of the Esk River, two small isolated patches of basalt have so far been recorded. These are of special interest as they indicate a considerable southern extension of the volcanic flow so largely represented north of the Richmond River.

Discovery of Gold in the Beach Sands.

According to Mr. D. Munro, of Ballina—who is well-known as a most observant and careful recorder of geological and other phenomena—gold in payable quantity was first discovered in beach sand in New South Wales, at Shaw's Bay, near the north head of the Richmond River, by John Sinclair, in March, 1875, who obtained 12 oz. of gold in a fortnight.* The publication of this return caused a rush, and drew New Zealand beach miners to the spot with the appliances which experience had proved most suitable under similar conditions on the west coast of the South Island of that Colony. Though thirty years have elapsed since the commencement of beach mining in New Zealand, blanket, carpet, or cocoanut matting covered tables have not been superseded. Dredges have been tried on the beaches unsuccessfully. In the *Papers and Reports relating to Mining in New Zealand*, 1893, p. 120, little hope of success with dredges is expected until the principle adopted by the miners is used in connection therewith.

From the date of Sinclair's discovery to the present time the beaches of the north coast have given employment to many. Periodically large numbers find remunerative work for several months in the year. Mining on the present beaches will, however, always be of an intermittent character, because of its dependence upon the occurrence of south-easterly gales to break up fresh portions of the terrace of black sand rock, which is exposed for miles along the coast just beneath the loose sand-dunes, and to concentrate the heavier particles on the surface of the beaches into what are locally called "sniggers." The lower portions of the loose white sand-dunes fringing the coast also contain particles of previously liberated gold, which help to enrich the concentrates accumulated in workable form during stormy conditions.

Mr. Munro states that the richest patches recorded in the early workings were found on the southern side of the headlands, which is in conformity with the greater force exerted at such points by the prevailing winds, viz., south-east. The localities recorded by the same authority as being specially distinguished by their original richness are Tallow Beach, south of Byron Bay, Seven-mile Beach, south of Broken Head, Black Rock Beach, and south of Evans Head. From these sums up to £800 per man were obtained in periods ranging from six to nine months.

For a considerable time past little actual beach mining has been done, owing to the absence of any gales of consequence. North of Jerusalem Creek auriferous deposits have been worked some distance back from the beach on areas of some elevation above sea-level. As the occurrence of the auriferous sands under such conditions in this locality has formed the subject of a special report by Mr. Stonier (already quoted), the present detail description will be restricted to the more recent discoveries in the flat lands further south.

In

* Mr. Munro has since informed me that Sinclair's discovery was in 1870.

*M'Auley's "Lead."**

In March, 1895, Messrs. Alexander and Angus M'Auley discovered the lead which bears their name; and to them belongs the credit of the first discovery of payable gold in the "black rock" at a distance from the present beach, but not, as is frequently stated, for the first discovery of gold inland from the sea-line.

For several months they had been prospecting the low-lying ground between the sea-beach, Jerusalem Creek, and the site of their find. Mr. Alex. M'Auley states that colours of gold were found almost anywhere in the locality mentioned. The ground was tested by means of a sludger—a tool presently to be described,—the holes being put down at short intervals to depths not exceeding 20 feet.

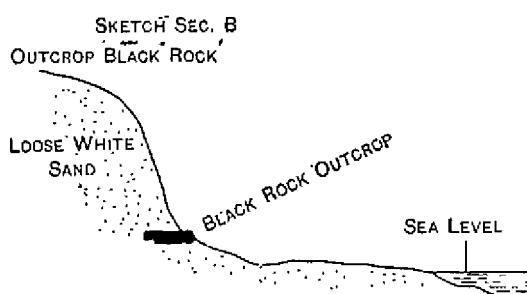
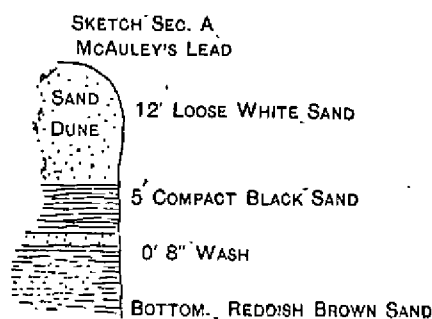
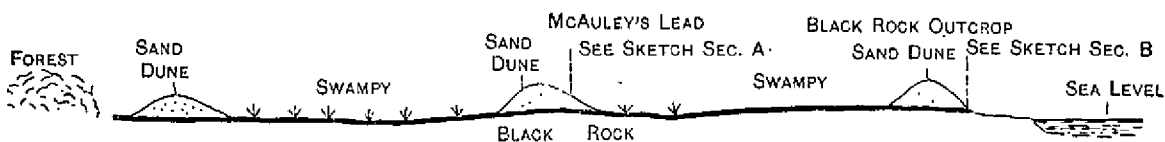
The lead occurs on the east face of a low, narrow, sand-dune, which trends parallel with the coast-line for several miles. For a long distance the lead keeps uniformly on the eastern face, but near the north end it underlies it. Its trend so far as traced is about north and south, and the distance from the coast about three-quarters of a mile.

The sand-dunes—several of which occur between the coast and the Esk River—are about 300 feet wide, and from 10 to 15 feet above the general level. Locally they are known as "terraces"; this term, however, has a local significance, differing from the ordinarily accepted meaning of the term in mining. About M'Auley's Lead and Jerusalem Creek it simply denotes long, narrow, windrows of loose white sand parallel to each other and the coast; and separated by areas of low marshy ground covered with stunted vegetation, chiefly spear-grass.

The "black rock" cropping out along the present coast-line on a uniformly level horizon indicates a prior extension of the swampy conditions seawards, and a subsequent encroachment of the sea. But whether the slight elevation of the surface of the black rock represents an elevation of the land or depression of the sea-bed, or simply an accumulation of sand thrown up by stormy conditions, sufficient data is not yet to hand to enable a determination being arrived at.

The following rough section of the country between the sea-coast and the edge of the forest land west of M'Auley's Lead will give a fair idea of the so-called terraces, and possibly suggest a mode of formation. If the most western dune or terrace be regarded as approximately the position of an earlier shore-line of a broad, shallow estuary, the middle terrace may be regarded as the probable site of a sand-bar which gradually shut off the sea-water; the land drainage and rainfall into the intervening area would gradually tend to render the impounded shallow sea-water brackish, and subsequently fresh; whilst the suspended matter would form nutriment for swamp vegetation, the decay of which has coloured all the underlying beds, so far as tested, to a more or less degree of blackness.

A repetition of similar conditions would account for any number of dunes or "bars" to suit the circumstances.



One of the small sections represents the outcrop of the "black rock" on the coast, along which it forms a most marked feature; and the other the nature of the sinking at M'Auley's prospecting claim; the latter being to scale. At this point, however, the overburden of loose white sand is exceptionally heavy, as the lead here is under the terrace.

A short distance north from M'Auley's the terrace takes a turn to the eastward, and swampy conditions prevail in the direct line of strike. At this point the lead has been lost, and a considerable distance intervenes between its north end and the next nearest workings which are known as Coolgardie.

The connected line of claims which form M'Auley's Lead proper, extends for a distance of about 2 miles. Since M'Auley's discovery the terraces have been followed as guides in prospecting, but it is doubtful whether their present positions can always be regarded as having been permanent since the first accumulation of the loose sand forming them; for the prevailing wind must tend to move them forward in the direction of its course. This objection applies only to the loose sand above the compact or swampy conditions, in which the inequalities would be permanent. The bend to the eastward, north of M'Auley's Claim, may be due to the protection afforded by the higher sand-dunes on the shore line opposite, and a little south of this point, which intercept, and modify the force of the wind, whilst the unprotected terrace further south would tend to move bodily in a more or less straight line. Hence

* The term "lead" is adopted in this report because of its local use; the auriferous wash, however, has been deposited by the action of the sea on an earlier shore-line, and not by a fluvial stream.

Hence there is every reason to expect to find in the level swampy areas between the terraces, other old shore-lines from which the loose surface sand accumulations have been removed by the transporting power of the wind. This explanation has in fact already been realised near Jerusalem Creek, where the leads occur chiefly in the swampy ground west of the terrace.

M'Auley's Lead itself affords evidence of movement of the terraces, for where the coast dunes are low or wanting, as opposite the southern portion of the lead, it is uniformly on the east side of the terrace, but directly the protective influence of higher coast dunes has come into play, as above stated, the lead passes under the terrace. From this it would appear that the natural inequality in the underlying compact sand layers forming the old shore-line (the present lead)—which rise to the west, and dip seawards—acted as a dam to arrest the wind-borne sand particles, which however, were shifted to leeward of the arresting medium where exposed to the full force of the prevailing wind.

The direction of the latter is rendered remarkably evident on the small plain a little north of M'Auley's Lead, by the inclination of the trees which are canted north-westerly at an angle of nearly 45 degrees from the vertical.

Detail description of M'Auley's Lead.

A full description of one or two of the most important claims on this lead will serve for the whole, the only variations being in the amount of stripping, thickness of wash, and yield of gold.

M'Auley's Claim, consisting of six mens' ground, is situated near the north end of the lead; and as before stated, is on the terrace instead of east of it. The overburden or stripping of loose sand is, therefore, exceptionally heavy, being upwards of 12 feet deep. At this level the compact black sand—locally identified as the "black rock"—is met with, and 5 feet below its surface the auriferous layer is reached. Underlying the wash is a layer of reddish-brown sand which is regarded as bottom. At the west side, or back of the lead, the auriferous layer forms but a thin streak, which thickens gradually on the underlay seawards. Its richness decreases proportionately with the thickening, and the overburden becomes correspondingly heavier. Hence the width of the workings represents the payable limit of the wash following the underlay. This fact holds good for the whole lead; the workable width of which, under present conditions, varies from about 14 to 30 feet.

The richest portion of the wash lies well up on the sloping bottom of the lead, just as do the "sniggers" of the present beaches after south-easterly gales. The gradual cessation of the gales, and recession of the waves, tend to draw off the lighter particles down the sloping surface of the beach, leaving the heavier stranded beyond the reach of normal waves, nature thus performing on a gigantic scale the panning of the miner.

In a number of claims—Williams and Party's for instance—two layers of auriferous sand occur, separated by about 3 inches of barren sand; the auriferous layers in this instance being 6 and 10 inches thick. The intervening barren sand increases in thickness in some claims—as at Kcats and Party's—to about 2 feet.

About 12 inches above the top of the black sand is a layer of varying thickness known as the "blue seam," which carries colours of gold, the colour of the layer being due to the distribution of black sand particles through the pure white. The "seam" represents, very probably, æolian concentration on the surface of the compact black rock. The concentrating action of the wind, by removal of the lighter particles of quartz sand, is seen to advantage any windy day on the sea-beaches; at a distance the wind-born particles have the appearance of dust. In this way large areas of beach surface, covered with a thin superficial layer of the heavy black sand-grains, have been completely sifted of the lighter quartz particles which were left entangled by the waves.

In the black rock above the wash very black thin bands occur at intervals, one very characteristic one, about 1 inch thick, just above the wash. These are exceedingly hard, most likely owing to the precipitation of an iron salt by organic matter.

In October last, there were but four claims at work north of M'Auley's Lead. In the most northern—Wilson and Bourke's—the stripping is very heavy; about 16 inches of wash is said to underlie it.

As before stated, north of this point a break in the lead occurs, extending for at least a mile. Up to this point the "terrace" has run a true course nearly north and south, here it takes an easterly bend. If, as there is reason to believe, the lead represents an earlier shore-line, a sinuous bend partly round a projection seawards, or following an inshore encroachment, may naturally be expected, which may account for the loss of the lead at the north end of M'Auley's, irrespective of the contour of the terrace; on the other hand the lead may yet be found on its course under the swampy land, and ultimately connect with the Coolgardie Lead which lies in the same general direction.

South from M'Auley's Claim the lead with few exceptions is being worked in a continuous line of claims for about one mile and a half. The richest portion, however, lies north towards the Prospecting Claim.

Prospecting has been extended for a considerable distance south of the most southern workings but without success; gold being obtainable, but not in payable proportion. In this direction the wash shows a considerable thickening, accompanied by a corresponding depreciation in richness. In M'Auley Bros. Claim at the extreme south end, the auriferous layer is 3 ft. 6 in. thick, and the approximate width 20 feet. An attempt was being made to work about 2 feet of this wash.

Coolgardie Lead.

This lead is situated on the west side of Jerusalem Creek. Three claims only were at work, but active prospecting was proceeding between it and the mouth of the creek. A number of claims have already been worked out north of the above lead.

The most interesting feature about the Jerusalem Creek Mines, and one of hopeful import to the field, is that several distinct runs of gold-bearing sand have been proved, in the swampy flats as well as in the terrace. In the swampy ground the sinking is from 9 to 12 feet. The runs of wash vary in thickness from 1 to 2 feet, by a width of about 12 feet. Water stands within about 3 feet from the surface.

Close to the head of Jerusalem Creek, the gold is obtained from about 2 feet of white sand just above the black rock; the best yield being from a seam about 3 inches thick directly above the latter. The underlying black rock has been tested to a depth of 12 feet, but nothing beyond colours was obtained; this, however, appears to have been a single test.

North from Jerusalem Creek the coast country loses its level character, and changes from marshy land traversed by low parallel sand dunes, to very undulating country covered with high dunes irregularly disposed.

Between

Between the sand-hills fresh water channels trend from the adjacent high lands on the west. At intervals large basin-shaped depressions occur also filled with fresh water. Along the shore-line high narrow sand dunes extend, the leeward of which affords capital camping ground for the itinerant miners who periodically visit the locality after stormy weather to work the "smiggers" or concentrates formed by the action of the high waves. In October, however, this locality was practically deserted owing to the superior attractions of M'Auley's Lead, and the absence of gales.

All the workings on the high levels back from the beach in this neighbourhood have been in the loose white sand.

Method of Working.

With few exceptions the whole of the stripping is done by manual labour, with shovel and barrow. The exceptions being a derrick and scoop worked by horse-power, and a few tip-drays.

The loose white sand is first removed in large benches or paddocks until a sufficiently large opening is obtained, then a bench of the compact black sand is taken out to the wash-level. In some instances the auriferous layer is beaten with large wooden mallets or rammers before removal, in others it is first raised and then broken on floors. The worked benches are then used in progressive order, partly for stowage of the overburden of black rock in succeeding benches, and partly as a sump or well-hole for drainage of the water. The loose white terrace sand is, however, always removed out of slipping reach of the workings.

The natural level of the soakage water is a little above the wash-level, but it can be kept down by jigger pumps, which are used in connection with the washing of the pay sand. Once a claim is properly opened, raising and treating the wash is concurrent and continuous, and pumping and washing readily and naturally combined.

Since the discovery of the lead, the conditions for cheap and expeditious working have been most favourable. The long-continued drought, so disastrous in its effects in most parts, has been an unmixed good in this locality. The water in the claims, though highly coloured by vegetable organic matter both in solution and suspension, is fresh and potable, and abundant for all requirements. (If preferred, clear fresh water is procurable near the Esk River for domestic purposes.) Judging from the surrounding swampy conditions and the porous nature of the sand-beds, it is extremely doubtful whether many—if, indeed, any—of the present claimholders could contend against a heavy and continuous downfall of rain. Much of the surface between the terraces is evidently periodically covered with water.

Treatment of the Gold-bearing Sand.

The method of treatment adopted for the auriferous black sand is uniformly the same along the lead, the only differences noticeable being in its more or less systematic application. One of the best regulated plants is that of Messrs. Hammond, Dowling and Party, whose claim adjoins the prospector's, a description of which will serve to illustrate the treatment.

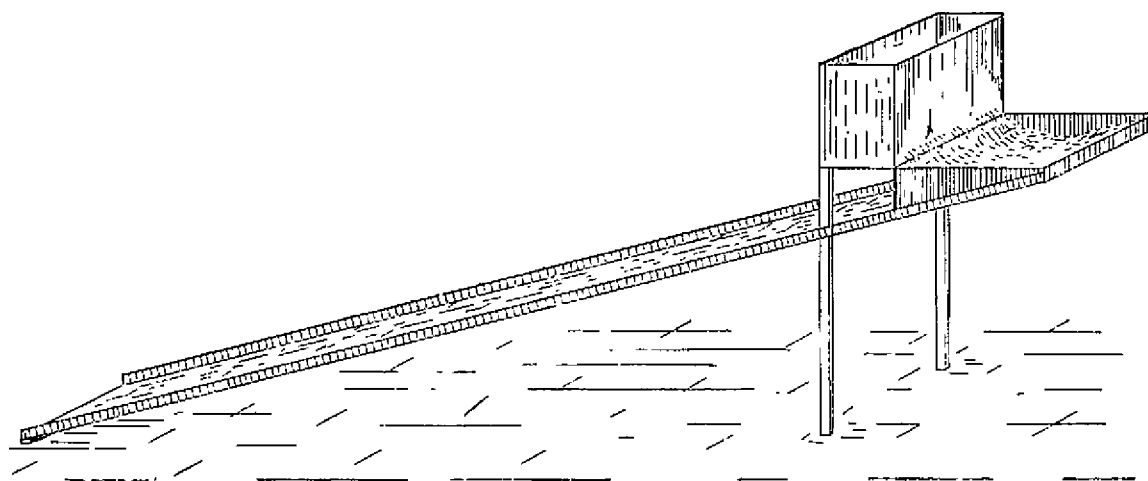
The auriferous sand is beaten *in situ* with wooden mallets, then wheeled on to a floor 12 ft. square, formed of tongued and grooved boards. Here it is screened through an ordinary plasterer's quarter-inch screen. The rejected portion is raked evenly over the floor, and rolled with a small iron garden roller and again screened. This operation is repeated until all the material passes through the screen. One man attends to this portion of the work as well as clearing the tailing pit.

The screened material is then fed slowly into a perforated zinc-lined hopper affixed over the upper end of the table. The water supply is raised from the mine workings by a jigger pump, and conveyed to the machine by canvas hosing; the distributing medium being an ordinary wooden box with a line of perforations just above the bottom on the hopper side.

The small indurated pellets of compacted sand grains too large to pass through the perforated lining of the hopper are scraped out by hand. These, after thorough dessication either by sun or artificial heat, are rolled and again passed into the hopper.

The table in use—14 ft. long and 2 ft. 3 in. wide—is set at an angle of about 13 degrees from the horizontal. Its width appears to be regulated chiefly by the breadth of an ordinary strip of carpet with which it is lined. A rectangular iron box, fitted with lock and key, is used for storing and securing the concentrates which from time to time are washed from the carpet. The concentrates consist of the heavier particles of the wash and the associated tinstone, gold, platinum, and platinoid metals which are caught on the rough surface or pile of the carpet.

The following sketch will give an idea of the table in use on the field.



The concentrates, at intervals varying according to the immediate wants of the owners of the different claims, but generally from three to four weeks, are washed in a solution of ordinary washing-soda with a little caustic soda, to which in some cases is added caustic potash. The strength of the solution varies. At the plant under description about 3 lb. of washing-soda is added to an ordinary oil-drum of water—about 5 gallons; the proportion of caustic soda being about 4 oz.

The duration of the treatment is dependent entirely upon the discretion of the manipulator, some preferring vigorous stirring and short immersion; others a more or less protracted subjection to the action of the alkalies; others, again, a double washing. The effect of this process, if efficiently conducted, is to remove the organic colouring which coats the individual particles of the sand, and doubtless to a large extent the metallic contents; and according to the completeness of the chemical reaction do the particles assume their natural colours. Hence the chemically-washed concentrates are much lighter coloured than the untreated material.

On completion of the cleansing process the carpet is removed from the table and amalgamated copper plates substituted. The prepared concentrates are then passed slowly over them, frequently as often as three times; and finally are bagged or preserved in separate heaps, as they have proved by assay to be of considerable value, on account of the escaped amalgam, free gold, platinum, and tinstone which they contain.

The above description of the method of treatment holds good for the whole lead, the only difference being in the detail. For instance, in some claims the wash is far more indurated than in others, and fire is used to render it thoroughly dry and friable, the sun-drying process being too slow and less efficient. Whilst saturated with water the wash possesses toughness in addition to its ordinary hardness. Complete expulsion of the moisture, however, renders it friable, excepting in such instances as already recorded, where hardness is due to cementation caused by precipitation of oxide of iron by organic matter, arising from the decomposition of vegetation on the swampy surfaces.

Where the loose white sand alone is worked, as near the head of Jerusalem Creek and the high-level claims further north, carpeting is not always used, the wash being passed directly over the copper plates.

Loss in Treatment.

Very diverse opinions are extant on the field as to the amount of gold lost in the tailings and concentrates, estimates varying from 30 to 70 per cent. of the actual contents.

During inspection small quantities were selected from the tailings' heaps of at least two-thirds of the claims on M'Auley's Lead, for the purpose of obtaining by assay a general idea of the loss in the first part of the treatment. In like manner small quantities of the concentrates after amalgamation were secured. From the general average of these samples the following results were obtained under the supervision of Mr. J. C. H. Mingaye, F.C.S., Analyst and Assayer to the Department:—

(4138). Mixed tailings from about two-thirds of McAuley's Lead claims:—

	dwt. gr.
Gold	2 14 per ton.
Silver	1 7 „
Metallic tin	0·05 per cent.

No platinum or platinoid metals detected.

(4139). Concentrates from McAuley's Lead claims after amalgamation:—

	oz. dwt. gr.
Gold	2 19 3 per ton.
Platinum	0 18 17 „
Iridosmine.....	under 15 „
Metallic tin	5·12 per cent.

(4270). Tailings from Hammond, Dowling, and Party's Claim:—

	dwt. gr.
Gold	3 19 per ton.
Silver	3 19 „

No platinum or platinoid metals detected.

(4269). Concentrates from Hammond, Dowling, and Party's Claim, after passing three times over amalgam plates.

	oz. dwt. gr.
*Gold	15 1 12 per ton.
Platinum	2 18 3 „
Iridosmine.....	0 17 7 „
Metallic tin	28·52 per cent.

*Chiefly from amalgam which escaped from the plates.

The following assay results, obtained in the Departmental Laboratory,† are quoted to show the extent to which concentration on a small scale has been carried on as regards the metals, other than gold, and the tin oxide. Unfortunately these returns afford no data of value, as particulars are not available as to the quantities of wash operated on.

With the exception of No. 1,251, these samples were presumably concentrated in the ordinary manner by frequent passage over carpet-covered tables. The exception was the result of manipulation in a small experimental machine constructed by a Mr. R. Young, but nothing is known of the principle.

(245). Concentrated beach-sand from Ballina:—

	oz. dwt. gr.
Platinum	428 9 4 per ton.
Iridium	26 16 16 „
Osmiridium	161 13 20 „
Other platinoid metals	2 16 11 „
Gold	2 19 12 „

(1251.)

† Ann. Rept., Dept. Mines, for 1894, p. 57.

(1251.) Beach sand from the Richmond River district, concentrated by Mr. R. Yongg :-

	oz.	dwt.	gr.	
*Gold	70	4	16	per ton.
Platinum	36	5	4	"
Iridium ..	8	6	14	"
Iridosmine.....	6	0	18	"
Other platinoid metals	4	8	2	"
Metallic tin	25.7			per cent.

* In this case it is known that none of the gold contents had been removed by amalgamation before concentration.

(2690). Concentrated beach sand (containing some amalgam) from the Richmond River district :-

	oz.	dwt.	gr.	
Gold	100	18	7	per ton.
Platinum	68	0	4	"
Osmiridium ..	8	18	23	"
Iridium and other platinoid metals.....	2	1	19	"
Metallic tin ..	28.96			per cent.

(2879). Concentrates from J. Ware's claim, Richmond River District :-

	oz.	dwt.	gr.	
Platinum.....	129	9	16	per ton.
Osmiridium.....	58	0	7	"
Iridium and other platinoid metals	5	0	7	"
Gold.....	0	9	11	"

(3499). Concentrated beach-sand from between Richmond River Heads and Byron Bay :-

	oz.	dwt.	gr.	
Platinum.. ..	7	13	22	per ton.
Osmiridium ..	1	6	0	"
Other platinoid metals.....	0	3	6	"
Gold.....	0	9	18	"
Metallic tin	15.82			per cent.

When the concentrates after amalgamation yield an abnormally high return of gold, it may be taken for granted that most of it is from amalgam which escaped from the plates.

The gold returns in the four samples Nos. 2879, 3499, 4139, and 245, which may, perhaps, be regarded as comparatively free from amalgam, equalled 9 dwt. 11 gr., 9 dwt. 18 gr., 2 oz. 19 dwt. 3 gr., and 2 oz. 19 dwt. 12 gr. respectively.

It is probable that concentrates which have been treated with due care contain under 3 oz. of gold per ton. This estimate, however, refers only to the amount of gold which is prevented amalgamating by coating of the particles, enclosure in hardened pellets, or other causes; for there can be little doubt that the average value of the concentrates in gold is considerably higher owing to the presence of escaped amalgam. The loss in this way is due (perhaps chiefly) to limited plate areas in the first place, and in the second to the rasping effect of repeated passage of such heavy material over the plates.

A careful examination of the above-quoted amalgamated samples, revealed the presence of a certain amount of free clean gold, the escape of which, in the total absence of slimes, must be attributed chiefly to the short length of the plates, and partly to the floating capacity of the gold particles, the surfaces of which are large in proportion to their gravity.

As regards the tailings from the carpet-covered tables, there is reason to believe that the supposed loss of gold is greatly exaggerated. The average sample made up of small quantities taken from about two-thirds of the claims on M'Auley's Lead, gave a return of 2 dwt. 14 gr. of gold per ton; and a sample from Hammond, Dowling, and Party's Claim, selected by themselves, yielded 3 dwt. 19 gr. per ton.

These returns, however, cannot be regarded as sufficient indication of the true average value of the tailings, which have in many cases been unduly enriched by defective manipulation, chiefly through insufficient crushing of the indurated portions of the wash. It is impossible to secure satisfactory average samples without bulk sampling, for as the wet tailings on the surface of the heaps rapidly dry, a large proportion of the small indurated pellets formed of compact sand grains (which probably contain the major portion of the lost gold) roll down the sides, and become more or less covered. Such, however, as remain exposed to the sun and wind disintegrate, and thus liberate the enclosed metallic particles, which, with those previously held in the wet tailings by suction from their great gravity, tend to sink as the drying surfaces of the heaps are rendered lively by the wind or the continuous slipping of the loose dry grains to their angle of rest. In this way the heavy metallic particles get beyond the reach of surface sampling.

As the wash is practically free from any shining substances, whatever loss occurs in the first process is confined to the tailings.

As the quantity of tailings on the lead is very large, a proper bulk sampling test to ascertain the true average value would be a boon to all concerned, and one well within the scope of the proposed Metallurgical Works.

It is highly probable that after exposure for a time to the influence of wind and weather, these tailings may even be remuneratively reworked under the present system, if previous roasting, or boiling in caustic solutions be adopted, and a large plate surface be used on the tables. At the same time a question well worthy practical demonstration in the Government Metallurgical Works, is the suitability of the Cyanide Extraction Process for recovery of the gold in the tailings; it appears highly probable that such a process would be most suitable.

As further evidence of the value of the tailings I have been informed by Mr. S. Dowling, of Hammond, Dowling, and Party, since the rough draft of this report was completed, that the following bulk test had lately been made by Allen and Party, of the Derrick Claim, M'Auley's Lead. A load of the natural wash was passed over the carpet in the usual way; the concentrates on treatment by caustic solution and amalgamation yielded about 4 dwt. of gold. The tailings from the carpet were then treated with caustic solution and afterwards amalgamated, the yield being 5½ dwt. of gold. The result of this test has induced others on a larger scale. Hammond, Dowling, and Party intend to put through a large parcel of their wash, discarding carpet concentration, and adopting the caustic solution treatment for the whole before amalgamation with larger plate surface than formerly used. The result of this experiment will be awaited with interest.

Composition

Composition and Characteristics of the Wash.

High specific gravity, fineness of component particles and colour, are the physical characteristics which immediately arrest attention.

The gravity of a sample of the wash from M'Auley's Claim carefully determined by Mr. Mingaye was 4.42. That of the average concentrates of the lead after amalgamation 4.22.

An attempt was made to estimate the proportion of quartz sand in the natural wash by means of a gravity solution, viz., borotungstate of cadmium, which has a density of 3.28. With the exception of a few grains which remained in suspension, the whole of the sample settled at the bottom of the tube, from which it may be inferred that the proportion of quartz is very slight, as indicated by the high specific gravity (4.42).

On warming a little of the wash with distilled water the solution gave an acid reaction with litmus paper. On roasting at a low heat in the open the organic matter and colouring were readily burnt off, which opens up the question as to the relative advantages of roasting and solution. To effect thorough combustion of the organic matter by roasting, open hearths or plates, lightly spread charges, and frequent raking will be necessary. The two processes are equally effective as far as cleansing the sand grains is concerned; roasting, however, removes the peaty particles which would remain practically untouched in the solution; this does not, however, affect the equal value of the solution process, as the peaty fragments would not interfere with amalgamation. The question therefore resolves itself entirely into one of relative cost.

After roasting in the open it was found that the major portion of the titanite iron could be removed by magnetic separation.

Briefly stated the wash is composed chiefly of small zirconous—mostly uncoloured—ilmenite (titanic iron), quartz, garnets, and tinstone, and varying proportions of gold, platinum, and platinoid metals.

The hardness (7.5) and highly crystalline character of the zircon sand suggests the possibility of its utilization for the preparation of an improved variety of sandpaper.

The fineness of the component particles of the wash will be easiest comprehended from the results achieved in sizing tests, which are given in the following abstract:—

SIZING TESTS.

Locality.	Nature of Material.	Weight of Sample.	No. 1 Screen	No. 2 Screen	No. 3 Screen	Passed through No. 3 Screen.	Remarks.
			800 holes to sq. inch.	3,100 holes to sq. inch.	8,100 holes to sq. inch.		
			Remaining.	Remaining.	Remaining.		
M'Auley Bros. Claim.....	Wash (specific gravity 4.42).	grs. 1,734	grs. ...	grs. (*) 17	grs. 700	grs. 1,015	A little peaty matter was previously extracted from this sample by No. 1 screen. a lost 2.82 gr. on ignition. On No. 1 screen a few peaty particles; on No. 2 screen, chiefly quartz sand; on No. 3 screen, a few colours of pure gold visible. No. 3 screen; numerous gold particles on this screen; practically all tinstone passed through. No. 2 screen, amalgam; No. 3 screen, platinum and gold showing on this screen. No. 1 screen, 74 per cent. metallic in scale; balance—ferrous and titanite oxides. No. 2 screen, chiefly quartz, mag., iron, ferric oxide, and ilmenite. No. 3 screen, quartz, colourless zircons, mag., and ferric oxides. No. 3 screenings, amalgamated gold and a little ilmenite.
M'Auley's Lead (Assay No. 4,130).*)	Average concentrates after amalgamation. From two-thirds of the claims on the lead	2,000	...	58	425	1,517	
Hammond, Dowling, and Party's Claim, M'Auley's Lead. (Assay No. 4,200).*)	Concentrates after passing three times over copper plates.	1,000	....	....	120	871
O'Dwyer's Claim do ..	Platinum concentrates	653	....	3	30	611
Shellharbour, South of Wollongong. (Assay No. 4327.†)	Concentrates ..	1,298	36.5	35	100	1,117.5	
Richmond River District	Concentrated platinum .. (Clean sample)	74	....	....	1	73

* For results of these assays see page 141 of this Report.

† This sample yielded { Platinum .. 30 oz. 10 dwt. 18 gr. per ton
Gold 1 .. 15 .. 22 " "
Tin 49.01 per cent.

Further concentration of Carpet Concentrates.

To effect a further reduction of the waste material in the concentrates from the carpets, sizing will first be necessary to ensure full efficiency of any form of gravity separation; without it larger particles of lighter substances will surely follow small fragments of heavier. Hence trials with Bruce Vanner's (departmental test), Wick's, and Farquar's Machines were unsuccessful. The latter machine embraced the principle of gravity *versus* upward hydraulic pressure regulated to overcome the gravity of descending lighter particles of the sand.

Judging from the results of the small experiments already quoted, it appears that sizing will also concentrate to a certain extent. For instance, the tinstone particles will readily pass through a screen of 8,100 holes to the square inch. The quartz grains rarely pass through a screen of 3,600 holes to the inch.

It was also found that the bulk of the titanite iron could be removed by magnetic separation after roasting in the open, the weak native magnetism being increased thereby.

Platinum Concentrates.

A great deal of dissatisfaction exists as to the local prices offered for platinum, which a few miners have endeavoured to concentrate. The few transactions or offers which have taken place appear to have been almost entirely based on haphazard estimates of value. An idea of the present price of crude platinum may be gained from the local selling price at the Fifield Mines, viz., 24s. per ounce for 75 per cent. metal. The platinum particles from the latter field are comparatively coarse, and therefore easily concentrated and cleaned, whereas those of the beach sands are excessively fine (in one instance a 74-grain sample

sample practically all passed through a screen of 8,100 holes to the square inch), which renders complete separation a difficult and lengthy process. The platinum concentrates of the beach mines generally consist of parcels of the heavier sand grains and tinstone, with varying quantities of platinum, which is reckoned by the yield per ton instead of percentage proportion.

The chief difficulty in connection with the realisation of the market value of the contained platinum is the smallness of the separate parcels and the cost of assay. A way out of the difficulty would be the pooling of the parcels and proportional division of proceeds obtained through one average assay. The process of concentration being uniform in pooling, it would only be necessary to ensure that each parcel had been carried to the same degree of fineness. Considering all the circumstances, however, the wisdom of attempting to separate the platinum is not apparent. Sale of the mixed concentrates on bulk assay (after amalgamation) appears to offer greater advantage to the individual vendors.

Payable Leads beneath those at present worked.

So far as could be ascertained very few attempts have been made to test the sand-beds beneath the present wash-level. In some of the very few test-holes below the bottom of the leads colours of gold have been found. It appears very probable that deeper leads exist, but the possibility of working below a stripping level is not very bright unless the yield is high. The presence of permanent water with impossible drainage, and porous and treacherous ground, requiring powerful pumping machinery, and close timbering or boxing, would render working very costly.

Prospecting.

Prospecting in the sand-beds is nearly all done by sludgers or sand-pumps, which are at once cheap and efficient; indeed, they can be readily extemporised. The better quality consists of a short steel barrel, about 2 feet long, and from 1½ to 2 inches in diameter, fitted with an air-tube and spring dump, or a ball or clack-valve. The sludger is affixed to the end of a light pine rod from 16 to 18 feet long.

The extemporised sludgers simply consist of a section of ordinary gaspipe, tempered and fitted with two rectangular opposite openings near the upper end, and a perforated wooden plug-valve and metal dump. Lining-tubes for the sludger-holes consist of two lengths of gaspipe or ordinary galvanised spouting of a slightly larger diameter than the sludger-barrel. To these tools it would be advantageous to add a chisel-shaped cutter (which could be affixed to the upper end of the sludger-rod), for the purpose of cutting through the hard bars in the "black rock."

Through the kindness of Mr. S. Dowling a section is given of an improved sludger, designed by Mr. R. W. Laidley, Consulting Engineer, 56, Pitt-street, and constructed at Mort's Dock. The original sludger designed by Mr. Laidley has been successfully used between the Esk and Evans Rivers for a period of about eighteen months. The latest design embodies all the improvements which practical tests have suggested, not the least being the sectional, jointed sludger-rod, which screws together on the principle of a fishing-rod.

The locally extemporised sludger, from a section of tempered gaspipe, is also illustrated in section, from a sketch of one in use at Jerusalem Creek.

In prospecting with a sludger a hole is sunk about 3 feet deep, sufficiently large to enable a man to stand in it and hold the lining-tube, which he gradually presses down with a semi-rotary motion as the sludger-hole deepens. The sludger is worked like a jumping-rod, the best results being obtained when the force of the impact is regulated chiefly by the gravity of the falling tool, and is followed by a semi-rotary boring motion before raising. As the wash-level is approached prospects are panned off on a shovel, on to which a little water is poured at short intervals. The miners become very expert at this form of vanning.

When two lengths of lining-tube are used, the shorter is first put down to the level of the 3-foot hole, and then withdrawn and the longer inserted. In this way it is possible to work the sludger-rod at the top of the lining-tube without a raised platform. The tubes are readily withdrawn by means of a short rope.

The test-holes are generally put down at short intervals, the distance varying according to the prospects obtained.

Applications for Prospecting Aid.

A number of applications have been received by the Prospecting Board for aid to prospect in the Parish of Esk, but a single visit to the locality is sufficiently convincing of the inutility of erratic individual effort. The conditions of the field are such as require systematic prospecting under efficient control, and concentrated effort on definite lines at right angles from the coast across the sea-made areas. The correctness of this view has been readily conceded by the applicants.

The following areas are well worthy systematic proving in the way indicated:—Between the Esk River and Jerusalem Creek and the coast; north of Evans River towards Broadwater; and about ¼ of a mile north-west of Byron Bay township.

Derivation of the Gem Sand and Associated Metals and Metallic Minerals.

As might be expected considerable diversity of opinion exists as to the source of the precious metals in the sands of the North-coast beaches. Some regard the adjacent coast ranges as the original repository; others surmise the existence of auriferous reefs beneath the sea parallel with the coast line; whilst others, regardless alike of distance and opposing currents, look even so far the West Coast of New Zealand, where similar auriferous sands occur. Precipitation from sea water is also not without advocates.

For the sake of comparison it is interesting to note Dr. Julius von Haast's description of the alluvial workings on the West Coast of New Zealand:—"The earliest found and most elevated of the drifts rest on terraces composed of marine Tertiary strata, where they have escaped denudation by the streams descending from the mountains. The second group of gold diggings are those in the beds and alluvial terraces of streams which intersect the first-mentioned leads. Third—The beach terraces, which extend to an altitude of 220 feet, and mark several changes in the level of the shore line within a comparatively recent geological period. In this group also must be classed the gold deposits formed on the present coast line by the action of the surf and currents, which distribute along the shore the gold brought down by the streams."*

As

* N. Zealand Mining Statements and Gold-field Reports (H. Authority), Vol. 3, 1893, p. 150.

As detail geological survey proceeds, the interesting problem of origin presented by the North Coast auriferous beaches will doubtless receive practical demonstration, in the meantime the following possible sources may be discussed :—

- (a) The underlying Siluro-Devonian rocks.
- (b) The Clarence Coal Measures, particularly the basal and middle beds of the Series.
- (c) Early drainage channels, represented by drifts under basalt.
- (d) The auriferous (?) basalt at the Richmond River Heads.
- (e) Present drainage channels from the eastern margin of the auriferous and stanniferous rocks of New England.

In considering the above suggested sources it is essential that the enormous spread of the auriferous sands along the coast should be kept prominently in view. From near the Queensland Border to Port Macquarie, at least, these sands have been worked; and even as far south as Shellharbour, south of Wollongong, similar sands occur, and have received a little attention. The distance between the extreme points mentioned is about 500 miles. In considering the probability of any restricted source, such as the Ballina basalt, it must also be remembered that the trend of the coast current is southerly.

The break in the continuity of the auriferous sands along the coast between the most southern (Shellharbour) and the nearest northern (Port Macquarie) will, perhaps, eventually be accounted for by the difference between the geological formations of the watershed between these points and those opposite the auriferous beaches.

(a) *The underlying Siluro-Devonian rocks* developed on the North Coast, between Broken Bay, near Ballina, and Sutherland Point, near the Tweed River Heads, contain numerous quartz reefs. In a few instances assays up to several dwts. of gold per ton have been obtained from the most favourable; but the average results have not exceeded 2 dwt. per ton. Mr. E. F. Pittman, after examination of the auriferous beaches between the Richmond and Tweed Rivers, came to the conclusion, in the year 1880, that the black sand and gold evidently came from a drift (underneath the basalt) derived from the underlying older rocks (Siluro-Devonian).*

The basalt referred to touches the coast about Ballina at the Richmond Heads, where it overlies the Clarence Coal Measures, hence any drifts directly underlying it having the above derivation, must have been transported from the Siluro-Devonian area on the north.

The drift becomes additionally important if instead of restricting its source to the underlying rocks, we regard it as evidence of extensive channels which, prior to the basalt outflow, drained from the high auriferous and stanniferous areas of the West. This extension of the source of the drift would account for the large proportion of gem sand and the tinstone, which are invariably associated with the gold and platinum metals in the beach sands, neither of which could be reasonably assigned wholly to the Siluro-Devonian sedimentary rocks.

(b) *The Clarence Coal Measures* form the surface rocks along the coast from a little north of Ballina to nearly opposite Solitary Island, a distance of about 80 miles south. The auriferous character of these measures is based upon the discovery of gold in minute specks in the Hawkesbury Sandstone (which is regarded as the equivalent of the middle beds of the above measures), at North Shore, and Govett's Leap, by the Revd. W. B. Clarke, M.A., F.R.S., &c.† and recently by Professor Liversidge in the same beds at Pyrmont, and in the overlying Wianamatta Shales in the University grounds, Sydney.‡

The basal conglomerate of the Clarence Measures, so far as is known has not been tested. This bed has an extensive outcrop along the western margin of the coal basin, where a thickness of several hundred feet rests directly on the auriferous Siluro-Devonian slates and sandstones of the eastern falls of the New England Tableland.

Where exposed in creek sections the conglomerate and intercalated coarse grits are generally very friable. Frequently quartz pebbles are abundant, the bulk, however, being slate and granite.

Considering the nearness of the Dalmorton, Mann River, and Solferino reefs, and the junction of the stanniferous granite, it is reasonable to expect to find at least traces of gold, tin, and gem stones in a conglomerate formed from the wearing down of such rocks. Through the kindness of Mr. W. J. Mulligan, of O.B.X. Creek, about 20 miles from Grafton, I have been able to test, by panning off, about 50 lb. of this conglomerate; but, contrary to expectation, none of the abovementioned minerals were detected. The test, however, can only be regarded as a superficial one.

Though gold has been determined in the Hawkesbury Series, there is no record of platinum ever having been detached.

The basal beds of the Clarence Measures have an additional interest, inasmuch as beds of similar age and geological horizon have recently been identified by Mr. E. F. Pittman, Government Geologist, as containing artesian water at Moree.

(c) *Drifts under Basalt.*—This possible source has already been alluded to under section (a). Basalt is extensively developed as a surface rock between Ballina and Casino; thence north-westerly up the channel of the Richmond River to Rosebery Station, and from there north-easterly to the coast at Point Danger.

Another outcrop trends north from Casino to Fairy Mount, and from there north-east to the valley of the Tweed, where it joins the first mentioned.

The isolated patches of basalt at Tobbinoble, and near Doubleduke Peak, on the dividing range of the Clarence and Richmond coast waters, afford indisputable evidence of a southern extension of the Richmond basalt sheet, or of a similar flow now almost entirely removed.

Under the Tobbinoble basalt patch, which is now but 10 to 15 feet thick, resting on Hawkesbury Sandstone, quartz pebbles and granular drift occurs, which has been prospected by three or more shafts, a little gold being obtained.

From selected samples, fine colours of gold and a little of the characteristic gem-sand of the beach-wash were obtained. Tobbinoble lies about 10 miles south-west of M'Auley's Lead.

The extensive basalt flows of the Richmond and Tweed Districts in all probability filled up the pre-existing drainage system from the western table-lands; and this would, as before stated, account for the composition of the beach sands, formed from denudation of the old channel débris.

(d)

* Ann. Rept. Dept. Mines for 1880, p. 245.

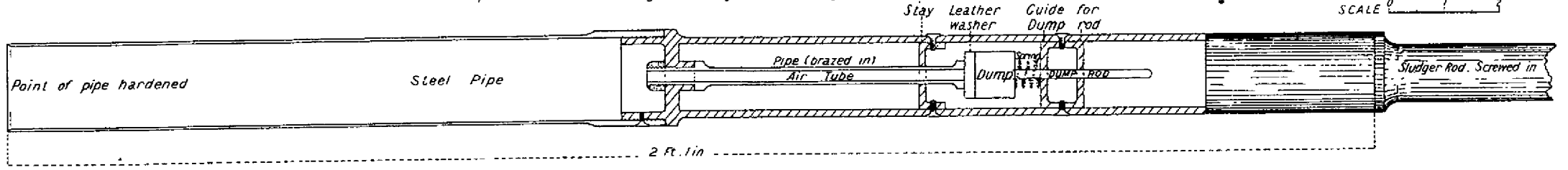
† Southern Goldfields, (Svo., Sydney, 1860), pp. 44 and 244.

‡ Journ. R. Soc. N.S. Wales for 1894, XXVIII, pp. 185-8.

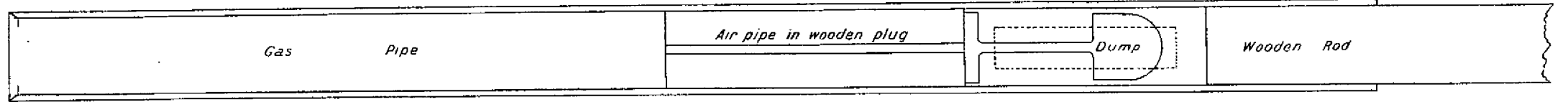
To accompany report by J.E. Carne, F.G.S. Geological Surveyor on the auriferous sand "leads" in the vicinity of the Est River and Jerusalem Creek.

Improved Sand Sludger designed by Reginald W. Laidley, Consulting Engineer.

SCALE 0 1 2 3 INCHES



Sketch of sludger locally constructed.



Diagrams shewing openings in pipes. SCALE 0 1 2 3 4 INCHES

(51224-1)

(d) *Basalt as a Source of the Gold.*—According to Mr. Munro, gold was first reported in decomposed basalt at Black Head, near the town of Ballina, in February, 1888. The only other record of the occurrence of gold in basalt ascertainable is that recently announced by Mr. J. Collett Moulden, A.R.S.M., from Kangaroo Island, off the south coast of South Australia.*

Professor Tate, in an editorial note, states that the basalt referred to occurs as an intrusion in mica schist. The specimen microscopically examined by Mr. Moulden contained a small speck of gold embedded in it, which might have been caught up from a reef in the intruded schist.

The late Government Geologist, Mr. C. S. Wilkinson, describes the Ballina occurrence in the following terms:—"The town of Ballina, which is immediately within the river entrance from the ocean, is situated on the flat; but the north head of the entrance consists of a small hill of dense black basalt and blown sand. About half a mile further north is the Black Rock (Head), a perpendicular cliff 30 feet high, facing the ocean, and composed at the base of hard dense basalt, then a bed 4 to 10 feet thick of scoriaceous volcanic agglomerate, overlaid by 15 to 20 feet of hard dense columnar basalt; above this is about 30 feet of soft decomposed laminated basalt.

Mr. Munro informed me that from the lower agglomerate bed several parcels had been treated in Sydney—one of over 3 tons yielding at the rate of 2 dwt. 10 grs. of gold per ton, and another of 19 cwt. yielding 18 dwt. 11 grs. of gold per ton, a total of about 7 tons 17 cwt. treated gave an average yield of 12 dwt. per ton. These beds have a slight dip inland and could be easily worked. There is no doubt that the gold and platinum in the sand and gravel on the beach, which has for years past been worked to the north and south of Black Rock, have been derived from the denudation of the basalt; the rippling action of the ocean surf tending to throw back the gold with the black sand and shingle drift about high water level.†"

Mr. Wilkinson personally selected samples from the 4-foot bed in Jones' shaft, from the top 1-foot layer of the lower 8-foot bed, from top bed 30 feet thick, and from lower 7-foot level, all at Black Rock. In only one of these samples was the Departmental Analyst, Mr. Mingaye, able to detect even a trace of gold.

Mr. Wilkinson also selected samples from the same basalt sheet near Lismore, in none, however, was gold detected.

Whilst recently at Ballina I also selected a sample from the agglomerate, and later on Mr. Munro forwarded a larger sample. In both instances care was taken to break away the sea-worn face and to take only the freshly exposed material. Large duplicate assays and panning tests failed to detect the presence of gold in either sample.

The value of the discovery is greatly discounted by the conflict between the numerous fire assay results and those obtained by mechanical treatment from bulk parcels, a statement of which, through the kindness of Mr. Munro, is here given.

Statement of Crushing of Basalt from Black Rock, Ballina.

Where treated.	Tons cwt. qrs. lbs.	Yield per ton. Oz. dwt. gr.	Remarks.
Sydney Mint ...	0 17 1 16	0 15 6	From sea face, lower seam.
Parke and Lacey ...	3 8 0 10	0 2 12	Do.
Do. ...	1 18 3 15	0 12 13	From drive in lower seam.
Do. ...	0 19 1 3	0 18 11	From drive in lower seam, 20-30 feet.
Do. ...	0 14 1 16	0 9 18	From top or surface seam.

The above parcels were dispatched in three lots at different dates in 1888.

Were it not for the yields from the two parcels obtained from drives in the lower seam (one of which is stated to have been from 20 to 30 feet in length), the discrepancy between the assay and bulk crushing results might be accounted for by the accidental occurrence of gold in the exposed scoriaceous agglomerate face at the foot of the Black Rock, the vesicular cavities of which would act as small rille holes as the auriferous sand of the coast is dashed against it by the wash of the waves which continuously reach it save at low tide. That gold sands have been perpetually dashed against this bed is undoubted, because of the occurrence of one of the richest patches of beach sand just on the north side of the Black Rock.

The presence of gold in the decomposed basalt forming the soil on the top of the cliff just below the Lighthouse (where the discovery was first made) does not weaken the above solution of the question, because the windblown sand mentioned by Mr. Wilkinson has at one time extended over the top of the basalt at this point, a little of it even now remains. As it was drifted away by the wind a few fine gold particles would remain on the surface of the decomposing basalt, and would slip into sun-cracks and joints, and thus account for the surface prospects obtained.

It is unaccountable why such favourable prospects, obtained from bulk samples, have not been followed up.

The value or worthlessness of this basalt as a source of gold is a question well worthy of thorough demonstration when the Government Metallurgical Works are in operation, pending which inquiry as to whether the contained gold is indigenous or accidental may well remain in abeyance.

The gem sand and tin stone, which are such uniformly persistent associates of the gold and platinum of the beach sands, can hardly have been derived from the basalt even if the gold was. A quantity of the crushed basalt was carefully panned, but no trace of any enclosed gem stones could be seen under the microscope. Even if such had been present in quantity their presence would, perhaps, be best accounted for by accidental engulfment in a basalt overflow.

(e) *Present drainage channels from the eastern margin of the auriferous and stanniferous rocks of the New England Tableland.*—These channels have a precipitous watershed from the above formations, and short courses to the ocean. They are very subject to flooding in rainy seasons, the currents at such times being swift and powerful. The lower stretches of these rivers have little fall, and here the heavier burdens from the precipitous upper reaches are dropped, whilst only the finest particles are swept on to the sea.

Where the watershed is formed of rocks, differing from those mentioned above (as west of Sydney, where the Hawkesbury Series, and the Permo-Carboniferous Measures form the high lands), the characteristic auriferous sand is absent from the coast beaches.

Taking

* Trans. R. Soc. S. A., 1895, XIX, Pt. 1, pp. 71, 72.

† Ann. Rept. Dept. Mines N. S. Wales for 1889, p. 203.

Taking all the facts into consideration, it seems most probable that the earlier drainage channels (represented by the drifts under the basalt flows) and the present surface streams have been, and are, the feeders of the auriferous beaches.

The early drainage channels probably first began the work of transporting the sand to the sea, which is now being carried on by the present drainage system. Owing to the extreme fineness of the particles, the powerful currents of these old torrential rivers, like the present, were able to overcome the high gravity of the component minerals and sweep them on to the ocean, where they encountered an opposing current and the shoreward sweep of the waves.

Since the basalt flow filled up these early rivers, and turned the waters into new channels, atmospheric denudation has been steadily wearing away the volcanic cover and bringing the imprisoned drifts again within the transporting influence of rain and stream to the further enrichment of the beaches.

Conclusion.

In concluding this report I desire to point out that for upwards of twenty-five years the auriferous beaches of the North Coast, particularly those between the Clarence and Tweed Rivers, have provided employment for a large number of men. Notwithstanding that the work has been intermittent, and the yields irregular, it is estimated by residents, competent to judge, that the average annual earnings have not been less than £1 per week per man. Many of the small settlers of the districts mentioned work the beaches when farming operations are slack, and, on the other hand, many of the regular miners avail themselves of the employment offered during the sugar-cane crushing season. Though the beaches have been robbed of nearly all the original rich accumulations, yet occasional highly payable patches are discovered, whilst the repeatedly worked areas are continually renewed whenever south-easterly gales occur. Taking all these facts into consideration, conjointly with the possibilities awakened by M'Auley Bros.' discovery in the "black rock" back from the sea-line, the auriferous sand areas must be regarded as amongst the most important fields for the absorption of labour. This field offers the additional advantages of small and inexpensive equipments, easy access, and extremely cheap living. About 300 men were profitably employed on the leads between the Esk and Evans Rivers; in October last this number was daily being added to, and it was confidently expected that the return of the regular beach miners, at the close of the cane crushing, would largely augment the total.

In view of the fact that the present known leads will shortly be worked out, it is recommended that special tests—under the aid and control of the Prospecting Board—be made, in the localities already mentioned, to discover other leads.

I have, &c.,

JOSEPH E. CARNE, F.G.S.,
Geological Surveyor.

The Government Geologist.

APPENDIX 15.

Geological Report upon the Slaughter-house Creek District.

Sir,

Glen Innes, 11 January, 1895.

In accordance with your attached instructions, I have the honor to furnish the following report upon the formations supposed to be gold-bearing at Slaughter-house Creek in the Moree District:—

Moree is situated on an ana-branch of the Gwydir or Big River (an important stream in the western fall of the Colony), the country around the township for several miles to the east and many miles in a northerly, southerly, and westerly direction consisting of the Tertiary alluvial plains which occupy a large area in the north-western portion of New South Wales. Slaughter-house Creek takes its rise in the ranges in the Parish of Singaporea, County Burnett, and flowing northerly through the Parish of Monsoon, joins the Gwydir 22 miles from Moree in a direction a few points south of east.

The area examined borders on the Bingera district described in my report of July, 1894, and consists of gently undulating open forest land with hills of circumdenudation rising abruptly from the surrounding surface, and long ridges whose tops are covered in part with open forest and in places with thick scrub.

My visit included a hurried trip through the country which lies immediately west of the range in which Slaughter-house Creek takes its rise. The highest peak in this range is known as the "Sugar-loaf," and from its summit an exceptionally good view can be obtained, although it is perhaps eclipsed by the magnificent sight from the top of the "Cap and Bonnett" (a hill about 2½ miles south-westerly from the Sugarloaf) from which can be distinguished Gravesend Mt. in the direction of Warialda, the Nandewar Range towards Narrabri, and a large extent of the western plains around Moree, with the remarkable hills known as the Fort, &c., standing out in bold relief from the general landscape.

The formations developed about Slaughter-house Creek are as follows:—

1. Recent.
2. Pleistocene and other Tertiary systems including basalt.
3. Middle Clarence Series.
4. Carboniferous.
5. Carboniferous mudstones, &c.
6. Porphyrite.
7. Granite.

1. Recent.

Under this heading are included deposits of varying width and thickness found along the banks of the streams now running; at Yugabi, and in Jong and Lowe's gullies (tributaries of Slaughter-house Creek), they have been found to contain gold, but the work has been only of the nature of gully raking, as the precious metal has not been traced into the wider and deeper deposits of alluvium, which are fairly numerous but practically unprospected. Gold was discovered in Lowe's Gully in the year 1874, and from it and Long Gully some 40 ounces in all are said to have been won; most of the gold obtained was fine with a fair number of coarse waterworn specks—the largest weighed 6 dwt. 12 gr.—and judging by the sample which has been kept by Mr. Maiden, the major portion would appear to have travelled a considerable distance. As the western plain country is approached the recent alluvium spreads out into wide areas and consists of the familiar black soil painfully known in wet seasons to travellers across the plain districts.

Along

2. *Pleistocene, &c.*

Along the banks of the Gwydir, and at heights varying up to 10 feet above the river flood-level, are patches of loose gravel of different thicknesses, and covering a mediumly large area; at Yugabi, (2 miles above the junction of Slaughter-house Creek with the Gwydir) the gravel carries gold, but there is not sufficient present to pay the expenses of working. As the series is followed westerly it thickens and widens, but is covered in part by more recent deposits; there can be little doubt, I think, that considering the amount of denudation which the country about Bingera has been subjected to, a certain quantity of gold must be concealed under the western plains, but, as has been pointed out* the Cretaceous sea would leave deposits which would be likely to be less concentrated than river-drift. It is possible, of course, for well-defined channels to occur in the wide Pleistocene drifts (although I have seen no evidence of elevation in the beds), but the farther west they are tried the farther is the known source of the gold left to the east, and consequently there is less likelihood of payable gold being struck. The deep round along the Gwydir, even at Bingera, where the prospects of striking payable wash are good, has never been tried, and to prove the existence of channels or basins such as are referred to above it would be necessary to undertake systematic and expensive prospecting operations which would not be warranted by present knowledge of the subject; it should also be borne in mind that to merely discover gold is a simple matter, the difficulty is to find the precious metal in sufficient quantity to pay the cost of its extraction.

At the bore at Moree Township, 1,450 feet deep (1/1.95), the Pleistocene beds have a thickness of 310 feet, and at the 36-foot level Mr. Skeet, who visited the bore and washed samples daily, obtained a speck of gold from a handful of gravel, and from the 50 to 300 feet levels a little black sand from a number of different samples. The speck of gold has not been kept. A piece of quartz collected from the recent gravels along the Gwydir was supposed to show gold, but the mineral appears to me to be iron pyrites and not gold.

Near Mr. Solling's house, 4 miles E.N.E. from Moree, a deposit of gravel has been opened out and shows a thickness of 10 feet of drift, consisting of well waterworn white quartz, red jasper, altered mudstone, and subangular and waterworn pieces of siliceous breccia up to 2 inches in diameter, with several occasional pebbles 5 inches in diameter, and several gems, such as sapphire, topaz, and zircon, of small size.

Underneath the Pleistocene are the Cretaceous (water-bearing) beds† which latter have been struck in both the Dolgelly and Moree bores. It is not known how far the series extends easterly.

Basalt occurs in several places, and in the range at the head of Slaughter-house Creek covers an outlier of the sandy pipeclay, &c., which are largely developed on the Bingera diamond field. It is probable that the gold found in Long Gully has been chiefly derived from an old river channel which is, or was at one time, covered by basalt, and with a view of testing the formation below the basalt a tunnel has been driven for about 40 feet (good prospects of gold and a few diamonds are said to have been obtained from a fine quartz drift in this tunnel) and several shafts, one of which is 40 feet deep, have been sunk. To prospect the formation is no easy task, because at Bingera the payable gravel is found to occur at various levels resting on pipeclay and not on the mudstones, which are the true bed-rock for the Bingera leads; hence at Slaughter-house Creek it will be necessary to prospect the whole thickness of the pipeclay and not merely the wash, which rests on the bed-rock. Then, too, the recognition of the bed-rock will not always be a simple matter, for to the south of Jerrybong Mountain the carboniferous mudstones, &c., are overlaid by sandstones and conglomerates, which latter will be bed-rock in the portion of the district referred to, and it may not be easy in some cases to distinguish the carboniferous sandstones, &c., from the siliceous sandstones of the leads. It is possible that the carboniferous sandstones, &c., may themselves contain gold. They are referred to under a subsequent heading.

A mile to the east of Jerrybong Mountain, and also again at 6 miles to the east of Moree, patches of basalt occur, the former of Tertiary age and the latter probably belonging to the same era. The "Cap and Bonnett" (already referred to) is capped by an outlier of rudely columnar basalt, about 60 feet thick, which is dipping to the north-east at about 20°, and resting upon a bed of volcanic breccia, 50 feet in thickness, containing angular fragments of a basic lava averaging about ½ inch, with a number of large pieces up to 1 foot in diameter.

3. *Middle Clarence Series.*

The rocks included in this division occur as outliers bounded on every side by mural precipices and capping the hills to the west of the Sugarloaf, known as the Fort, &c. They consist of whitish and reddish brown glistening sandstones and quartz-pebble conglomerates with thin layers of sandy ironstone, the beds being of variable thickness, and a number of them showing false-bedding, which dips E. 20° N. at 20°, the whole series having perhaps a slight westerly dip. At the Fort the underlying rocks consists of clayey sandstones dipping E 30° N. at 35° and are clearly unconformable to the false-bedded sandstones—the actual junction-line can be traced without difficulty.‡ No evidence was observed which would indicate the existence of the Lower Clarence Coal Series developed about Warialda, but it is possible that in a westerly direction the Carboniferous rocks may be found to have been extensively denuded and the intervening strata, between them and the Middle Clarence rocks, to consist of coal-bearing beds of either Permian or Lower Clarence age. This would appear to be the case, for in a well sunk by Mr. Moloney, 14 miles in an easterly direction from Moree, a seam of coal, said to be 3½ feet thick, was struck at a depth of 70 feet. I visited the site, but was unable to descend the shaft, although specimens of the coal which had been raised to the surface were collected and forwarded to you.§ A sample sent to the Mines Department by Mr. Joseph, in 1892, was analysed with the following result, and it will be observed that the mineral does not possess the composition of a true coal:—

Assay No. 1232/92.	Hygroscopic moisture	10 25
	Volatile hydrocarbons	32 3 0
	Carbon	36 55
	Ash	20 90
	No coke formed.	100 00

It is only reasonable, I think, to conclude that better coal and thicker seams have been found in the series, although the extent of the field, and its value for the production of coal, remain yet to be proved, for the measures are concealed by alluvium, and consequently do not outcrop over a large area. 4.

* T. W. E. David, Peak Hill, Ann. Rept. Dept. Mines, 1889, p. 216.

† I have since found *Tamnopteria Daintreei* in these beds, thus proving them to belong to the Clarence or Ipswich measures and not to the Cretaceous formation.—E.F.P. ‡ I have since found marine fossils of true Carboniferous age in these beds.—E.F.P. § *Tamnopteria Daintreei* was subsequently found by me in the spoil-heap from this well.—E.F.P.

4. Carboniferous (a).

The rocks which are seen from the Fort, for a couple of miles in a northerly direction, consist of sandstones and coarse conglomerates, probably of Carboniferous age, and clearly unconformable to the Middle Clarence Series. Judging by the occurrence of *Orthis australis*, determined by Mr. R. Etheridge, junr., Honorary Consulting Palæontologist, Geological Survey, N.S. Wales, and considered by him to be essentially Carboniferous, at Rocky Creek (20 miles south from the Sugarloaf), and plant remains 3 miles west of Derra Derra Homestead (13 miles south of Sugarloaf Mountain), the rocks would be divisible into a fresh-water and marine series, but no evidence was obtained at Slaughter-house Creek to assist in unravelling the problem. The beds occupy a large area, and are traversed occasionally by thin felspathic veins; the lower beds are likely to contain gold, as they have been formed from the disintegration of gold-bearing formations, but so far as could be learned no attempt has been made to prospect them.

5, 6, and 7, Carboniferous (b) Porphyrite and Granite.

The Carboniferous rocks come to the surface at Yugabi, and extend uninterruptedly to the head of Slaughter-house Creek. They consist of thin-bedded mudstones, sandstones, and limestones dipping, as far as was observed, to the east at angles varying from 30° to 70°, and traversed occasionally by thin felspathic and quartz veins. The limestone beds are numerous, some of them from a foot to 18 inches in thickness, being composed almost wholly of encrinites, and others containing shells and corals of Carboniferous type in profusion. The following genera have been determined by Mr. W. S. Dun:—

- | | |
|----------------------------------------------------|---------------------------------|
| 2. <i>Spirifera</i> , cf. (<i>convoluta</i>) (?) | 3. <i>Diphyphyllum</i> (f), sp. |
| " sp. | <i>Syringopora</i> , sp. |
| <i>Strophomena</i> | <i>Cyathophyllum</i> , sp. |
| <i>Penestella</i> , sp. | <i>Zaphrentis</i> |
| Crinoid stems | |

with the remark that *Diphyphyllum* and *Syringopora* are new to Australian Carboniferous rocks. It is satisfactory to have this palæontological confirmatory evidence, but without it there would be no difficulty in correlating the beds with the rocks developed from Pallal towards Cobbadah.

Porphyrite is found 2 miles to the north of Yugabi, and although its occurrence at Bingera as an interbedded lava is fairly clear, the junction line at Yugabi has somewhat the appearance of being intrusive. The rock is traversed by a number of lenticular veins of quartz, which were tried to a depth of 40 feet without payable gold being met—the bulk of the quartz which was raised to the surface does not show gold. Near the shaft just referred to a well defined quartz vein, from a foot to 18 inches in width, of white dull opaque quartz and capel, and bearing W. 10° N., with an underlay to the south of 5° traverses the sediments, but has not been tried to a greater depth than 4 feet.

Granite is noted on the late Rev. W. B. Clarke's map as occurring near Torry-hic-hie.

From the foregoing report it will be seen—

1. That the district around Slaughter-house Creek has not received much attention from prospectors.
2. A small amount of gold, which appears to have been chiefly derived from an old river-channel, has been won by gully-raking in two tributaries of Slaughter-house Creek close to a basaltic range.
3. This basaltic range may contain part of an old river-channel carrying payable gold with some diamonds, and should be prospected by experienced miners.
4. The river Gwydir has brought a certain quantity of gold into the western plains, but there is no evidence to show that there are other than patches of auriferous wash concealed by the surface alluvium.
5. Very few veins have been observed, and none have been tested to a greater depth than 30 feet. One vein is well defined, but has not been proved to carry payable gold. The Carboniferous Series is the most likely to carry auriferous veins.
6. Coal may be expected to occur between Slaughter-house Creek and Moree, but the thickness of the seams, and value of the coal, remain to be ascertained by systematic prospecting.

In conclusion, I beg to acknowledge the kind help afforded me by Messrs. Conroy, Skoot, and Joseph during my examination of the district.

I have, &c.,

GEO. A. STONIER,
Geological Surveyor.

The Government Geologist.

APPENDIX 16.

Report on the Uralla Gold-field.

Geological Survey Branch, Department of Mines and Agriculture,

26 March, 1895.

Sir,

In accordance with your instructions attached, I have the honor to furnish the following report upon a recent inspection of the Gold-field immediately around the Township of Uralla, County Sandon:—

The field has been mentioned in various reports by the late Rev. W. B. Clarke, and was fully reported upon by Professor (then Geological Surveyor) David,* so that my remarks will deal more particularly with recent discoveries, and are chiefly supplementary to the Professor's paper, which will be referred to in this report as A, and his maps as A1.

I. GEOLOGY.

For a considerable distance around Uralla the formation consists of hornblendic granite, mediumly coarse, and making in places a fairly strong outcrop, but, as a general rule, showing above the surface of the ground as occasional boulders in gently undulating country, the soil of which is several feet in thickness in places. The rock is intersected by felsitic, earitic, quartz porphyry and basaltic (?) dykes of variable thickness up to 8 feet, and by a number of quartz veins, one of which has been proved to be auriferous. About 3½ miles south-east and 5 miles west of the township the granite intrudes (there is no local

* Ann. Rept. Dept. Mines for 1886, p. 153.

local evidence of the age of the intrusion, but it probably took place during early Permo-Carboniferous times), and is replaced by a series of granitoid rocks, claystones, conglomerates, &c., the age of which, in the absence of palaeontological evidence, is doubtful, and was considered by Professor David to be Siluro-Devonian (?). A very large area was at one time covered by basalt and laterite of Tertiary age, but, as a result of denudation, the volcanic rocks are now represented by outliers such as Mount Beef and patches of various size, the largest including Doherty's Hill, Mount John, &c., and running in a northerly direction for several miles, with a width of more than a mile. The basalt conceals several auriferous deep leads, representing old river-channels, some of which are exceptionally wide, and in places appear to have been partly of lacustrine origin. The deep lead deposits consist of gravels, sands, and clays, up to 11½ feet in thickness, and containing leaf-impressions, which have not been thoroughly examined, so that the exact age of the formation cannot be stated. It should, however, be remembered that the older leads at Vegetable Creek (Geological Survey, N.S. Wales, Pal. 2, pp. 78 and 188; Geological Survey, N.S. Wales, Geol. 1, p. 24) have been determined to be of Eocene age, that the late C. S. Wilkinson considered that the Newstead (Elsmore, New England) ironstones were not younger than Lower Miocene, and Professor Bittingshausen (Geological Survey, N.S. Wales, Pal. 2, p. 78, *et seq.*) classified the fossils submitted to him from Elsmore as Eocene, so that, although the relation of the Uralla to the Vegetable Creek (Eumaville) and Newstead leads is not known, there is a possibility that the Uralla leads may be partly of Eocene age. It is quite clear that a considerable time has elapsed since the deposition of the leads, for valleys have been excavated to a depth of 500 feet. A number of patches of "billy" (quartzite) are associated with the drifts, and are found not only on the outside edges of the basalt, but also covering payable wash, and hence the occurrence of the rock is not invariably an indication of the depth of the ground. The leads are at least of two ages, and are all more or less auriferous. One of them has been worked from the western side of Mount Jones, through Sydney Flat, to Doherty's Hill (a distance of 1 mile 30 chains), with a fall in the bed-rock in the direction stated. Miners who have worked in the lead say that judging by its occurrence (the underground workings are not open to inspection at the present time) the wash would appear to have come from the reverse direction; but both aneroid levels and the varying depths of water in the old shafts show clearly that the present fall in the direction named, and, as there is no evidence of local subsidence, it is only reasonable to conclude that the old watercourse ran in the direction of the present main stream, *i.e.*, roughly, meridionally. The other leads, including one older and found at a higher level than the Sydney Flat lead, have been proved for short lengths; their extension is of importance from a mining standpoint. Besides the earlier Tertiary several newer and shallower leads not covered by basalt, such as the Freethinker, &c., have been developed and have been worked for gold, but have not extended for any great distance. Finally, there are the recent deposits along the present watercourses, and they are all more or less auriferous, and of a thickness up to 20 feet, with areas of surfacing of fair size, and containing more or less gold.

2. MINING.

(a) *Recent, &c., Alluvial.*

These deposits, all more or less auriferous, have been fairly well developed, and have yielded a large amount of gold, and to those who are acquainted with and settled on the field there is a living to be obtained for a number of years to come. The more likely and easily-worked places have been tried, and at the present time even the old mullock heaps of the Sydney Flat, &c., leads are being carted and washed for the sake of the gold which was not considered worth the labour of extraction in the old days. The drawback is the want of water, and to provide a good supply would entail the expenditure of a large sum of money, while it is open to question whether the results would justify the expenditure of the necessary capital. The subject is specially referred to in Report A. The field has a peculiar elasticity, for although the alluvials were considered to be worked out ten years ago, they have given and still are affording employment to a number of men.

(b) *Deep Leads (chiefly covered by Basalt).*

As already stated, a lead has been worked from Mt. Jones to Doherty's Hill. At the last-named place the lead split, and although a large sum of money has been expended and a wide body of drift has been proved to exist in a northerly direction from Doherty's Hill, patches only of payable wash have been struck. A line of shafts known as the "Bullion" were sunk in the position shown on plan A1; but no attempt has been made to test the formation further to the north. Of the shafts sunk between Doherty's Hill and the Bullion Shafts prior to 1886, a detail account is given in Report A, and since that time a considerable sum of money has been spent in trying to prove the same stretch of country. The Rocky River Company have driven for 429 feet in an easterly direction from the bottom of the "Old Rock" shaft (No. 13 (?) plan A1), which was continued to the 120-ft level. Browning and Party have recently sunk a shaft on M.L. 2, Parish Arding (Co. Sandon), a couple of chains south of the long drive just referred to. The shaft is 126 feet deep (110 feet to bed-rock), and has been driven 182 feet in an easterly direction, 8 feet northerly, and 32 feet southerly. In consequence of the pump being out of order, I could not descend the shaft and examine the workings, but the drift is said to vary from 3 ft. 6 in. to 11 feet in thickness, and the wash from 6 inches to 1 foot in thickness, and to contain 5 dwt. of gold to the load, while the southerly drive is approaching ground which was worked by — Bullen to the water-level, and yielded handsome returns. The Phoenix Shaft (No. 10, plan A1) has been driven for 100 feet in a W.N.W. direction in black pipeclay without any sign of wash or bed-rock, and a short drive was put in a southerly direction. It is to be regretted that the southerly drive was not continued. Rice and Party are not now at work, but have recently won a fair amount of wash from a claim immediately south of No. 19 (plan A1). I was unable to ascertain details of the work done.

From the foregoing particulars it will be seen that, although there have not been either specially important developments within the last ten years, or the discovery of a payable run of wash, the expenditure of the capital has demonstrated the fact that between Doherty's Hill and the Bullion Shafts a lead exists which is auriferous and wide, although, on account of the expense attendant on dealing with a large body of water, the wash, as a whole, is not payable; it is, however, a matter well worthy of investigation, whether a deep-level tunnel could not be constructed from Tipperary or an adjoining gully, which would drain off the water.

Of much more immediate promise, however, is the basalt country north of the Bullion Shafts, for, as pointed out by Professor David, between Portions 23 and 244, Parish Arding, the basalt narrows to a width of three-quarters of a mile, and as this is the narrowest part of the area it is well worth a trial. One shaft (or bore) would not, however, be sufficient to test the ground, and as there will be a large body of water to be dealt with, it is useless for any attempt to be made unless the party is prepared to properly complete the work. A shaft was commenced some years ago in the position referred to, but was abandoned before reaching bed-rock.

The Sydney Flat Lead, which has been just described, is not the only one in the vicinity, for the basalt is wide, and has been proved to cover more than one run of wash. At the head of the Sawpit Gully a short lead of payable gold has been worked, and a few chains north of the lead Rixon and Party are sinking a shaft now 120 + feet deep, and within a few feet of the bed-rock; should they strike payable gold, the lead may have a great length. On Mount Copeland (east of Sydney Flat) auriferous wash has been proved in several shafts, and between Mount Copeland and Doherty's Hill a shaft known as the Government prospecting shaft, which was sunk to a depth of 79 feet, and driven for 60 feet in a westerly direction, is well worthy of further attention.

At Mount Jones Mr. French has done an immense amount of work in testing an upper drift, and although he has failed to strike payable wash, he is confident that a tunnel driven on the southern side of the hill would give good results. If, however, the existence of a rich patch of auriferous wash be proved, the work will not establish his contention that a main lead runs from east to west, consisting of a number of saucer-like depressions with payable wash on the eastern portion of the basin and without any drift connecting the basins, for, although the occurrence of depressions in the bed-rock is common in the Vegetable Creek leads, there is generally a trace of wash to indicate the lead, and their development in the Uralla district remains yet to be proved. In connection with this subject the work now in progress at Mount Beef is of special interest; Dr. Woods and Mr. Krippner are having a low-level tunnel driven (now 260 feet in the granite), believing that the bed-rock will dip into the hill, which is capped by basalt, but has not been proved to contain an outcrop of wash, although a little gold can be obtained from the surface on the eastern side of the hill. That the junction-line between the basalt and the granite does dip in places is proved by Carroll's old tunnel, a couple of hundred feet south-west of Dr. Woods' tunnel; the former is 176 feet in length, and for the last 28 feet dips 1 in 4, while at the end of the tunnel the junction between the basalt and granite is almost vertical. Whether the dip will continue and wash be found between the two formations as the junction is followed into the hill can only be solved by actual prospecting work, but it should be remembered that dykes of basalt may be struck, and in that case the junction-lines will be vertical; if, however, wash is discovered it is likely to carry gold. The work is of importance, because, as a rule, no attempt is made to prospect a hill capped by basalt, unless there be an outcrop of wash, so that if Mount Beef be found to contain payable gold a number of basalt hills will be tried which hitherto have been looked upon as valueless from a mining standpoint.

About a mile to the east of Uralla there is a stretch of basalt, including Bourke's Nob, which covers drift containing gold, and has been but little prospected; also at the Digger's Ridge, 5 miles easterly from the township, gold has been obtained in a drift, and is well worthy of further attention.

(c) Veins.

The granite is traversed by a number of veins of quartz, felsite, &c., and some of the latter are said to carry gold, but until very recently reefs of any description have not been considered to be of much importance, for the alluvial gold is very fine and has seldom been found attached to quartz; recently, however, a patch of alluvial was worked on the western side of Mount Mutton, and Mr. Roberts assures me that a number of specimens were obtained. Most of the gold won from the alluvials was probably derived from the granite, and as that granite is intrusive it is only reasonable to expect that auriferous veins were formed near the junction of the granite with the adjacent rocks, and it is in this geological position that recent prospecting operations have revealed the occurrence of gold-bearing veins.

Six miles north-west of Uralla, on Portion 93, Parish Devon, Sney and Party have discovered a vein by tracing the gold gradually from the alluvial, and have tried it to a depth of 91 feet. The vein bears E. 40° N. with an underlay of 2° to the north occurs, in granite, and consists of a dyke of felsite (?) with quartz up to 10 inches in thickness developed on both walls, but mostly on the foot-wall; the walls are from 9 inches to 3 ft. 3 in. apart, and are slicken-sided and striated, the striae dipping to the north at 53°. At the 40-foot level a bunch of sulphide of antimony of high grade, with a maximum height of 5 feet, a thickness of 15 inches, and dipping to the south, was struck, and was driven on for 10 feet; at the bottom level there is also a thin vein of sulphide of antimony on the foot-wall. A crushing of 4 tons 2 cwt. gave 8 oz. 14 dwt. 18 gr., *i.e.*, 2 oz. 2 dwt. 14 gr. per ton, but cannot be taken as an average of the vein as the gold is patchy, and a well-marked auriferous shoot has not yet been struck. There can be but little doubt that the vein will continue to a considerable depth, and it is purely a matter for systematic sinking and driving to determine the dimensions of the auriferous shoots. The antimony will occur in bunches, but may prove to be a valuable adjunct to the precious metal.

At Balala, on Portion 150, Parish Devon, 2½ miles southerly from Sney's Claim, M'Alister and Party have discovered several mullocky veins which traverse quartzites near the junction of the granite. An underlay shaft (Prospectors' Shaft) at the southern end of the portion has been sunk to a depth of 60 feet on a vein which bears N. 23° E., with an underlay of 6° to the west, and averages 6 inches; the hanging wall is badly defined, but the foot-wall has been continuous throughout. The vein has been traced for several chains in length, although its outcrop is difficult to follow, and appears to have been faulted at the shaft. Two crushings have been sent to Hillgrove, the first of 5 tons giving 23 dwt. per ton, and the second of 5 tons yielding 8 dwt. per ton. Near the northern boundary of the portion two shafts have been sunk, the deeper of which is 25 feet, and have proved a vein 4 to 5 inches in thickness, which bears N. 10° E. with an underlay slightly to the east. Encouraging assays have been obtained, and the claim-holders propose to send away a parcel of stone for battery treatment. I would suggest that the tailings be assayed, as gold may occur in the form of auriferous mispickel, and it would not be saved by the ordinary treatment.

Immediately to the south of the Prospectors' Shaft, Crotty and Collins (No. 1 South) have sunk a shaft to a depth of 69 feet on a vein which bears N. 13° E. with an underlay of 9° to the east, averages 6 inches, and is up to 2 feet in thickness. Gold is present, but only as occasional colours and fine prospects. To the west of the underlay shaft a well-defined quartz vein 9 inches thick, and bearing N. 23° E.

E. with an underlay to the east of 4° , has been discovered, and tried to a depth of 15 feet without a colour of gold being detected, but as the vein is fairly well defined its outcrop might be traced and tested in various places in order to ascertain if it contains a shoot of gold which comes to the surface. The country between Suey's claim and Balala, both of which have been referred to, is well worth prospecting, and although the veins do not make a bold outcrop and are not easy to follow, some of them are likely to continue to a depth, and should carry payable gold. It is, however, necessary that the vein, and if possible the shoot of gold, should be followed, for if the walls are once left there may be difficulty in finding them in a crosscut, as the country is traversed by a number of joints, and it will be impossible to know on which side of the drive the shoot of gold lies. A small battery erected in a position convenient to both places would be a help to the field, but sufficient work has not been done to justify at present the erection of a complete plant.

Four miles to the south-east of Uralla, on Portion 504, Parish Uralla, a number of badly defined veins have been discovered, and are now being tried by Mr. P. Shanahan, who has sunk three shafts, the deepest of which is 49 feet, and has struck a couple of flat veins, and in a drive northerly from the bottom level a fairly defined reef of quartz up to 15 inches wide and bearing N. 25° W. with an underlay to the west. Thirty-two feet northerly a shaft 12 feet deep has touched a vein 8 inches wide bearing E. 12° S. with an underlay to the south at 45° , and a cross-vein 4 inches wide bearing N. 15° W. with an underlay to the west. There are several tons of quartz at grass, and although an assay gave 7 dwt. of gold no crushing has yet been made, so that it is impossible at present to state the average yield of the quartz. A number of veins have been formed, but it remains yet to be proved that there is a vein which will extend to a depth. In testing the veins it will be found advisable to prospect the surface of the ground for the outcrop of auriferous shoots, and then to follow the shoot wherever it may lead; certainly for ultimate working it may be desirable to sink a vertical shaft in a carefully selected spot, but work of that character may well stand over until it has been demonstrated that the erection of a battery is justifiable, and at present that stage has not been reached.

Summary.

From the foregoing report it will be observed—

1. A very large amount of gold has been won from Recent, &c., alluvial, and the field should yield a living to a certain number of residents for years to come.
2. A considerable amount of gold has been obtained from several leads under basalt, and there is a large area which may conceal the extension of these leads and their tributaries, besides outliers which have been but little tried. On account of the body of water to be overcome and the width of basalt to be prospected, it appears improbable that in some cases the leads will be proved, except by their being traced from one claim into the adjoining property.
3. The recent discovery of auriferous veins is of importance, and is a new feature in the mining industry of the district. In each case they have been found near the junction of a large mass of granite with the adjacent rocks. They vary up to 2 feet in thickness, and crushings of several tons have proved a yield of gold up to 2 oz. 3 dwt. per ton; but none of them have been tried to a depth exceeding 91 feet. One vein has well-defined and striated walls, and the remainder, although not so well defined, carry richer gold. The country at the junction of the granite with the adjacent rocks is worth the attention of prospectors.

In conclusion, I beg to acknowledge the kind help afforded me by Dr. Woods, Messrs. Cleghorn, Roberts, Glendenning, French, and a number of others, who did all in their power to assist my examination of the field.

I have, &c.,

GEO. A. STONIER,
Geological Surveyor.

APPENDIX 17.

Report on Alluvial Tin at Shannon Vale.

Sir,

Inverell, 4 February, 1895.

In accordance with the attached instructions I have the honor to furnish the following report upon the recent discovery of alluvial tin at Shannon Vale, in the New England District, 8 miles from the township of Glen Innes, in a direction a few points north of east:—

1. Situation.

Shannon Vale is a settlement in the Parishes of Beardy Plains, Rusden, and Boyd, County Gough, and along the Mann or Mitchell River, which latter is an eastern water rising near Glencoe and flowing in a northerly direction until it is joined by Skeleton Creek, when the river changes its course and flows easterly for a considerable distance, ultimately entering into the Clarence River. I traversed the Mann River at intervals for a distance of 7 miles above the junction of Skeleton Creek, and find that it is bar-bound in a number of places (the bars bearing generally east and west), with patches of alluvial on either side of the river, and occasional bluffs of rock falling away into open forest country. As a rule, the fall into the river on both sides is not steep, and the soil between the outcrops of rocks, which are numerous, is of a fair thickness, and supports good herbage.

2. Recent Alluvium.

Alluvial tin has been worked for the past twenty years at various places in the bed and along the banks of the Mann River, but the work has been of a desultory character, as it could only be attempted in dry seasons; in all, some 200 to 300 tons of ore are supposed to have been mined. There are, however, parts of the river-bed which are unworked, and several wide flats, such as Lobb's Farm (Portion 214, Parish Beardy Plains), which are untested; and as there is evidence that the watercourse has changed its position by encroaching on the eastern bank, and has continually received material resulting from the degradation of tin-bearing rocks, it is only reasonable to expect that tin-bearing deposits are concealed under some of the wide flats. It would, however, be useless to commence work unless ample provision be made for dealing with the water, which is troublesome, except in very dry seasons. Colours of gold are constantly associated with the tin; opposite Portion 17, Parish Beardy Plains, a piece weighing $\frac{1}{2}$ dwt. is said to have been obtained.

3. "New Find."

The "New Find" is situated on Portion 155, Parish Rusden, near the School-house, and consists of an outlier of drift and sand having a thickness (so far as has been proved) varying from 2 to 6 feet, and occurring 50 feet above the river-level; it probably represents portion of an old watercourse, but the small size of the pebbles and the quantity of sand present raise a doubt whether it may not represent a flood deposit rather than a portion of the main channel. There can, however, be no doubt that at the time of deposition of this stanniferous outlier the river-bed was at a higher level than it is at the present time, but having generally the same course and flowing in the same direction as the present stream. The Boden Bros., who discovered the tin, have opened a paddock about a chain square and having an average thickness of about 3 ft. 6 in. of sand and wash, the pebbles in which are up to 4 inches in diameter and consist of subangular and well waterworn, and a few angular fragments of quartz, quartzite, quartz-porphry, and altered mudstone. The paddock has yielded $3\frac{1}{2}$ tons of tin. Several shafts have been sunk about a chain to the north-east of the paddock, and prospects of tin have been obtained, but the deposit itself cannot extend across the river in a northerly direction into Lobb's Farm (already alluded to), and no work has yet been done to prove its existence south of Portion 190. It is, however, unlikely that this one outlier is all that remains to denote the existence of an old river-bed, and I would urge that the country on each side of the river be carefully prospected for some distance in a southerly direction for high-level deposits similar to that which has been discovered by the Messrs. Boden. The old channel probably had the same general direction, so that the outliers, which have escaped denudation, may be found half a mile one side or the other of the present watercourse. The tin is fine, and consists chiefly of waterworn grains, which appear to have travelled for some distance. Part may have been derived from the basalt range which occurs to the west of the river, but the bulk of the mineral must have come down the river for some distance, even supposing that a fair percentage of it was derived in the first instance (primarily, of course, from veins) from an old river channel partly denuded and partly still concealed by the basalt sheet just referred to.

4. Surfacing.

Besides the alluvial close to the river, deposits have been mined in two or three places half a mile back from, and at a considerable elevation above, the watercourse. On Portion 22, Parish Rusden, 2 miles south of Boden's Claim, a party of Chinese, who are still in possession of the ground, have worked a patch 8 chains in length, in one place $2\frac{1}{2}$ chains in width and from 2 to 6 feet in thickness, consisting partly of alluvium accumulated in a gully from the disintegration of the rocks in the immediate vicinity, and passing at the sides into ordinary surfacing. The tin is fine and has probably been derived locally from narrow veins in the surrounding granite, which is also traversed by a number of felsite veins up to 10 inches in thickness, running in various directions, and having a little quartz occasionally on either wall carrying tinstone in small crystals. The claim is said to have yielded 18 tons for the last eighteen months' work.

On Portion 331, Parish Beardy Plains, a mile to the north of Boden's Claim, three small strips of surfacing, the largest of which is a couple of chains in length, by rather less than a chain in width and about a foot in thickness, have been worked; they occur about 30 chains westerly from the river, and at a considerable elevation (some 70 feet) above its bed. The tin won was coarse, specimens up to an inch in their longest measurement being of frequent occurrence, and, from their angular condition, had evidently not travelled.

5. Veins.

Within the last couple of months Williams and Party have discovered two veins traversing the granite on portion 331, where the surfacing has been worked; one of them consists of oxide of tin an eighth of an inch in thickness, and has been tried to a depth of 9 feet, while the other vein, which bears W. 30° S. has been tested in two shafts, 10 and 22 feet deep, and found to be 10 inches and an eighth of an inch respectively in thickness. In the latter case the vein consists of oxide of tin, and has maintained its thickness from the surface to the bottom level, although heaved in one place for about 7 inches. The shaft is of particular interest, because it shows that the tin-vein was formed subsequent to the development, but before the consolidation, of a felsite vein which crosses the shaft.

6. Basalt Range.

About 15 chains to the west of the workings referred to under the previous heading a dip tunnel has been driven under the basalt on Portion 337, Parish Beardy Plains, bearing W. 12° N. for a distance of a hundred feet, and following a fine and patchy drift resting on the bed-rock (*i.e.*, granite). At the end of the tunnel the bed-rock is still dipping into the hill, and the work has been stopped at a time when its continuation has become a matter of some importance. The drift forms part of a Tertiary deposit of whitish and reddish-brown sandy clays, &c., which are at least 40 feet thick and contain an upper quartz-pebble drift composed of waterworn fragments up to an inch in diameter of quartz, some of which carry tinstone, and others have the dark tint considered to be favourable for the occurrence of tin in the Vegetable Creek District. This upper drift does not appear to have been prospected, and for future work it should be borne in mind that, although the wash resting on bed-rock (*i.e.*, granite in this particular part of the district) should be carefully tested, it is of importance that the drift which occurs at a higher level should not be neglected, as there are instances (*e.g.*, at Tin, near Walcha) where the richest mineral does not occur in the deepest part of the channel.

The basalt occupies a large area on the western side of the Mann River, and has been observed for the distance shown on the accompanying plan.

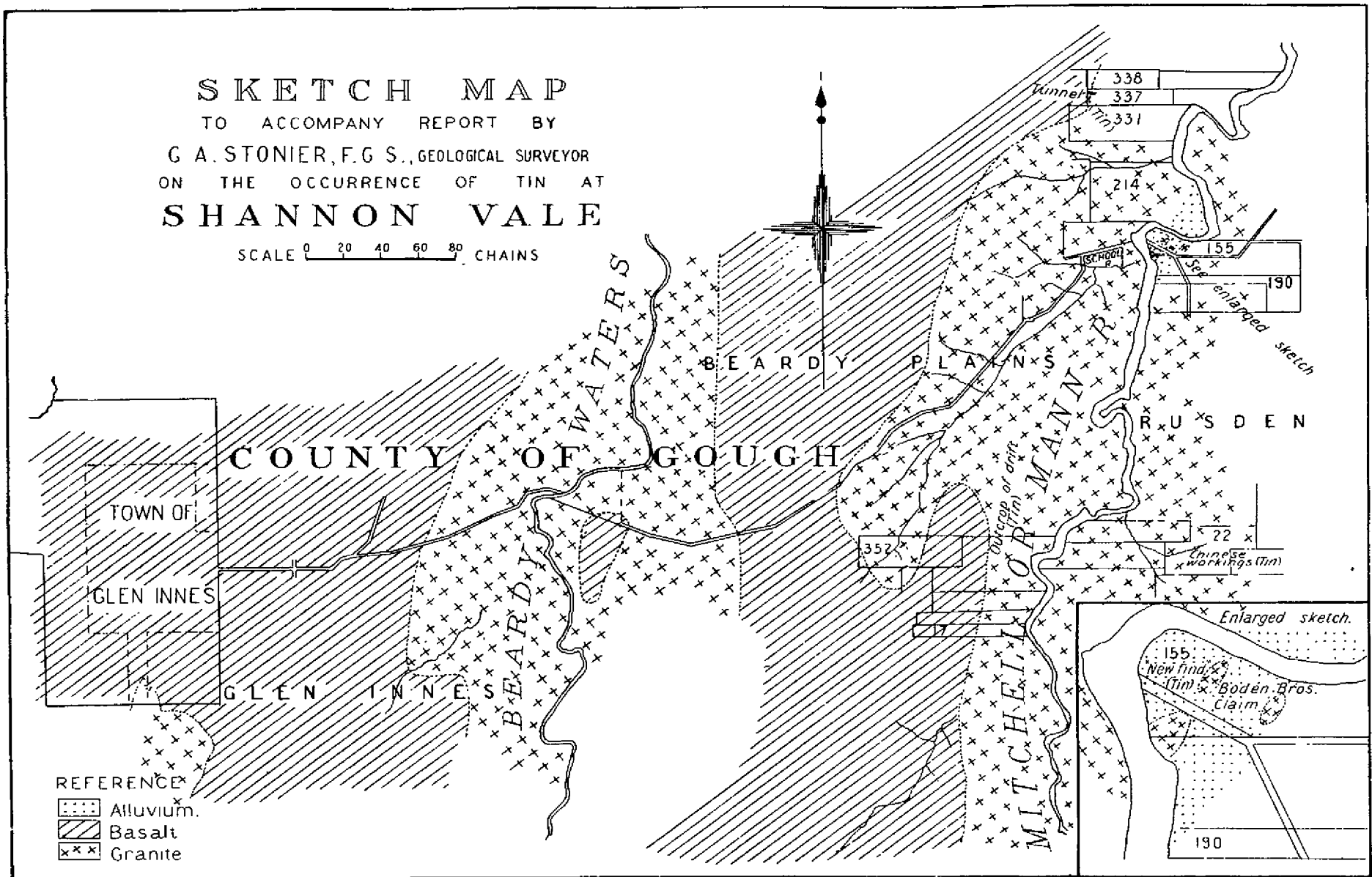
A few chains to the west of Portion 352, Parish Beardy Plains, Mr. Osborne has discovered an outcrop of drift which carries tin, and is worthy of further attention.

7. Granite.

With the exception of the basalt area the country consists entirely of granite as far as examined, of which two types can be recognised, although their exact relation is by no means clear. The one is a granite (possibly a granitite), consisting of felspar with quartz, hornblende, and biotite; it makes a bold outcrop, and occasionally forms bluffs, resembling in its occurrence a rock developed about Emmaville, which is, as a rule, non-metalliferous. The other type consists of a granite containing quartz, felspar, and

SKETCH MAP
 TO ACCOMPANY REPORT BY
 G. A. STONIER, F.G.S., GEOLOGICAL SURVEYOR
 ON THE OCCURRENCE OF TIN AT
SHANNON VALE

SCALE 0 20 40 60 80 CHAINS



- REFERENCE
- Alluvium.
 - Basalt
 - Granite

(Sig 271)

a little biotite, and is traversed by a number of veins of felsite running in various directions, and up to 10 inches in thickness, and thin felspathic quartz and tinstone veins. The stanniferous veins already discovered are very thin, but as some of them consist almost entirely of tinstone they should pay, while in soft granite which may be expected to extend to about the 80-foot level (there is one instance where the soft granite extended in New England to the 160-foot level, but the occurrence is exceptional). There is no evidence available that the veins will increase materially in thickness as depth is attained, but if several of these thin veins could be discovered, separated only by a small thickness of rock, they might pay to work even in the hard country. No well-defined vein has however been discovered, and it is possible that prospecting operations will demonstrate that the tin is associated with felspathic rather than with quartz veins. Numerous pebbles of quartz-porphry are found in the river-wash, but the rock has not been yet observed *in situ*.

8. Summary.

From the foregoing report it will be observed—

1. A certain amount of tin has been worked from recent deposits along the Mann River, and from surfacing in two places above the river-level.
2. The discovery of alluvial tin on Portion 155, Parish Rusden, proves that an old watercourse deposited tin at a higher level than the present river-bed.
3. There is a fair area along the bed of the Mann River still untested, and a considerable area where portions of an old river-channel, at a higher level than the present watercourses, may be expected to occur, as well as a larger amount of surfacing and shallow alluvial which has not been touched, but is worth a trial. (The difficulty in the first case will be to overcome water, and in the last-named to provide water.)
4. The drift discovered under the basalt, which forms the divide between the eastern and western waters (*i.e.*, the Mann and Beardy Rivers), is worth prospecting.
5. The veins hitherto discovered are thin, but carry rich tin in places. The formation in which they occur should be prospected for larger lodes.

In conclusion, I am glad to have an opportunity of acknowledging the unvarying courtesy which has been extended to me, both on the late and previous visits, by those interested in the mining industry of the Glen Innes District.

I have, &c.,

GEO. A. STONIER,
Geological Surveyor.

The Government Geologist.

APPENDIX 18.

Geological Report on Crow Mountain.

Sir,

Bingera, 16 May, 1895.

I have the honor, in accordance with your instructions attached, to furnish the following report upon the recent discoveries of auriferous veins at Crow Mt., the reported yields of gold having caused some excitement in the Barraba district:—

Crow Mountain is situated in the Parish of Eumur, County Darling, and within the watershed of the Manilla River, a tributary of the Namoi in the western fall of the Colony. It is distant 12 miles from the township of Barraba in a direction about east 30 degrees south, 18 miles northerly from the township of Manilla, and 40 miles, a few degrees west of north from Tamworth, a town on the Great Northern Railway.

The Annual Report of the Department of Mines contain various references to the mining and geological characteristics of the country north of Barraba, and some of the features of the latter are described in Mr. Geological Surveyor Anderson's report.*

1. General, Physical, and Geological Features.

The country around Crow Mt. is mountainous, open forest land, and consists partly of hills of circumdenudation, rising to a height of several hundred feet above the main creek-beds, with spurs in places, rocky and fairly steep, and running in various directions, occasionally opening out into gently undulating ridges with shallow and narrow alluvial flats between them. The timber is chiefly white box and apple-tree, with ironbark over a limited area and cherry-tree on the ridges.

The formations developed consist of—

- (a) Recent and other Tertiary Alluvials.
- (b) Serpentine, granite, and felsite (?).
- (c) Carboniferous rocks.

(a) *Recent and other Tertiary Alluvials.*—The Recent alluvials do not occupy a large area, but are found chiefly as narrow and shallow patches along the various watercourses, such as Crow Mt. Creek, &c. The older Tertiary alluvials occur at various elevations, up to 100 feet above the Recent flats, and have a thickness in places of at least 80 feet; they consist of clays (containing concretionary magnesite), sands, and conglomerates containing angular, sub-angular, and well-rounded pebbles averaging about 1½ inches and up to a foot in diameter, and composed largely of red and other jasperoid rocks, quartz, and occasionally felsite, in places cemented together into a hard, compact, ferruginous rock. The formation has been observed by me at intervals for a length of 6 miles and a considerable width; it occurs on the tops of various ridges, and at one time must have covered a large area, but has been subjected to continued denudation, so that it is now found frequently as outliers. The material of which the rocks are formed was probably deposited after the intrusion of the serpentine into the Carboniferous rocks, for a number of pebbles of the Carboniferous jasperoid rocks are present in the conglomerates, but the exact age cannot at present be stated, although judging by the height at which the formation is found above the present drainage channels a considerable time must have elapsed since its consolidation. A striking feature is the presence of a number of angular fragments; their form, taken in conjunction with the width of the deposit, raises a doubt whether the conditions may not have been partly lacustrine.

(b)

* Ann. Rept. Dept. Mines for 1888-1889, p. 179.

(b) *Serpentine, granite, and felsite* (?).—The serpentine occurs in the district as a well-marked belt having a nor-nor-westerly trend and extending almost without a break from Manilla to Bingera, a distance of 50 miles. At Crow Mt. its width varies from 3 to 14 chains with a fairly direct western but an irregular eastern boundary. Divisional planes bearing N. 20° E. are well developed in places, and the terms of the formation are marked by so-called "gossan" (possibly peridotite) bars of variable thickness; on the west the rock is continuous but cannot be traced on the eastern side for about half a mile north of Crow Mt. Creek, although about 25 chains to the east of this spot a peridotite (?) dyke about a chain and a half in width outcrops for three-quarters of a mile in length and trends in a nor-nor-westerly direction. There can be little doubt that the serpentine is intrusive, and as the intruded are jasperoid and probably of Carboniferous age, and jasper conglomerates are found in Permo-Carboniferous rocks, the intrusion may have taken place at the close of the Carboniferous period. A number of thin, sometimes auriferous veins of quartz, calcite, &c., and bunches of chromite, have been observed. Near Bingera an intrusive diorite has been noted by Mr. Anderson.*

The granite, which occupies an extended area in New England and intrudes rocks of Carboniferous (?) age, comes within 6 miles to the east of Crow Mt., and it is interesting to observe that its junction line with the sediments is in the same general direction as the serpentine, although the distance between them is lessened in a southerly direction; the relation of the serpentine to the granite has not been determined. A quartz-felsite (?), probably intrusive, occurs in small areas south of Crow Mt., and is traversed by thin quartz veins.

(c) *Carboniferous rocks*.—The beds which extend from Barraba to Crow Mt. probably form part of one system, and consist of a well-developed tuffaceous series with interbedded felsite (?), occasional conglomerates, sandstones, and thin-bedded mudstones (containing *Lepidodendron australe* at Barraba Township, and cleaved in lines coincident with the bedding planes close to the serpentine), with argillaceous interbedded limestones. The rocks have been altered, apparently, by the intrusion of the serpentine—Professor David, however, suggests that the red jaspers may be abyssal deposits—into quartzite, jaspers, and jasperoid rocks, the latter occurring at Crow Mt., chiefly on the eastern side of the serpentine. The limestones in Crow Mt. Creek on Portion 14, Ph. Eumur, are richly fossiliferous, and contain the following forms, which have been determined by Mr. W. S. Dun:—

Crinoid stems.
Fenestella.
Polypora, or Phyllopora.
Rhombopora (?).
Phillipsia, sp.
Spirifera.
Syringothyris cf. cuspidata, Martin.
Strophomena cf. rhomboidalis, var. *analoga*, Phill.
Orthis resupinata, Martin (?).
Orthotetes (?).
Productus, several species.

Mr. Grey, a local resident, states that fossil shells have been collected at Jenny's Creek, 4 miles south from Crow Mt. Creek, and has shown me specimens of encrinital limestone. In 1893, I collected *Lepidodendron australe* on Portion 2, Parish Borindie, County Darling, 10 miles south-west from Barraba, and found that, 3 miles further in the same direction and a few chains south-west from Portion 106, the fossil was associated with marine shells in an oolitic and encrinital limestone. It is remarkable that where *Lepidodendron australe* has been collected in the Barraba District the beds have generally only a slight dip, and hence it has been suggested that those measures which have a steep dip are unconformable to the horizontal rocks; and such, at first sight, would appear to be the case at Burindi (Borindie), but a detail survey would probably result in the apparent unconformity being proved to be due to rolls and faults.

II. Mining.

Alluvial gold with platinum (?) has been mined in the recent alluvial along middle Jerry's Creek, &c., but there has not been a large amount of the precious metal won, although specimens up to 42 oz. (containing only 1½ oz. of quartz) have been obtained. Surface Gully has been worked for three-quarters of a mile, and has yielded wages, pieces up to 15 dwt. being of common occurrence; there are also a number of gullies which are untested, but are worth a trial. The Older Tertiaries contain colors of gold throughout some thickness of the beds, but they have not been proved to carry payable gold.

Auriferous quartz and calcite veins, traversing the Carboniferous rocks, were discovered about the year 1868, and worked by Fletcher and others, who are said to have made as much as £1,000 for three years work on one claim, and £4,000 for twelve months' work on two other claims; but for a long time the ground has been unoccupied, and it was not until the end of 1893 that Watt and Party commenced work on the old Try Again block, and ultimately proved payable gold. Their operations did not, however, attract much attention until the beginning of the present year, and when about the end of February Mr. Kenzie and Party struck rich gold-bearing quartz at a depth of 15 feet, claim pegging began in earnest. The number of men on the field fluctuates daily, and although at one time it is said to have reached 200, it is doubtful if there are more than 80 men at the present time actively engaged in mining operations.

Most of the claims which are being worked are close to and on the eastern side of the serpentine, the most northerly being:—

(1.) Chalmers and Party, who hold Portion of an old gold lease, No. 18, Parish Eumur, at Crow Mount. A shaft has been sunk to a depth of 50 feet, and at the 26-ft. (?) level driven south for 23 feet, and at the 10-ft. level northerly for a few feet. Two shoots of auriferous quartz have been proved, and one of them stopped to the 26-ft. level for a length of 8 feet and an average of about 15 inches (up to 2 feet); with a steep dip in the shoot to the north, the vein being 8° E., with an underlay to the west at 10°. The second shoot was worked to the 50-ft. level, and had a length of 6 feet, but was only

* Ann. Rept. Dept. Mines for 1888 (1889), p. 181.

only taken for a thickness of 2 feet, leaving quartz 3 feet thick still unstoped, and which is stated to contain $\frac{1}{2}$ oz. of gold to the ton. Several parcels have been crushed at Ironbarks (local battery) with the following results:—

4 tons	.....	20 oz. of gold.
8 "	.....	7 $\frac{1}{2}$ "
13 $\frac{1}{2}$ "	.....	19 "
6 "	.....	5 $\frac{3}{4}$ "
<u>31$\frac{1}{2}$ "</u>		<u>52$\frac{1}{4}$ "</u>
		4 dollied.
		<u>56$\frac{1}{4}$ oz. obtained.</u>

A crushing of 40 tons is now being carted to Ironbarks (expenses cartage 12s., and crushing 10s. per ton), and is expected to yield about 6 dwt. to the ton, making the total quantity, which has been taken out of the claim, to average an ounce to the ton. Several other veins have been discovered, but have not been opened out.

(2.) Dyson and Party's Claim adjoins the preceding property on the east, and includes the Old Red Flag and O'Donnell's shafts. The former are 20 to 28 feet deep, and the veinstone won yielded $\frac{1}{4}$ of an ounce to the ton. O'Donnell's shaft was sunk about the year 1882; it is 92 feet deep, and at the bottom was worked for a length of 15 feet, and two veins, one a foot thick on the hanging-wall, and the other comprising 15 inches of quartz on the foot-wall, were stoped to veins bearing E. 12° N. with an underlay to the north of 45°. Dyson's shaft is a few yards to the east of the workings just referred to, and is 23 feet deep, with a drive 16 feet west, on a shoot 6 feet long, and about 14 inches wide, dipping west, and expected to yield 4 ounces of gold to the ton.

(3.) The "Princess" has been held by several parties, and is now in the hands of Condran and Party, who have a lease (Gold Lease 2) of the land which is south of (2). A vein of quartz, with a strike, varying from N. 20° E. to N. 10° W., and underlying to the west, has been traced for some distance, and two shafts have been sunk 35 feet apart, one of which has proved a shoot, about 6 feet long and 10 inches in width, to a depth of 87 feet, dipping N. at 50° with a fairly defined foot-wall. The first crushing was completed in April, 1893; and the following are the results of several parcels of stone treated in the district:—

17 tons	.....	15 oz.
8 "	.....	2 $\frac{1}{2}$ " per ton.
50 "	.....	14 dwt. "
8 "	.....	13 " "
15 "	.....	about an ounce to the ton.
<u>98 "</u>		

A drive has been commenced at about the 40-foot level, so as to test the reef in a southerly direction.

The three claims, which have been referred to, are all situated on Crow Mt., and following the serpentine in a southerly direction. On Conditional Purchase 16, on the southern side of Crow Mt. Creek, is (4) a claim held by Janson and Gardiner, who have sunk to a depth of 18 feet, following a vein which gives fair prospects of gold, is 8 inches wide, and bears N.W. underlying to the east at 19°.

(5.) Adjoining the preceding, and on its southern side, Ryan and Party have done a considerable amount of work in sinking through the Tertiary alluvial without striking bed rock, but have also sunk a couple of shafts 4 feet deep, and discovered auriferous quartz, but sufficient work has not been done for the size and direction of the veins to be determined.

(6.) Hill and Skews hold the ground adjoining Ryan on the south, and have sunk a shaft to a depth of 17 feet on a vein from 6 to 16 inches in thickness, bearing N. 20° E. and underlying to the east at 10°. Good prospects have been obtained by hand-crushing—the vein is worth proving. A shaft has also been sunk to a depth of 37 feet on a vein of quartz from 4 inches in thickness.

(7.) To the east of (6) is M'Kenzie and M'Nair's claim which was known at one time as "Crowley's" reef, and now as the "Dodger." A shaft has been sunk to a depth of 18 feet on a vein bearing N. 30° E. underlying to the west at 9° and consisting of quartz which averages 13 inches where it is gold bearing. At 13 feet level gold was struck, and has continued to the bottom of the shaft, the shoot dipping apparently at a long angle to the north, and containing very coarse specks and pieces of gold. In all 4 $\frac{1}{2}$ tons have been won, and of this quantity 3 tons of quartz have yielded 33 oz. to the ton (a number of rich specimens have not been yet crushed—had they been included the yield would have been about 57 oz. to the ton), 70 oz. have been dollied, and there are a number of rich specimens still uncrushed.

(8.) Adjoins the "Dodger" on the south-east, and is held by Geddes, Leslie, and Reay. A shaft 41 feet deep discloses a foot of quartz on the hanging-wall, and 4 inches on the foot-wall of a vein bearing N. 35° E. with a slight underlay to the west, and giving prospects of gold. In another portion of the ground 7 tons were raised by Williams and Party, previous holders of the claim, and the parcel is said to have yielded 3 $\frac{1}{2}$ oz. of gold to the ton.

(9.) Smith and Party, a couple of chains south-east of (8), are 8 feet deep and testing a body of quartz said to contain gold, and situated probably at the junction of several veins.

(10.) Fletcher's claim, G.L. 54, was taken up in 1875, and is said to have yielded £7,000 to a small party of miners working for three years. Several shafts have been sunk, one of them to the 60-ft. level; the vein bears W. 10° N., and the shoot dips to the west; 40 tons of quartz are said to have yielded 23 oz. to the ton. A lease of the ground has been applied for and work will be shortly commenced to further test the veins.

(11.) Adjoining (10) on the east, Johnson and Party have sunk a shaft to a depth of 13 feet on a mullocky vein, bearing W. 10° S., underlying to the north at 40°, and varying in thickness from 5 to 12 inches. A second shaft is 6 feet deep on a vein bearing N. 30° E., having a slight westerly underlay, and consisting of quartz and fluean, 3in. to 5in. thick, said to carry gold.

(12.) Is on G.L. 109 and half a mile south-east from the preceding claim. It is known as the "Try Again" and was worked in 1868, yielding to a small party of miners £4,000 for twelve months work. The lease is now held by Wall, Davis, and Hayes, who have sunk a shaft to a depth of 75 feet, and stoped

all the quartz from the surface to the 65-foot level for a length of 60 feet. It was impossible to examine the stoped ground, but the average thickness of the quartz ore is said to have been about 18 inches with the shoot dipping rapidly to the north—the vein bears N. 10° E. with an underlay of S° to the west. A three-head battery has been erected by the party at Crow Mt. Creek, distant 2 miles from the claim. The following are the results of crushings to date:—

50 tons.....	100 oz. (about)
5 "	42 "
15 "	35 "
12 "	30 " expected yield, stone not crushed.
<hr/>	<hr/>
82 tons.	207 oz.
	76 " dollied.
	<hr/>
	283 oz. total yield.

The party are sinking below the 65-foot level a shaft 30 feet north of the deep shaft, and its progress is of importance to the field as the work already done is thorough, and the party have their own battery for treatment of the veinstone won.

(13.) Immediately to the south of the "Try Again," T. Guy has sunk a shaft 20 feet deep, and driven from the bottom level northerly for 15 feet, proving a vertical vein 18 inches wide, bearing N. 45° W., and a cross-vein bearing N. 15° W., and having a thickness of 15 to 18 inches of quartz and mullock, which is said to contain colours of gold.

(14.) Fifteen or twenty chains S.-E. of (13), Janson and Gardiner are trenching a vein of quartz and brown iron ore 1 foot in width, and giving fair prospects of gold; it strikes N. 15° E., and has an underlay to the W. of 25°.

(15.) Is known as the "New Find"; it adjoins the preceding claim, and was taken up in the latter end of April by Faddy and Johnson, who have sunk a number of eastening trenches, and have discovered several veins, most of them carrying gold; from one of them a pound weight of gold was obtained in a dish of dirt. The work has not proceeded far enough for an idea yet to be formed of the value of the veins, which are, however, well worth attention.

(16.) About 15 chains east from (4), Williams is driving a tunnel in a direction W. 12° S., now 38 feet in length, and expects to strike a vein in a few feet. The vein outcrops about 20 yards south of the tunnel, strikes E. 30° S., with an underlay to the east of about 50°, and has a thickness of 5 inches. A load went 1½ oz., and several dishes gave 3 to 5 dwt. per dish.

The sixteen claims which have been referred to are all to the east, but within 20 chains of the eastern boundary of the serpentine, and are included in a length of 3¼ miles. As already stated, however, about 25 chains east of the main mass of serpentine, *i.e.*, on Jones's Selection and Leases Nos. 26 and 28, a dyke of the same rock occurs, and within 24 chains to the east of its eastern edge veins have been partly worked. At the present time there are three claims held. Floyd and Party (17) have sunk a shaft to a depth of 7 feet on a vein bearing E. 15° N., with an underlay to the north of 10°, having a thickness of 8 to 12 inches, and outcropping for nearly 5 chains. The quartz is said to carry colours of gold. Jones and party (18) are commencing work on a thin vein, bearing E. 10° N., with a slight underlay to the south, and composed largely of calcite; the shoot dips east. Several other veins up to 1 foot in thickness, and consisting chiefly of quartz, have been discovered, and will doubtless be tested. Handsome returns were obtained some years ago from working a vein in "Flanagan's" old shaft, and Phillips and party (15) have started a shaft on the same (?) line of reef, and have sunk it to a depth of 18 feet, following a thin leader, bearing W. 10° N., with an underlay of 4° to the north.

A mile and a half south-east from (15), Geddes and Party (20) are commencing work on G.L. 110 (?), Parish of Welsh, known as the old Fig Tree Claim. The vein bears W. 22° N., with a slight northerly underlay, has been tried to the 63-foot level and stoped for 40 feet in length to a depth of 25 feet from the surface for a thickness of 7 to 8 inches. The hanging-wall is fairly well defined, but the foot-wall is broken. Mr. Jones has kindly supplied the following particulars of the crushings which were taken out of the claim when previously worked:—

tons.	oz. dwt gr.
2½	7 1 12
13	1 10 0 per ton.
4	1 11 0 "
4	0 13 14 "
<hr/>	<hr/>
23½	

A few chains south of (10) Finkernagel and Party have commenced to test a number of thin veins which occur in the serpentine. The claim is of interest, because it is the only one now being worked which is situated on the serpentine.

III. Summary.

Alluvial gold has been worked in the neighbourhood of Crow Mt. and at the present time is giving a living to a few men, but the immediate cause of the rush now taking place is the discovery of rich gold-bearing quartz, &c., in veins.

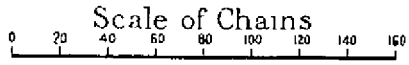
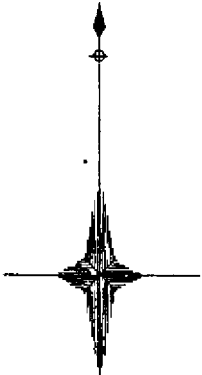
The occurrence of auriferous veins is not however new to the field, for work was commenced in the year 1868, and it is said that some of the parties of miners obtained as much as £4,000 for twelve months work, while there is every reason to believe that a crushing of 40 tons yielded 23 oz. of gold to the ton.

Most of the old deep shafts are not open to inspection, but Mr. Dyson states that one of them has reached the 150-foot level. Of the later work, *i.e.* performed during the last eighteen months, the deepest shaft is 72 feet, and payable gold has been worked to the 60-foot level. At the present time there are about eighty men on the field, the number varying daily and at one time reaching 200.

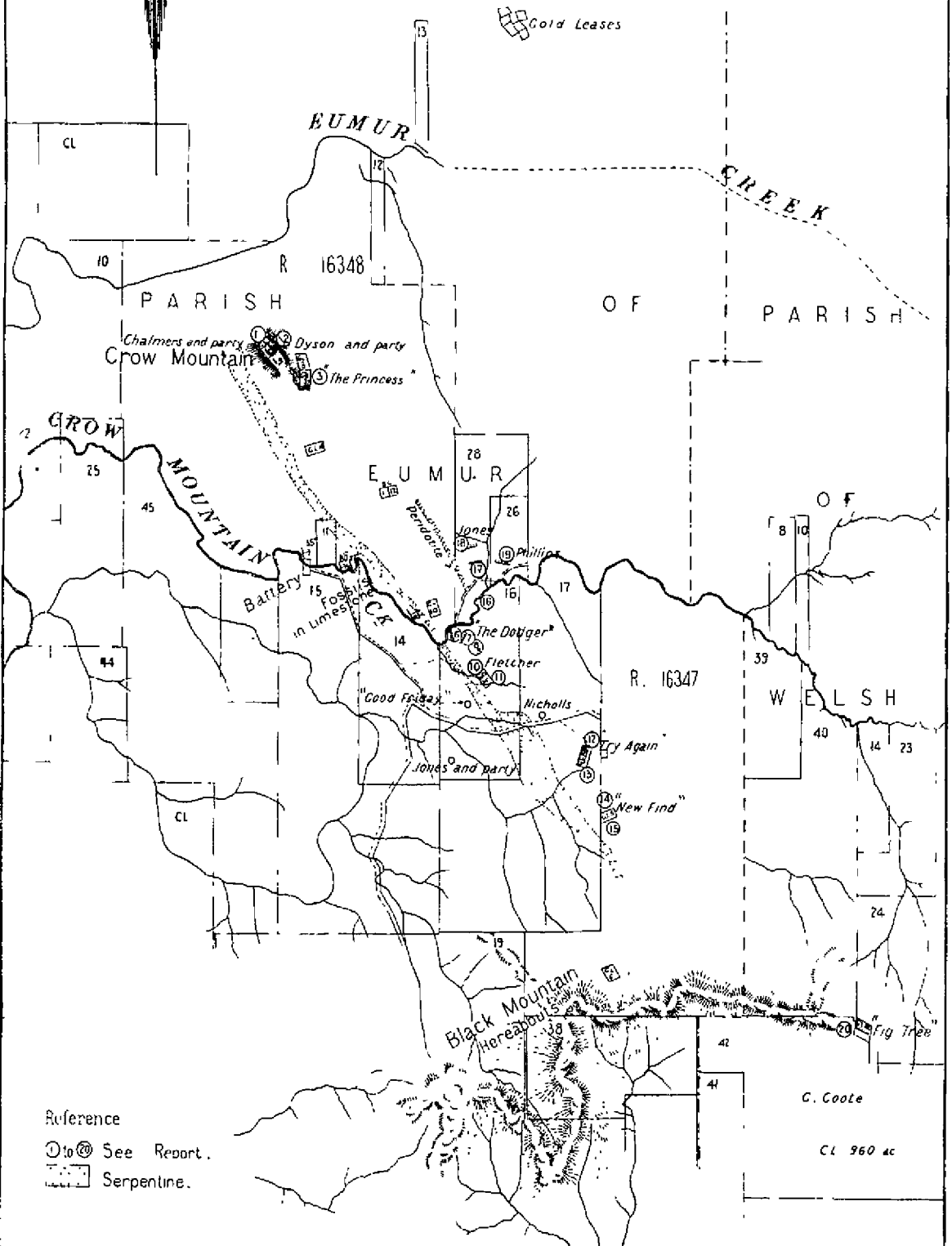
Three distinct areas of auriferous country have been proved to exist, one has a length of 3¼ miles with a width of about 28 chains, a second is three quarters of a mile long by about 24 chains, and the third has not been proved beyond a very limited area; if however the three areas be considered to form one auriferous belt, it will have a length of 5½ miles by 7 mile in width. The auriferous land abuts on to the eastern side of a well-marked belt of serpentine striking in a nor'-nor'-westerly direction, and the veins consist chiefly of

SKETCH PLAN

To accompany report by G. A. STONIER, F.G.S., Geological Surveyor, on the
 Auriferous veins at **CROW MOUNTAIN** Near Barraba.
 COUNTY OF DARLING



Edward F. Pittman
 GOVERNMENT GEOLOGIST.



(Sig 24)

quartz and occasionally of calcite, &c., running in two general directions, N. 8° to 30° E. and W., 15° S. to W., 22° N.—the gold does not appear to favour one series rather than the other—and varying in thickness, taking four of the principal claims, from 10 to 18 inches. As a rule the shoots outcrop and do not exceed 6 or 7 feet in length, but are separated by a variable, at times almost feather-edged amount of barren veinstone; one reef has been stoped for a length of 60 feet with payable results, but the gold may have occurred in more than one shoot. Sufficient work has not been done for a definite statement to be made as to the direction in the dip of the shoots, but it appears to be northerly in the meridional reefs and westerly in those at right angles to them, the amount of dip being variable. The gold has a Mint value of £4 1s. per ounce and occurs as coarse specks, probably deposited before the consolidation of the quartz, and pieces partly coated with oxide of iron, but although there is some fine gold present and occasionally a little pyrites, there has been no difficulty up to the present in saving the precious metal by the ordinary methods. As the gold is coarse it is not a matter of surprise that the yields vary and small parcels have given high returns. Of the quartz recently crushed one parcel of 50 tons has yielded about 100 oz. *i.e.* 2 oz. per ton, and a recent crushing of 3 tons gave a return equal to 57 oz. per ton (the actual yield was 33 oz. to the ton, but the parcel did not include a number of rich specimens now being dollied). Within the last twelve months 320 oz. of gold have been despatched to the the Mint, but the amount does not include all the gold which has been won.

The richer veins have not been traced outside the particular ground in which they are being worked, and their walls are not well-defined. Some few are unquestionably lenticular, but others are much promising for continuation to a depth, and one has been proved to the 150-foot level (recent work to 72 feet), while another vein outcrops for a distance of 5 chains.

A three-head stamper-battery, with copper plates and blankets, has been erected within 2 miles of the main portion of the field, and at Ironbarks (8 miles distant) there are two stamper-batteries, one of eight-head, with copper plates, and the other of ten-head, with cement tables and Watson and Denny pans. Owing to the scarcity of water there are not many sites convenient to the field, and suitable for the erection of batteries.

For future work it appears to me to be of importance that the country to the west of the serpentine should not be neglected, and as at Bingera auriferous dykes traverse the serpentine, the latter formation at Crow Mt. should be prospected. Moreover, gold is not the only mineral known to occur, and lodes may yet be found containing payable shoots of antimony or copper. The serpentine extends for more than 50 miles in an almost unbroken line, and gold has been obtained in various places at its junction with the adjacent rocks, but the intervening country has been but little prospected, so that there is a good opening for miners who are prepared to work without expecting immediate returns. The shoots are small, and it therefore takes time to prospect a small area of country; but, on the other hand, they are rich, so that there is in some cases a handsome return for the labour expended.

In conclusion, I desire to acknowledge the kind assistance afforded me by Mr. Warden Lawson and Messrs. Watt, Guy, and Dyson.

I have, &c.

GEO. A. STONIER,
Geological Surveyor.

The Government Geologist.

APPENDIX 19.

Report on Country between Moree and Warialda.

Glen Innes, 10 July, 1895.

In accordance with the attached instructions, I have the honor to furnish the following geological report upon the road from Moree to the Whalan, Bogabilla, and Warialda. The specimens of rock met with have been already forwarded to you:—

From Moree to Bogabilla there is not an outcrop of rock to be seen, the whole distance being over tertiary plain country, and, so far as could be learned from inquiries, none of the wells or bores (Moree, 1,450 deep, and Dolgelly, 1,660 feet deep) have touched any rocks other than the water-bearing (Cretaceous) strata.

At the Whalan, a fairly large inlier of rock occurs, showing a thickness of 12 feet, and consisting of compact greyish-white sandy clays, passing into marl, with beds of fairly coarse clayey sandstone, enclosing, occasionally, well rounded pebbles up to 2 inches in diameter, composed chiefly of siliceous mudstone, the whole section containing numerous concretions of sandy or siliceous ironstone. To the west of the Rocky Crossings, thin beds of ferruginous quartzite also occur, the whole formation being overlaid by dark grey finely-divided sand. The dip could not be determined accurately, but is, apparently, a little south of west, at about 20°. There is no conclusive evidence of their geological age; but judging from the lithological character of the beds, I consider them to belong to the Cretaceous period, and to form part of the Rolling Downs Formation of Queensland. It was impossible, however, to decide whether they are in the upper or lower portion of the Cretaceous beds, and it depends solely on their position in the series whether a bore would strike water which would rise to the surface. In order to throw any light on the question, it would be necessary to go into Queensland, and follow, to the New South Wales border, the junction of the Cretaceous beds with the underlying rocks, and by devoting about three weeks to a journey of this kind, some useful information would be gathered, even supposing that conclusive evidence were not obtained. I understand that Mr. Jack, the Queensland Government Geologist, has lately discovered a thick porous bed of Cretaceous sandstone, which is probably the inlet of the water, and if this sandstone bed could be traced for some few miles, and the fall of its outcrop ascertained, some idea might then be formed whether a bore at Bogabilla or the Whalan would have any chance of success. At both places there is, however, practically permanent water, and there are several sites between the Whalan and Moree where the chances (judging by available evidence) of obtaining water are better, and where the water is said to be more urgently needed. If, however, it be decided to bore either at Bogabilla or the Whalan, I would venture to respectfully suggest, (1) that the bore should not be commenced until the Dolgelly and Gil Gil Bores have been completed; (2) in order to obtain as much information as possible, that samples be carefully kept of the strata passed through at Dolgelly, Gil Gil, and Moree Bores.

The Tertiary plain country continues from Moree for 6 miles, when an outcrop of basalt, probably of Tertiary age, and occupying at least a square mile of country, is met. At Yugabi the Carboniferous rocks outcrop, and towards Warialda are covered by a series of sandstones, &c., capped by basalt, the latter being of Tertiary age. At Warialda itself there is no chance of striking the Cretaceous series by boring,

boring, for the Carboniferous come to within a mile and a half of the Township to the west, and three miles to the south. Although there is no confirmatory palæontological evidence I do not feel any hesitation in correlating them with the Carboniferous beds of Bingera, where they are largely developed, and extend to Tamworth.

Above the carboniferous mudstones, &c., there is a thin unconformable series of fresh-water beds, in which I discovered fossils determined by Mr. W. S. Dun to be "*Alethopteris sp.*, *Phyllopteris sp.*, and *Brachyphyllum*, and to indicate the presence of beds of the Clarence Series." The discovery of these fossils is of importance, because they tend to prove that the measures are of Mesozoic and not of Palæozoic age, as previously considered; and to confirm my observations of the geology of the Coonabarabran District. Above this fresh-water series there is a large development of falsely-bedded sandstone, with beds of sandy ironstone, in all about 100 feet thick, and lithologically resembling the Middle Clarence Series (considered by the late C. S. Wilkinson to be homotaxial with the Hawkesbury Sandstone). The falsely-bedded sandstones appear to me to be slightly unconformable to the fresh-water beds. About 4 miles to the east of Warialda a bed of conglomerate occurs, dipping to the west, and in an easterly direction is succeeded by a coarse ternary granite. Whether the conglomerate is interbedded with the Clarence Measures, or is a small inlier of Permo-Carboniferous rocks, has yet to be ascertained.

I have, &c.,

GEO. A. STONIER,
Geological Surveyor.

The Government Geologist.

APPENDIX 20.

Report on the Lismore District.

Geological Survey Branch, Department of Mines and Agriculture,

Sir,

Sydney, 25 July, 1895.

In accordance with your instructions attached I have the honor to forward the following report upon a recent visit to the Lismore District.

Lismore is a township on the Richmond River in the north-eastern (*i.e.*, the coastal) portion of the Colony, and is well known as the centre of a fine agricultural district.

Most of the more important geological features have been already noted in official reports of which the following will be found of interest:—

- (1) E. F. Pittman, 1880, p. 244.
- (2) C. S. Wilkinson, 1889, p. 202.
- (3) T. W. E. David, 1891, p. 220.

1. Geology and Physical Geography.

The country around Lismore consists of gently undulating ridges with small plateaux, having fairly steep sides in places, and clothed with a dense brush which makes clearing operations a work of magnitude, but is a speaking witness to the fertility of the soil. Between Lismore and Murwillumbah (a township on the Tweed), the hills attain a considerable height, and in places are rocky and rough. The "Nimbin Rocks" are two remarkable hills of circumdenudation, having a small base, and rising abruptly from the surrounding country; when seen from a distance they resemble the outliers of Hawkesbury sandstone common on the famous Blue Mountains, near Sydney. From the summits of the range which divides the Tweed from the Richmond, fine views of the surrounding country can be obtained, and an idea formed of the extent of land which is being cultivated. In past years the sugar-cane industry was confined to the rich alluvial flats fronting the river, but the energy of the residents is being directed to the clearing of the ridges, and the destructive effects of frost are being met by the cultivation of the higher land.

The geological formations are—

- (1) Recent and Pleistocene.
- (2) Tertiary lavas, pipe-clays, &c.
- (3) Lower Middle and Upper Clarence series.
- (4) Granite and other acidic intrusive (?) rocks.
- (5) Devonian (?) sandstones, &c.

(1) Recent and Pleistocene.—The Richmond and Tweed Rivers with their tributaries are flanked by rich alluvial deposits, proved to be 40 (+) feet in thickness in places. Along the beach are wide areas of blown sand, and to the south of Richmond Heads the existence of a "back-terrace" has been demonstrated.* At Ballina the sand is consolidated into a sandstone having a steep dip inland, at the base of which is a conglomerate of late Tertiary age and of marine origin. Along North Creek kitchen-middens have been formed, flanking the stream in one case nearly 25 chains, and having a thickness of 6 to 13 feet. They contain a number of stone tomahawks, clips of quartzite, rounded pebbles, and occasionally basalt boulders, the latter showing clearly that the deposits are of later age than the basalt flow. B. J. Statham, Esq., Assoc. Inst. C.E., published a paper giving details of these shell heaps,† and a description of the shells discovered is given in Mr. Etheridge's report.‡

(2) The Tertiary lavas occupy an immense area, for the most part consisting of basalt which is at least of three distinct sheets and variable composition, and showing well in section in a number of places. The acidic lavas occur to the north and north-west of Lismore in the vicinity of the Nightcap Range where they are more largely developed than in any other part of New South Wales, except perhaps the Coonabarabran District. In the Parish of Tunstall they attain a thickness of several hundred feet, and occupy a fair area, many of the rocks showing beautiful fluxion structure, and passing into pitchstone. The pipe-clays, &c., have been observed chiefly to the south of Lismore, where a deposit of tripolite has been discovered, varying in thickness up to 4 feet 6 inches, but there has not been sufficient work done to enable any idea to be formed of the extent of the deposit—doubtless prospecting operations will reveal its occurrence in other parts of the district.

(3) These Measures outcrop in a number of places from beneath the basalt, and although their outcrop does not occupy a large area, the system has been widely developed, and will be found under the basalt in many parts of the district.

Professor

* Ann. Rept. Dept. Mines for 1894 [1895], p. 120.

† Proc. R. Soc., N.S.W. for 1892, p. 304.

‡ Ann. Rept. Dept. Mines for 1891, p. 268.

Professor David has given a detailed account of the coal at Coraki, and notes the occurrence of the three coal-seams, one of which with bands is 10 feet in thickness, but as the average percentage of ash in the average sample was high, it is evident that the coal would not be profitably exported. West of the township of Wardell, several outcrops have been observed, but none of them are of importance. North of Lismore a number of outcrops are known, and from Parish Tunstall ("Nimbin"), a couple of tons were brought into Lismore and tried at the local Gasworks. The coal is friable, and has only been found in thin beds, and even were it more favourably situated, the seams are too thin to be worked; there is, however, a large area yet to be prospected, and the creeks could be carefully traversed in order to ascertain if larger outcrops containing coal of better quality exist. In view, however, of the distance of the field from market, even a first-class coal would be handicapped.

(4 and 5.) Granite has been observed near Mount Warning, and at Mullimbimby, felsites make their appearance. The sandstones, &c., in the absence of palæontological evidence, might be considered to be of Devonian age. They come to the surface in small areas, and a strip of the rocks runs from Cape Byron in a southerly direction, 6 miles to the west of Ballina.

(2.) Mining.

Immediately to the north of Black Head, Ballina, beach-combers have found a considerable amount of profitable employment. Some miners assert that during rough weather, gold is brought up by the action of the waves and deposited on the beach, but it is questionable whether the process is not one of concentration of the mineral already present, rather than the transportation of mineral from a distance. As to the source of the gold, platinum, and tin which are found along the beach, there can be little doubt that they have been originally derived from veins, &c., in the Devonian sandstones, &c., and it is a suggestion well worthy of consideration whether the minerals may not have been concentrated into the conglomerates, &c., of the Clarence Series from which they are being daily freed and deposited ultimately along the beach. The conglomerates referred to are worthy of a little more attention than what has already been devoted to them. The late Mr. Wilkinson, in his report already referred to, states that the basalt at Black Head is auriferous. The deposit has received some attention, but the returns of gold have varied considerably. Independent of the present beach, there is a fair stretch of flat country back from the shore-line, where a back-terrace may be concealed; it is impossible to sink shafts in some cases, so that recourse must be had to boring, and as the beach may not be wide, the ground will need to be systematically prospected before it can be definitely asserted that a back-terrace does not occur.

Unless the Clarence Measures contain gold in the form just alluded to, they are not likely to be valuable to the gold-miner. Of much more promise, however, are the Devonian sandstones, &c., for they are traversed by quartz-veins which carry gold. At Alstonville (between Lismore and Ballina), several veins have been discovered, one of which is a foot in thickness, and a crushing of a ton gave 15 dwt. to the ton. On Tonkeo Creek, two quartz-veins have been discovered, and are well worth prospecting. There is a fair stretch of country worth attention, but as it is partly covered by a dense brush the work takes a considerable time, and prevents a party from making much headway.

In conclusion, I desire to acknowledge the kind courtesy extended to me by Messrs. Coleman (the Mayor of Lismore), Stewart (Mayor of Ballina) and Morton, and in particular to Mr. Munro, of Ballina, whose intimate acquaintance with the district and geological notes and plans proved of great service to me.

I have, &c.,

GEO. A. STONIER,
Geological Surveyor.

Progress Report by Mr. J. B. Jaquet, Geological Surveyor.

Geological Survey Branch, Department of Mines and Agriculture,

Sir,

Sydney, 22 January, 1896.

I have the honor to inform you that during the past year I was engaged as follows:—

From 1st to 22nd January I was absent on leave. On the 23rd I left for Condobolin, and spent a week making a geological examination of the country around Melrose, about 35 miles north of this town. (*Vide Appendix 25.*) I afterwards reported upon proposed alterations of gold-field reserves, and applications for aid from the Prospecting Vote in the following localities:—Alectown, Peak Hill, Cadia, Canowindra, Watle Flat, Avisford, Windeyer, and Oberon. I returned to Sydney upon the 28th February.

Having prepared various reports, I left for Mount Drysdale upon the 18th March, and made an inspection of the Drysdale and Billagoe Gold-fields. My report upon the same forms Appendix 26. I also examined a newly-discovered deposit of auriferous ironstone upon the Cobar-Louth Road, and the Restdown and Hermidale Gold-fields.

Returning to Sydney upon the 4th April, I left again upon the 25th, and was engaged until the 9th May in making a joint inspection with Mr. District Surveyor Sheaffe, of Cooma, of various gold-fields upon the upper portion of the Shoalhaven River, with a view of reporting as to how their boundaries might be altered and simplified. From Braidwood I proceeded to Nerrigundah, Moruya, and Bateman's Bay, and reported upon applications for aid from the Prospecting Vote and proposed alterations of gold-field reserves in these localities.

I arrived back in Sydney upon the 21st May, and left again for Dubbo upon the 29th. From Dubbo I journeyed to near Ballimore, and made an examination of the auriferous drifts upon the Talbragar River (*Vide Appendix 27.*) After leaving Ballimore I journeyed to Stuart Town, Orange, Sunny Corner, Palmer's Oakley, Newbridge, Trunkey, Tucua, Crookwell, Young, Cowra, Junee, The Rock, and Picton. In each of these localities I either reported upon applications for aid from the Prospecting Vote or inspected portions of land which it was proposed should be withdrawn from various gold-field reserves. I also inspected the Amos (Lucky Hit) Mine and the Golden Dyke Mine at Tucua, the deposits of chrome ore at Berthong and the Cumberoona Gold-field, near Albury. (*Vide Appendices 28 and 5.*) I returned to Sydney at the end of July.

Upon the 27th August I left Sydney for Mandurama, Woodstock, and Mount Macdonald, in connection with applications for aid from the Prospecting Vote. I also reported upon a newly-discovered auriferous reef near Woodstock. (*Vide Appendix 30.*)

Towards the end of September I left Sydney and journeyed to Tarcutta, Adelong, Bullenbong, Junee Reefs, Harden, Burrowa, Yass, Gunning, Wyalong, Lake Cudgellico, Yalgogrin, Euabalong, Cujong, Condobolin, Forbes, and Parkes. In the vicinity of each of these towns I inspected mines in connection

connection with applications for aid from the Prospecting Vote. I also reported upon the Yalgogrin Gold-field and the platinum deposits at Fifield. (*Vide* Appendices 31 and 32.) Returning to Sydney upon the 23rd November, I left again upon the 27th for Lewis Ponds, and inspected some M.L.'s which had been applied for, and which were supposed to cover payable auriferous deposits.

From Lewis Ponds I proceeded to Binni Creek, near Cowra. Upon the slope of a low hill which overlooks the Binni Creek lead some exceedingly rich specimens of auriferous quartz have been from time to time found. I examined the locality with a view of determining whence these specimens had been derived. Having regard to all the circumstances, I am of opinion that they have not been shed from a well-defined reef, but from a series of small quartz-pockets. One patch of auriferous quartz has already been discovered, and found to pinch out altogether a few feet below the surface. These pockets can be best discovered by trenching; and I am of opinion that it is useless to continue sinking in the country rock where no indication of a vein is to be seen, in the hope that a reef will be struck at a depth.

I journeyed from Binni Creek to Oberon, and inspected a portion of the Swatchfield G.F. Reserve from C.P., with a view of reporting as to whether such portion might be cancelled.

During the year I have contributed four papers to the Records of the Geological Survey, as follows:—
Notes on the Geology of the Auriferous Gravels occurring in the upper portion of the Shoalhaven River.
Petrological Notes on two Andesites associated with Auriferous Deposits in N.S.W.

The Intrusive and Metamorphic Rocks of Berthong, with especial reference to the occurrence of Serpentine after Amphibolite.

The Occurrence of Platinum in New South Wales.

I have, &c.,

JOHN B. JAQUET,

Geological Surveyor.

The Government Geologist.

APPENDIX 21.

Report on Gold Reefs at Cumberoona and Wyndham.

Geological Survey Branch, Department of Mines and Agriculture,

Sydney, 17 August, 1895.

Sir,

I have the honor to report that, in accordance with your instructions, I have inspected the gold reefs which have recently been discovered about 15 miles north-east of Albury in the Parishes of Cumberoona and Wyndham, County Goulburn.

The reefs occur in granite. They vary in width from a few inches to 2 feet, and are composed of highly ferruginous quartz.

Picked samples of quartz have yielded when assayed by this Department up to 2 oz. of gold per ton, but at the period of my inspection no crushings which would enable me to form an idea of the general yield had been made. The gold would seem to occur in a finely divided state; at a short distance below the surface it will probably be associated with pyrites and be difficult of extraction.

On Portion 29, Parish of Wyndham, Plunkett and Party have traced a reef in trenches for a distance of 9 chains. A shaft has been sunk to a depth of 30 feet. Near the surface in this shaft the vein is 2 feet wide and well defined, but it has split up into a number of small veins below.

On Portion 85, Parish of Cumberoona, Macpherson, Gibson and Party have sunk a shaft to a depth of 40 feet. I was not able to inspect the shaft owing to the absence of the proprietors, but I learned from the inspection of the ore recently raised that arsenical pyrites had been met with below. Several shallow shafts have also been sunk upon Portions 119 and 116, Parish Cumberoona, by Messrs. Auhl, Cotterell and Party, and Cobman and Party.

Both as regards the stone they yield and the mode of its occurrence, all the reefs I examined closely resembled one another, and I have but little doubt that further prospecting will result in other similar reefs being found.

There are at the present time twenty men working upon the field. Most of these own farms in the district, and I do not think many of them could earn a living by mining alone.

Some reefs have already been found to give out but a few feet below the surface, and I think very few of them will continue downwards; while any ore obtained below the zone of oxidation will probably be refractory. I would advise the miners to devote their attention to exploring and raising the gossanous ore near the surface, rather than in sinking deep shafts in the hope of meeting with better ore below.

I have, &c.,

JOHN B. JAQUET,

Geological Surveyor.

The Government Geologist.

APPENDIX 22.

Report on Specimen Hill, Binni Creek.

Geological Survey Branch, Department of Mines and Agriculture,

Sydney, 15 February, 1896.

Sir,

I have the honor to report that according to your instructions I have made an examination of "Specimen Hill," Binni Creek, near Cowra.

Specimen Hill overlooks the Binni Creek Lead from the west. It is composed of quartz-felsite. The bedrock is, however, for the most part hidden by a loam deposit which is from 2 to 12 feet deep. Underneath the loam, resting upon the bedrock, exceedingly rich specimens of auriferous quartz have, from time to time, been discovered. Altogether specimens worth several hundred pounds have been obtained, some of them were more than half gold. They were but little waterworn, and this is evidence that they had not travelled far from their source.

Having regard to all the circumstances I am of opinion that the specimens have not been shed from a well defined reef, but from a series of small quartz pockets. One patch of auriferous quartz has, I was informed, been already discovered and found to pinch out altogether a few feet below the surface.

There is no evidence to show that any golden pockets still remain *in situ*. They may, with the exception of the one already found, have been denuded away and scattered over the hillside and flat below. The pockets could be best discovered by systematic trenching upon the hill top, and I am of opinion that it is useless to continue sinking in the country rock where no indication of a vein is to be seen, in the hope that a payable reef will be struck at a depth.

I have, &c.,

JOHN B. JAQUET,

Geological Surveyor.

The Government Geologist.

APPENDIX 23.

APPENDIX 23.

Report on Metalliferous Deposits at Restdown, Amphitheatre, Hermidale, and Bee Mountain.

Geological Survey Branch, Department of Mines and Agriculture,

Sir,

Sydney, 24 April, 1895.

I have the honor to report that, in accordance with your instructions, I made an examination of the metalliferous deposits at Restdown, Amphitheatre, Hermidale, and Bee Mountain, in the Cobar and Nyngan districts.

Restdown.

Gold has been discovered in the outcrop of a reef about a mile and a-half west of the Restdown Hotel. On the find becoming known, about six months ago, a number of men flocked to the field, and a considerable amount of prospecting has been done upon it. At one time there were thirty men working in the claims, but only nine of these now remain.

The reefs are composed, near the surface, of ferruginous quartz, and below, of quartz with arsenical pyrites. Only traces of gold have been found in them, and having regard to the large quantity of arsenical pyrites present the treatment of any ore, other than that raised from the outcrop, would be a costly operation.

I am of opinion that the district around is well worth prospecting, but that little good is likely to result from the exploration of the reefs now being worked.

Amphitheatre.

The auriferous deposit is situated about 9 miles west of Cobar, upon the Cobar-Louth road.

It consists of an irregular mass of hæmatite, occurring in argillaceous sandstones. I was informed by Mr. W. J. Hogan, of Cobar, who accompanied me during my inspection, that 10 tons of the ironstone yielded, when treated in Cobar, gold at the rate of 16 dwt. per ton.

Hermidale.

Several years ago gold was discovered in hæmatite about 4 miles west of Hermidale, and after several shafts had been sunk the workings were abandoned. Attention has recently been again directed to these deposits.

The gold occurs not only in the iron ore but also in the slates which are more or less impregnated with iron oxide. The ore hitherto obtained has only yielded traces of gold—less than 2 dwt. per ton.

The deposits resembles that one which is being worked at Mount Allen, near Mount Hope. They deserve, I think, to be further prospected.

Bee Mountain.

A large quartz reef carrying galena and mispickel has been discovered upon the flat to the east of Bee Mountain. Samples of this reef, when assayed, yielded but small quantities of silver and lead, and no gold, hence I am of opinion that the lode is not worth prospecting.

I have, &c.,
JOHN B. JAQUET.

The Government Geologist.

APPENDIX 24.

First Report on the Cujong Gold-field.

Geological Survey Branch, Department of Mines and Agriculture,

Sydney, 4 February, 1895.

A VERY promising gold reef was discovered near Condobolin by Messrs. Linten and M'Clure during the latter portion of last week, and, before leaving the district, I made an examination of the same.

The site of the discovery is distant about 30 miles in a westerly direction from Condobolin, and about 8 miles from Kiacatoo Homestead.

The country rock is altered slate, which is for the most part covered with a loose rubble.

The outcrop of the reef, which is about 2 feet wide, has been exposed for about 5 feet along its course. I saw coarse particles of fine gold occurring in situ, and several hundred-weight of rich specimens have already been raised.

Prospecting is now being carried out in the immediate vicinity of the discovery, and, having regard to the fact that numerous boulders of quartz, which resemble the stone raised from the prospector's claim, have been found in the trenches, I am of opinion that other reefs may be discovered shortly.

I have, &c.,
JOHN B. JAQUET.

APPENDIX 25.

Report on Auriferous Deposits in the Condobolin, Melrose, and Cujong Districts.

Geological Survey Branch, Department of Mines and Agriculture,

13 March, 1895.

Sir,

I have the honor to report that, in accordance with your instructions, I have made an examination of the auriferous deposits occurring in the neighbourhood of Condobolin, Melrose, and Cujong.

The formations around Melrose were geologically examined by the late Mr. Lamont Young in 1879,* and afterwards in greater detail by Mr. P. T. Hammond in 1892.†

Condobolin.

The country is made up of low ranges of hills which are widely separated from one another by spacious flats. The hills are composed of altered silurian slates and sandstones. The flats are covered, for the most part to a great depth, with recent and pleistocene sediments. It is upon the ranges and at those places where, the recent deposits being shallow, the bedrocks can without much difficulty be examined that reefs have been found, and prospecting is now in progress. About

* Ann. Rept. Dept. Mines for 1880, p. 259.

† Ann. Rept. Dept. Mines and Agric. for 1892, p. 167.

About 3 miles north of Condobolin, on the Condobolin-Melrose road, numerous auriferous reefs have been discovered, and several shafts sunk upon them.

The reefs conform with the bedding planes of the country and when followed either in a vertical or horizontal direction are found to frequently "pinch out" altogether. The gold near the surface is associated with quartz, cerussite, and oxides of iron, and below the zone of oxidation with pyrites, mispickel and galena. The shoots of payable stone hitherto discovered were of small dimensions; and having regard to the general character of the reefs I think there is but little chance of any of them yielding a large quantity of ore.

Melrose.

I spent several days examining the country in the vicinity of Melrose.

The physical features of the district are similar to those which obtain around Condobolin. The formations consist of much altered Silurian slates which are intruded by bosses of granite and quartz felsite. Outliers of Devonian sandstones and conglomerates occur in places.

In places quartz reefs are very numerous, I did not see any which carried gold; however, having regard to the geological formations, and the fact that a little alluvial gold has been found in the creeks, I think the district deserves to be well prospected. It is possible that ore-deposits consisting of altered slates impregnated with gold similar to those which occur elsewhere in the Western District may be present; the intending prospector would do well to bear such deposits in mind.

On Mount Tinda, which is composed of granite, numerous thin veins of argentiferous galena occur. Several shafts were sunk upon these lodes a few years ago, but at the present time, with one exception, the workings are all abandoned. The galena contains from 20 to 40 oz. of silver per ton. The small lodes hitherto discovered would not, in my opinion, yield a profit if worked.

Several shafts have been sunk in various places upon the flats with a view of discovering deep auriferous leads on the bottom. In no instance have such efforts been successful. It is possible that such leads do exist in places, but the Pleistocene sediments are very thick and of vast extent, while there is nothing on the surface to indicate the position of ancient gutters below, and these circumstances enormously increase the difficulties of the prospector.

I am of opinion that it would be better for the searcher after alluvial gold to confine his attention to the drifts which accompany the present watercourses.

Cujong.

For some months past prospecting has been in progress in this locality at a spot distant 8 miles in a north-westerly direction from the homestead on Kiacatoo Run. The country here consists of much altered slates which are covered to a depth of from 2 to 6 feet with a recent deposit of loam and rubble.

A few days previous to my visit, the outcrop of a promising looking reef had been discovered by Messrs. Maclure and Linden. It was 2 feet wide, had an approximately vertical dip, and appeared to trend nearly east and west. Several bags of rich ore, a considerable portion of which was richly studded with gold, had been raised.

Upon the surface of the ground for a considerable distance around boulders of quartz, some of which have been found on crushing to contain gold, are to be seen; and I am of opinion that further prospecting will result in other reefs being found.

I have, &c.,

JOHN B. JAQUET,

Geological Surveyor.

The Government Geologist.

APPENDIX 26.

Second Report on Mount Drysdale.

Sir, Geological Branch, Department of Mines and Agriculture, Sydney, 23 April, 1895.

I have the honor to report that, in accordance with your instructions, I have made a further examination of the Drysdale Gold-fields.

Mount Drysdale Mine.—No. 1 Shaft.

This shaft has now been sunk to a depth of 190 feet. The rich ore thinned out and terminated at a depth of 160 feet. Below this point the country is charged with finely disseminated arsenical pyrites. I obtained samples of the pyritous rock from the bottom of the shaft and these on assay yielded neither gold nor silver.

No. 2 Shaft.

The sinking of this shaft has been discontinued. A winze has been sunk from the 50-foot level to the stopes at the back of the 100-foot level upon the ore-shoot. I was unable to examine the winze, but from the back of the stopes I obtained samples of rock, and these on being assayed yielded at the rate of 8 dwt. of gold and 3 dwt. of silver per ton.

A winze has also been sunk below the 100-foot level to a depth of 50 feet. No ore would seem to have been met with in this winze, and some samples which I took from the bottom contained neither gold nor silver.

The 100-foot level has now been connected with the 80-foot level of No. 1 shaft, and a testing of the stone has shown that the ore-bodies accompanying No. 1 and No. 2 shafts respectively, are distinct from one another.

The gold yielded by the last 100 tons of ore sent away from the mine to Queensland—16 dwt. per ton—was not sufficient to pay for the cost of carriage and treatment.

Eldorado Mine.

The shaft has now been sunk to a depth of 150 feet, and preparations were being made to drive south and explore the ore-body previously worked in the underhand stopes from the 100-foot level. It was from these stopes that the bulk of the ore sent away from the mine was obtained. I was unable to examine them for the entrance is boarded over and covered with heavy rocks.

A little ore is now being raised from the walls and "backs" of the 50- and 100-foot levels.

Mulum in Parvo.

The shaft has been sunk to a depth of 140 feet without meeting with any payable stone. In view of this fact we may be warranted in assuming that there is no connection between the Drysdale and Eldorado ore-bodies.

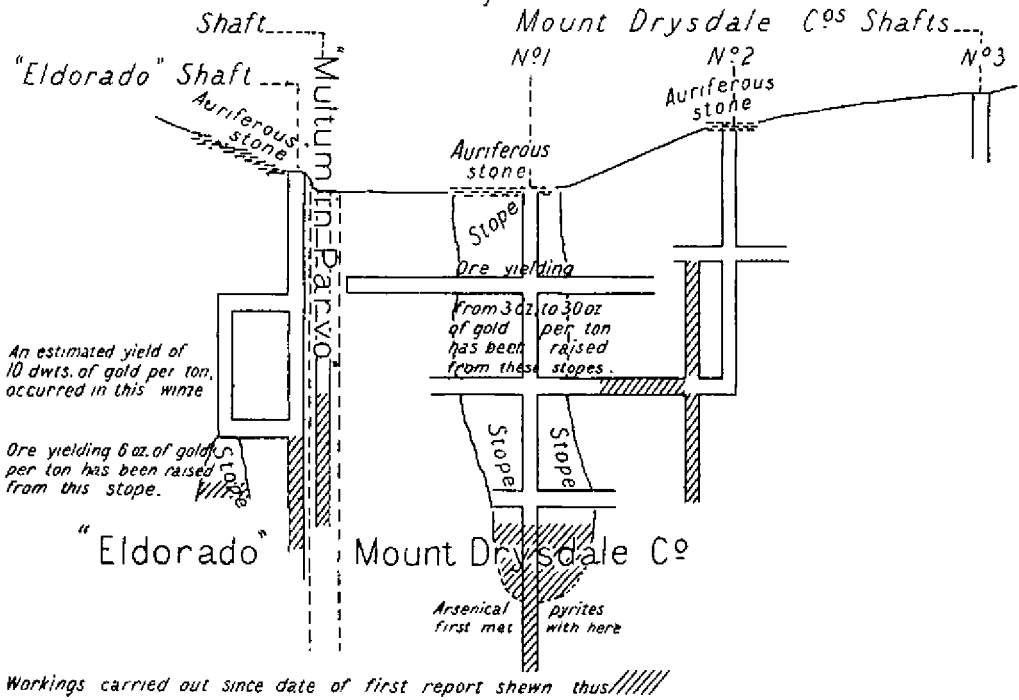
Drysdale

Sketch Sections.

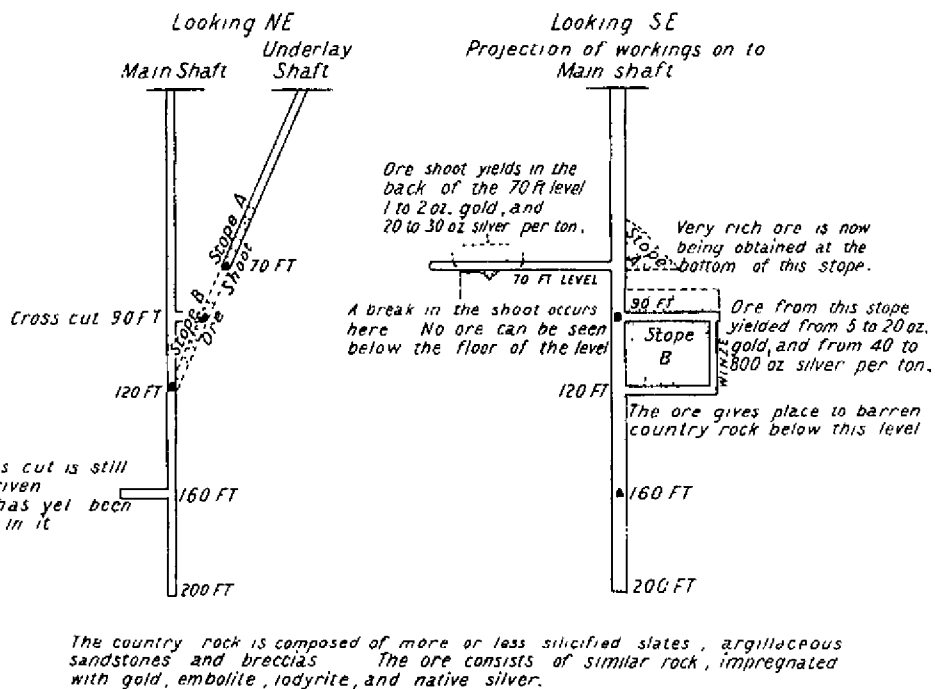
TO ACCOMPANY SECOND REPORT BY
 J. B. JAQUET, A.R.S.M., F.G.S., GEOLOGICAL SURVEYOR,
 on the Mount Drysdale Gold Field, near Cobar.

SCALE 0 20 40 60 80 FEET

Section through shafts.



Mount Billagoe Mine



(Sig 24)

Drysdale Proprietary Mine.

The company owning this mine is exploring the ground adjoining the Mount Drysdale Block upon the west. Two shafts have been sunk near the boundary of the mines, one of which has reached a depth of 110 feet, and the other 50 feet.

General Remarks concerning the Drysdale Mines.

After my previous inspection I stated that the Drysdale and Eldorado Mines were not sufficiently developed to enable me to express any definite opinion as to the extent of the ore-bodies. Since that inspection, however, fresh exploratory work has been carried out and several important facts made clear. The chief among these are as follows:—

1. The rich ore occurred in three distinct shoots, which are separated from one another by masses of barren rock, or rock containing but traces of gold and silver. One of these is situated a little south of the Eldorado Shaft, and the others accompany the No. 1 and No. 2 Drysdale Shafts respectively.

2. At a depth of 160 feet in the Drysdale Mine the country is highly charged with iron pyrites and mispickel. These minerals not only accompany the ore-bodies, but are more or less distributed through all the rocks below the zone of oxidation. It may be that the gold was originally associated in small quantities with the pyrites, and has been concentrated on the oxidation of this mineral by a process of segregation in the decomposed and porous portions of the country rock.

3. The ore-shoot accompanying the Drysdale No. 1 Shaft, hitherto by far the most productive of the three, has given out at a depth of 160 feet, when the soft bleached slates, &c., pass into a compact blue pyritous rock, and has not been met with between this depth and the bottom of the shaft. It is important to note that several breaks occurred in the shoot while it was being followed from the surface to 160 feet, and this circumstance suggests that it may be found again lower down. However, it yet remains to be seen what effect the change in country will have.

I would recommend that drives and cross-cuts be driven from the bottom of the shaft, for it is possible, in the event of the shoot making again, that it may dip either to one side or the other, when it would never be encountered in a vertical shaft.

Should ore be met with beneath the zone of oxidation, it will probably contain less gold and be more difficult to treat.

At the time of my inspection only six miners were employed in the Drysdale Mine, and these were engaged in sinking No. 1 Shaft and the winze near No. 2 Shaft. No attempt was being made to explore the upper portions of the mine.

I would suggest, having regard to the irregular character of the ore-bodies, that the most efficient and profitable method of searching for them would be by means of a series of vertical and horizontal diamond-drill bores. Such bore-holes were successfully substituted for exploratory cross-cuts at the South Broken Hill Mine, and, I believe, they have also been used in the Wentworth Gold-mine at Lucknow.

I am of opinion that further prospecting may result in patches of rich ore being found in the Drysdale and Eldorado Mines, but that the ore-bodies are too small and scattered to permit of these mines yielding for a lengthy period large supplies of gold. There is a considerable quantity of low-grade ore in sight, which might be profitably treated when a battery is erected upon the field.

Billagoe Mine.

This mine is distant about 2 miles in a south-westerly direction. The ore-body exploited by it consists of silicified slates, argillaceous sandstones, breccias and lenticular patches of quartz, impregnated with chlorobromide and iodide of silver and gold. In the lower levels of the mine patches of ore are to be seen in which the silver is present wholly as native metal. A specimen of this ore which I obtained yielded at the rate of 3 oz. of gold and 130 oz. of silver per ton.

The sketch sections which accompany this report show the relative positions of the mine workings and ore-shoots.

The main ore-shoot is about 30 feet long. It is 3 feet thick in the centre, and tapers towards each end. The ore raised from it contained from 5 to 20 oz. of gold and from 40 to 300 oz. of silver per ton. No ore was obtained in the underlay shaft between the surface and a depth of 50 feet, and the shoot has been lost sight of in the floor of the 120-foot level. It yet remains to be proved whether a break occurs in the ore-body at this level or whether it ceases there altogether. It is significant to note in connection with this question that the western cross-cut at 160 feet has been driven a distance of 22 feet without meeting with any ore.

Some very rich ore is now being raised from the bottom of the underlay shaft (stopes "A"), but a glance at the plan will show that the amount of ore remaining here unworked is not very great.

A second ore-shoot has been discovered in the 70-foot level, about 40 feet in a north-easterly direction from the underlay shaft. It is about 30 feet long and 10 inches wide, and I was informed by the Manager that it contained from 1 to 2 oz. of gold and from 20 to 30 oz. of silver per ton. This shoot has disappeared in the floor of the 70-foot level.

I have, &c.

JOHN B. JAQUET,
Geological Surveyor.

The Government Geologist.

APPENDIX 27.

Report on Auriferous Drifts on the Talbragar River.

Sir, Geological Survey Branch, Department of Mines, New South Wales, 6 August, 1895.

I have the honor to report that I have made a geological examination of the auriferous drifts in the vicinity of Talbragar River, in the Parish of Erskine, distant about 20 miles in a westerly direction from Dubbo.

The drifts are probably of Tertiary age. They are superimposed upon the Hawkesbury Sandstone and Coal Measures, and have been for the most part covered by a flow of basalt. In so far as they only occur in the vicinity of the Talbragar River, we are, perhaps, justified in assuming that they represent detritus brought down by this river during Tertiary times.

All the circumstances point, I think, to the gold having been derived from a far distant source. The component pebbles of the drifts are water-worn, and are nearly all composed of white quartz. No quartz-reefs occur in the underlying sandstones, nor has quartz *in situ*, nor auriferous rock, been found within a radius of several miles from the deposits.

The precious metal occurs in very minute scaly particles. It is, indeed, so fine that in the absence of special precautions a considerable proportion would be lost during the washing of the drift.

Some of the pebbles, more particularly those which rest immediately upon the bottom, are tightly cemented together by an infiltration of oxide of iron. The gold in these cements can only be won by treating the stone as reef-quartz and crushing it in a battery.

Upon Portion 13, Parish of Erskine, Dr. Fitzpatrick and partners have driven a tunnel upon the drift, which is here from 1 foot to 3 feet thick, for a distance of 100 feet. They have also erected a five-stamp battery for crushing the cement.

On the hill above the tunnel several shafts have been sunk through the basalt and "bottomed," at depths varying from 20 to 43 feet. From one of these shafts May, Hogan, and Party recently obtained fourteen loads of dirt, which yielded, I was informed, on washing, 2 oz. 5 dwt. of gold.

There seemed to be some doubt in the minds of the miners working on the field as to whether all the work hitherto carried out had not been upon a "false bottom." Acting upon this assumption, one shaft has been continued for a distance of 20 feet into the Hawkesbury Sandstone, without, it is scarcely necessary to add, meeting with any drift. In all sections examined by me there was but one distinct bed of gravel resting immediately upon the bed-rock. I would advise all miners to cease sinking after meeting with a compact bed of sandstone. On the whole, I do not think these drifts can be profitably worked on a large scale.

The gold is for the most part patchy as regards its mode of occurrence, and the exploitation of the rich patches is not likely to yield a profit equal in amount to the money expended in preliminary exploratory work. Again, the bottom is very uneven, and this makes the driving of levels upon the drift a costly and difficult operation.

A few miners may, perhaps, make a living by quarrying the drifts where they are exposed upon the river cliffs.

I have, &c.,

JOHN B. JAQUET,

Geological Surveyor.

The Government Geologist.

APPENDIX 28.

Report upon the Amos and Golden Dyke Mines, Tucua.

Geological Survey Branch, Department of Mines and Agriculture,

Sydney, 13 August, 1895.

Sir,

I have the honor to report that, in accordance with your instructions, I have inspected the "Amos" and "Golden Dyke" Mines, which are situated in the Parish of Meglo, County Georgiana, about 3 miles south of Tucua, upon the Tucua-Binda road.

The "Amos" Mine has been worked intermittently for a large number of years. It was formerly known as the "Lucky Hit" Mine. The formations in which the auriferous deposits occur consist of altered slates and chlorite-schists.

The gold is found in thin lenticular veins, which strike across the cleavage planes of the slates, and are seldom more than a few feet in length. The greater portion of the old workings were filled with water, and I was, in consequence, prevented from making an examination of the veins far from the surface; but I was informed by Mr. Mills, Mine Manager, that some of them had been followed downwards to a considerable depth.

The veins are composed, in the slates, of quartz, and, in the chlorite-schists of calcite, with an admixture of quartz.

The gold occurs for the most part in a massive form. It is concentrated in certain portions of the pipe-veins, and outside of the auriferous nests the stone is of little or no value. From the golden portions of the veins small quantities of exceedingly rich stone have from time to time been raised; indeed, some of the specimens contained as much gold as gangue.

The veins have been followed down to a depth of 265 feet by an underlay shaft, and from this shaft numerous levels have been driven across them. A shaft has recently been sunk upon the hillside at a point distant 260 feet in a westerly direction from the underlay shaft. From this shaft, at a depth of 203 feet, a cross-cut has been driven easterly for a distance of 75 feet. In this cross-cut chlorite-schist occurs, and ramifying through it are barren, segregated veins of calcite.

The position of the various workings is shown upon the sections accompanying this report, which is plotted from data principally supplied by Mr. H. M. Mills, Manager of the mine.

It has been suggested to me that the pipe-like veins would probably run together and form a well-defined reef below, but I am unable to concur in this opinion.

I have already stated that the vein-stone varies with the country rock, and that it consists almost entirely of calcite in the chlorite-schists. Veins of calcite are frequent concomitants of chloritic rocks, more particularly when the chlorite has been derived from amphibole or pyroxene, and I attach no special importance to the occurrence of the lime-mineral in this case.

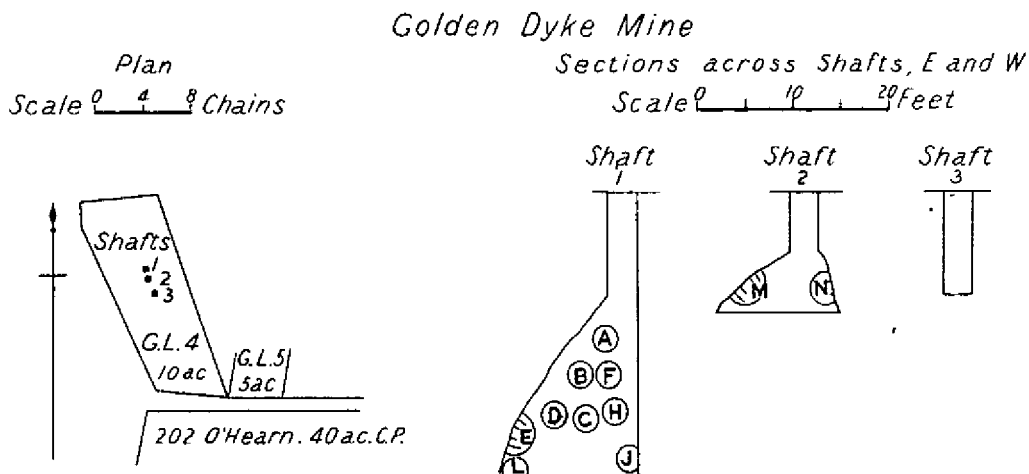
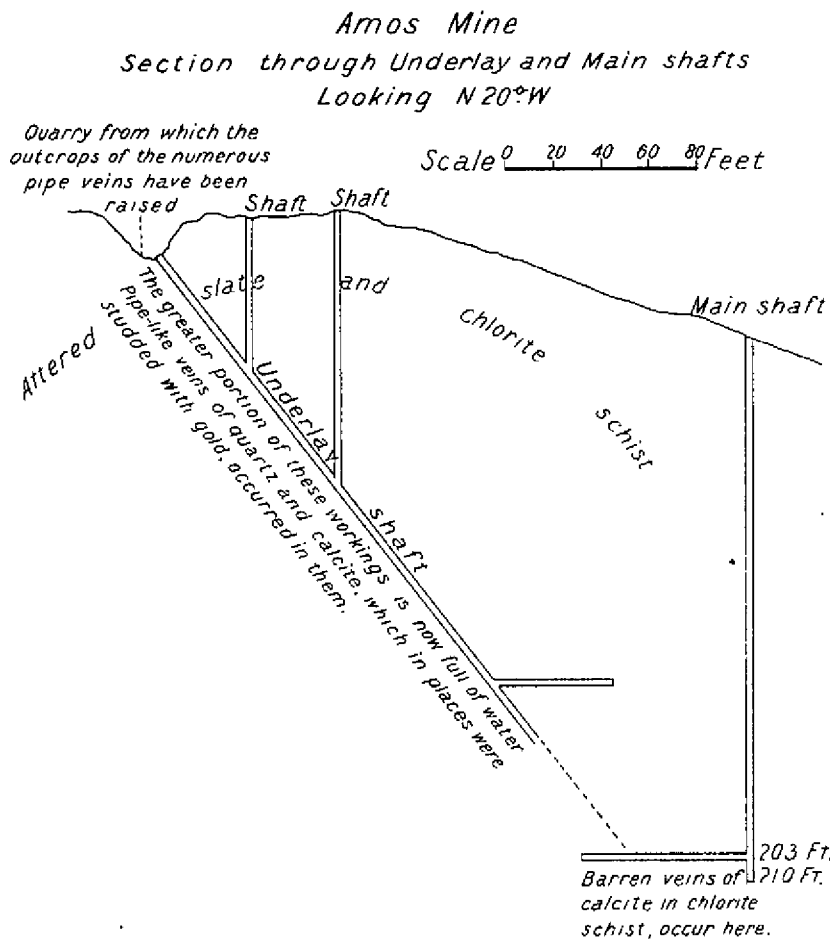
I saw but little oxide of iron in the veins, and the rich pockets of gold would seem to have been directly segregated from the country-rock, and not have resulted from a secondary segregation accompanying the oxidation of pyritous ore. In view of these facts, I see no reason why, in the event of the veins continuing downwards, they should not, as they have done near the surface, contain patches of very rich ore. On the other hand I have no reason to believe that the yield of gold will be more regular at a depth, or that the patches of auriferous stone will be richer; and it is scarcely necessary for me to add that the cost of working will continue to increase as a greater depth from the surface is reached. At the present time there would seem to be no ore exposed and available for exploitation in the mine.

The auriferous deposit known as the Golden Dyke is situated upon G.L. 4, Parish of Meglo, three-quarters of a mile from the Amos Mine in a north-westerly direction.

The formation in which the gold is found consist of slates and chlorite schist, and are identical with those found at the Amos Mine. The mode of occurrence of the gold is, however, quite different.

The

Sections
 TO ACCOMPANY REPORT BY
 J. B. JAQUET, A. R. S. M., F. G. S., GEOLOGICAL SURVEYOR,
 on the Amos and Golden Dyke Mines, s.s.e. of Tuena.
 PARISH OF MEGLO COUNTY OF GEORGIANA.



The gold-bearing stone consists of silicified slates impregnated with iron oxide. Thin veins of quartz and calcite ramify through the slate. The boundaries of the ore deposit are most irregular.

Two shafts 28 feet and 12 feet deep respectively have been sunk at a distance of 42 feet from one another, and payable gold-bearing stone has been obtained from each of them. A shaft has been started at a point distant 90 feet from No. 2 shaft, but would appear to have not yet encountered any gold-bearing stone.

From No. 1 and No. 2 shafts I took several samples and these on my return were assayed by Mr. J. C. H. Mingaye, Assayer and Analyst to the Mines Department. The sketch sections which accompany this report show approximately the place from which each sample was taken. The results of the assays were as follows:—

A.	Gold, 2 oz. 14 dwt. 10 gr. per ton.
	Silver, 6 " 12 " "
B.	Gold, 7 " 14 " "
	Silver, 3 " 6 " "
C.	} From various parts of face below A. and B.—Neither gold nor silver.
D.	
E.	
H.	
J.	
K.	} From various parts of face—Neither gold nor silver.
L.	
M.	
O.	
N.	From various parts of face—
	Gold, 15 dwt. 2 gr. per ton.
	Silver, 4 " 8 " "
P.	Specimen taken at random from ore raised from No. 2 shaft—
	Gold, 1 oz. 12 dwt. 16 gr. per ton.
	Silver, 6 " 12 " "

These assays show how irregular is the distribution of gold in the deposit.

In prospecting the ground it will be necessary for the stone encountered to be continually tested, for it is not always possible for the eye to distinguish barren rock from rich ore, and there are no walls to guide one.

It will be noticed that very little work has yet been done to prove the extent of the deposit. Several tons of ore await crushing upon the surface, and payable stone has been raised from both No. 1 and No. 2 shafts.

In so far as the auriferous rock has numerous pseudomorphs of limonite after pyrites scattered through it, the gold will probably be found associated with the latter mineral below. The pyritic ore will probably contain less gold than that raised near the surface, and it certainly will be more costly to treat.

I have, &c.,
JOHN B. JAQUET,
Geological Surveyor.

The Government Geologist.

APPENDIX 29.

Geological Report on the Berthong Estate, near Wallendbeen.

Sir, Geological Survey Branch, Department of Mines, Sydney, 22 August, 1895.

I have the honor to report that, in accordance with your instructions, I have made a geological inspection of the Berthong Estate, near Wallendbeen.

The dominant formations are Silurian slates and quartzites and granitite. The latter rock has had an intrusive origin; wherever examined it shows evidence of having been crushed, and in places it passes by insensible gradations into a granitoid gneiss. Near the head of Berthong Creek a large area of hornblende rocks occur, which over wide areas have undergone a serpentinous change. Masses of hornblende rocks are also found apparently intruding the slates.

A dyke of felsite has been intruded along the western line of junction between the hornblende and granitite.

The distribution of the various rocks is shown upon the geological sketch map accompanying this report, and I propose contributing a paper to the Records of this Survey which will contain an account of their petrological character, and the relation which they bear to one another.

Gold Deposits.

The drifts found along the banks of Berthong Creek and its tributaries contain small and not payable quantities of alluvial gold.

About twenty years ago a selector named Dwyer found some very rich specimens in a small water-course about a mile S.E. of Berthong Homestead, and subsequent prospecting led to the discovery of quartz *in situ*. Several shafts, the deepest of which is 60 feet, were sunk. The reefs exposed in these shafts are ill-defined, and some of them can be seen pinching out at a few feet below the surface.

I was shown by Mr. Dwyer a very rich specimen which he obtained several years ago from one of the veins; however the quartz now exposed in the shafts and lying upon the surface was of a barren character, and contained little or no gold. I am of opinion that the unproductive character of the veins has already been sufficiently proved, and that the circumstances do not warrant further prospecting.

Upon the western portion of the run Prothero and Party are being aided by the Government to put down a series of shafts for the purpose of proving whether an auriferous lead exists beneath some deep Post-tertiary deposits. Several deep shafts have already been bottomed but no river drift has been met with in them.

Chrome Iron Ore.

Chromite has recently been discovered upon Berthong Run, but nothing has yet been done in the way of proving the extent of the deposits. In the bed of Berthong Creek, at the spot indicated upon the accompanying map, a shallow trench 5 feet long and 2 feet broad has been cut through a mass of this mineral. Chrome ore has also been found in a shallow trench put down upon the banks of a tributary of Berthong Creek. In the vicinity of the discoveries, and over a large portion of the serpentine zone, the bed-rock is hidden by a shallow alluvial deposit, and it will be necessary for prospectors to trench in order to find the ore below.

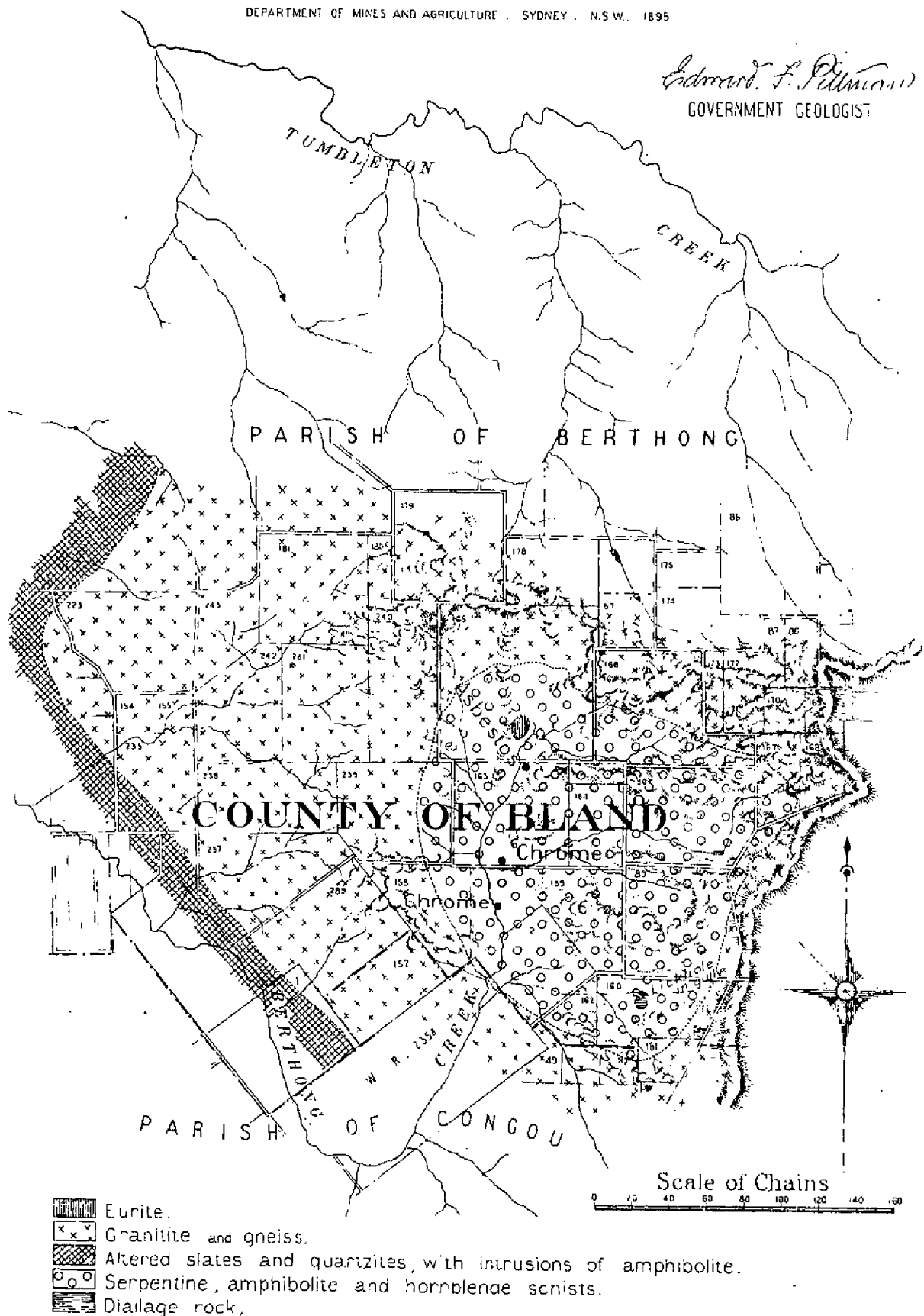
Chromite

GEOLOGICAL SKETCH MAP

To accompany report by J.B. JAQUET, A.R.S.M. F.G.S. Geological Surveyor, on the
BERTHONG ESTATE NEAR WALLENDREEN

DEPARTMENT OF MINES AND AGRICULTURE . SYDNEY . N.S.W. . 1895

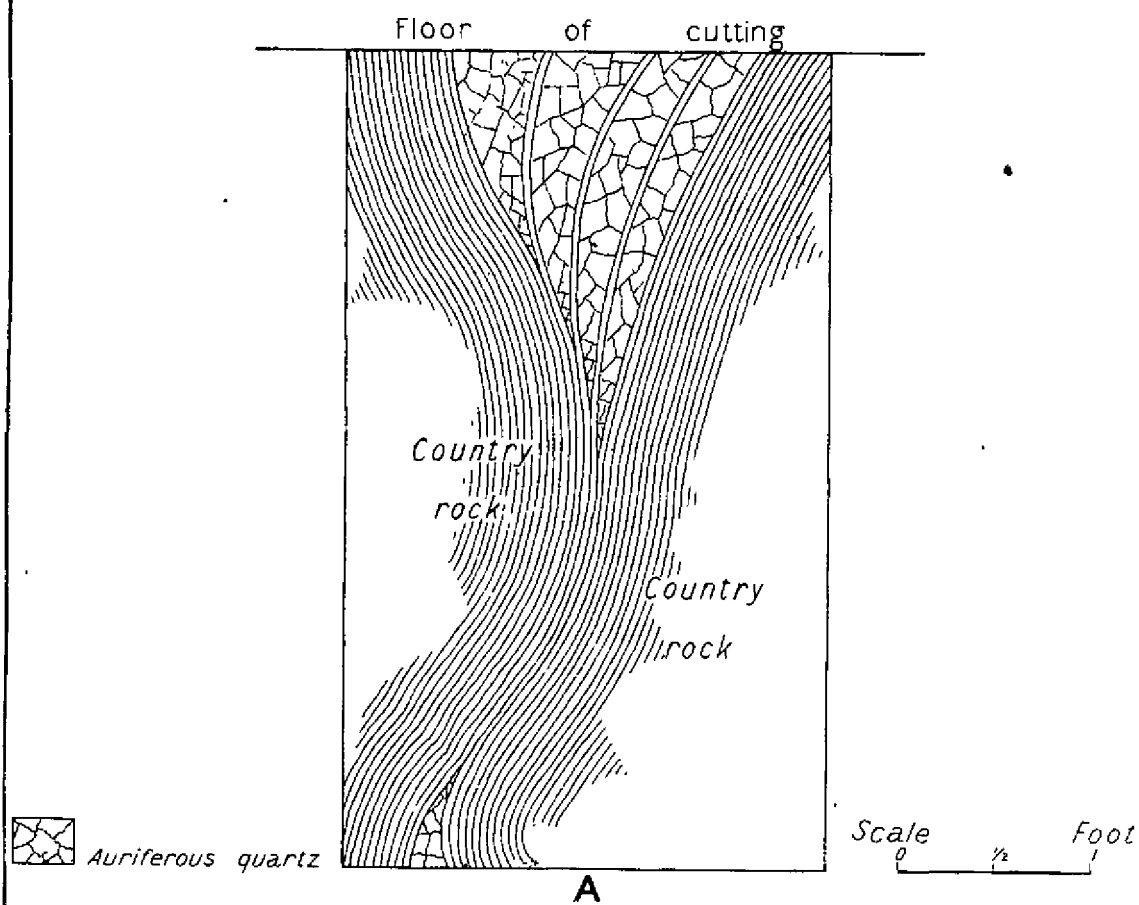
Edmund F. Pittman
 GOVERNMENT GEOLOGIST



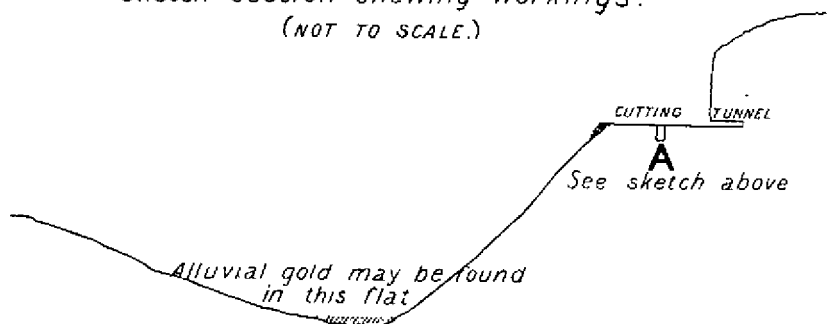
(Sig. 24)

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
 SYDNEY, NEW SOUTH WALES.

Sketch shewing mode of occurrence of auriferous quartz
 in workings on Portion 15'
 PARISH OF WALLI COUNTY OF BATHURST
 Two miles N.E. of Woodstock.



Sketch section shewing workings.
 (NOT TO SCALE.)



(Sig 24)

About 4 miles south of Yalgogrin township a lode of siliceous gossan has been proved to a depth of 90 feet by means of an inclined shaft. The ore when tested was found to contain a little gold, but no crushings in bulk have been made. A little arsenical pyrites can be seen in the stone, and it will without doubt pass into a very refractory ore at a depth.

Near the township altogether about thirty shafts have been sunk to a depth of from 30 to 100 feet. All the reefs which I examined here were closely analogous to one another. They varied in width from 3 inches to 2 feet, and are on the whole well defined. The ore in the upper levels consists of ferruginous quartz, with a little iron and arsenical pyrites; as a greater depth from the surface is reached the pyrites increases in quantity. Galena is present in some of the stone. As regards their general character the reefs closely resemble those being worked at Wyalong.

During last year 335 tons of ore were raised upon the field, which yielded on crushing 377 oz. of gold. Small parcels of stone have yielded between 2 and 3 oz. of gold per ton.

A crushing plant (Otis Mill) has been placed upon the field, and at the time of my visit it was reported that a battery was going to be erected.

I see no reason why these reefs should pinch out when followed downward, but after a certain distance from the surface has been reached (say 100 feet) the ore met with will certainly be of a most refractory character and require a special mode of treatment. I believe, in fact, that the oxidised ores now being treated in the ordinary way contain a considerable quantity of gold which will not readily amalgamate.

To the north of Yalgogrin the country consists of iron-stained Silurian slates. These slates are likely to contain both quartz reefs and deposits of auriferous ironstone, and deserve to be well prospected. Near Blairgowrie Homestead, about 30 miles north of Yalgogrin, I inspected a reef from which some very rich specimens have been obtained. It would seem, however, as seen in a shallow shaft, to have pinched out altogether at a few feet below the surface.

Upon the Monument Flats Pastoral Holding I found outliers of a horizontally bedded, vitreous-looking sandstone, which would seem to closely resemble, lithologically, some of the arenaceous rocks of the Upper Cretaceous series. Mr. Minter, of Gorman's Hill West, kindly procured for me a specimen of sandstone traversed by a vein of common opal. Further investigations may show that several outliers of cretaceous rock occur in this locality.

As one travels northward, the leucite basalt, which has been described and provisionally mapped by my late Colleague, Mr. G. A. Stonier,* is first met with a little beyond Monument Flats, where it forms a low range of hills.

Between Monument Flats and Bygaloree, I examined a section which was exposed on the banks of a creek, where the vitreous sandstones could be seen resting unconformably upon Silurian slates, while at the same time they were capped by a basalt flow.

It has been suggested by Mr. Edward Caudish and others that an auriferous lead may run under the basalt. I carefully examined the exposed edges, but in no instance did I find any evidence of ancient drift beds. It is true that old river channels, which may or may not carry gold, have been perhaps covered up and preserved by the consolidated lava; but having regard to the large area covered by the rock, and its great thickness, I think there is but little chance of success following any prospecting operations, and there are no data available which would enable one to indicate sites for shafts.

I have, &c.,

JOHN B. JAQUET,
Geological Surveyor.

The Government Geologist

APPENDIX 32.

Report on the occurrence of Platinum at Fifield

Sir, Geological Survey Branch, Department of Mines, 18 December, 1895.

I have the honor to report that I have made a geological examination of the platinum deposits at Fifield and Platina, about 26 miles N.E. of Condobolin and 54 miles N.W. of Parkes.

Platinum elsewhere in N.S.W.

Grains of platinum have not infrequently been met with in some of the auriferous drifts in the Colony. Professor Liversidge mentions a nugget weighing 268 grains as having been obtained from the bed of Wiseman's Creek, near Oberon.† It is also found associated with gold and gemstones in the sea beaches between the Richmond and Clarence Rivers,‡ and occasionally small parcels have been saved by the miners working in this locality for gold. From a scientific point of view, perhaps the most interesting occurrence is near Broken Hill. Here the metal is found in ironstone and decomposed gneiss.§ No platinum can be seen in the ore. Experiments made to determine the condition in which it is present have resulted in failure, while attempts at concentration have only been partially successful. Until the opening of the Fifield-Platina Lead, however, there had been no production of platinum upon a commercial scale in the Colony.

History of discovery at Fifield.

For the last two decades it would appear that the country around Fifield has been intermittently prospected for alluvial gold, and a little platinum must from time to time have been obtained, though there is no record of this metal being discovered previous to 1887.

In this year Mr. J. F. Connelly, who received aid from the Government to prospect the district, reported having discovered alluvial platinum and presented a sample to the Geological Museum. Nothing appears to have been done in the way of further developing the field until 1893, when Messrs. Fifield, Rand, and Party discovered rich alluvial gold near the site of the present township of Fifield.|| Upon news of the discovery becoming known a rush set in to the district, and the lead which is now being worked was found soon afterwards.

General

* Records Geol. Survey, N.S. Wales, 1893, III, Pl. 3, p. 71.

† Minerals of N.S. Wales, p. 52.

‡ Records Geol. Survey, N.S. Wales, IV., Pt. 1, p. 25.

§ Ann. Rpt. Dep. Mines and Agric., N.S. Wales, for 1892, p. 142

|| A. Jbid., for 1893, p. 63.

General Geology of district.

The sedimentary formations represented are slates of Silurian age, and fossiliferous sandstones and limestones of either Devonian or Siluro-Devonian age. Mr. W. S. Dun, Assistant Palæontologist, has identified the following forms as occurring in specimens of the latter beds which I collected and those which were given to me by Mr. C. J. Metcalfe of Fifield:—

<i>Sandstones.</i> —Rhynchonella, sp. indet.	<i>Limestone.</i> —Multiculporoid corals, 2 genera.
" allied to R. cuboides.	Rhynchonella, 2 species.
Spirifera.	Tentaculites.
Athyris.	Pleurodictyum.
Cyclonema.	
Orthoceras.	

The Silurian slates are intruded by diorite. A thin section of this rock which I examined under the microscope consisted essentially of grains of hornblende and triclinic felspar with some accessory sphene and quartz.

Near Melrose Plains homestead an auriferous reef has been discovered in the diorite and a little exploratory work carried out upon it.

The Platiniferous Lead.

The Fifield-Platina Lead runs in a north and south direction for a little over a mile. It is from 60 to 150 feet wide. The drift containing the precious metal is overlain by from 60 to 70 feet of loam with occasional bands of barren quartz drift. The platinum and gold occur in small well-waterworn grains, and are practically confined to the crevices in the bed-rock and the dirt within a few inches of the bottom. Occasional nuggets have been obtained which have weighed from a few grains up to 5 dwt.

The treatment of the Washdirt.

The washdirt is first of all puddled in machines worked by horses. During this process the soft layer of bed-rock which is broken down with the drift is pulverised and any metal which may be attached to it set free. The clean gravel is afterwards washed in ordinary sluice boxes and the gold and platinum obtained. The gold is extracted by amalgamation with mercury and crude platinum left behind. The latter realises at the present time upon the field 24s. per oz. It contains about 75 per cent. of platinum, the balance being chiefly platinoid metals and iron.

Analysis of crude platinum.

An analysis by Mr. J. C. H. Mingaye, Analyst and Assayer to the Mines Department, was as follows:—

Platinum.....	75 90 per cent.
Iridium	1 30 "
Rhodium	1 30 "
Palladium	traces.
Osmiridium.....	9 30 "
Iron	10 15 "
Copper	41 "
Gold	nil.
Lead	traces.
Siliceous matter.....	1 12 "
	99 48 "

VALUE of Wash-dirt.

No. of Claim.	Loads washed.	Yield.		Ratio of Platinum to Gold in round numbers.	Value per load.
		Platinum.	Gold.		
		oz. dwt. gr.	oz. dwt. gr.		£ s. d.
No. 4½ South	65	17 3 0	5 6 0	3 to 1	0 12 2
" 4½ "	16	5 9 12	1 11 22	3 " 1	0 15 8½
" 10 "	34	8 5 12	2 4 0	4 " 1	0 10 8
" 12 "	14	3 9 0	0 12 12	6 " 1	0 9 0
" 3 "	13	6 0 0	1 10 7	4 " 1	0 19 4
" 10 "	24	10 3 0	2 0 9	6 " 1	0 16 0
" C "	35	11 0 0	4 8 0	3 " 1	1 0 0
" 12 "	39	12 11 0	3 13 12	3 " 1	0 19 4
" 2 "	16	6 11 12	2 4 6	3 " 1	1 0 3
" 14½ "	2	1 2 6	0 6 6	4 " 1	1 4 6
" 9 "	2	0 16 6	0 5 2	3 " 1	0 19 3
" 3½ "	2	0 15 16	0 5 0	3 " 1	0 18 9
" 12½ "	2	1 12 9	0 9 21	3 " 1	1 17 10½
" 14½ "	6	3 8 12	0 13 12	6 " 1	1 2 1½
" 13 "	4	1 8 3	0 7 9	4 " 1	0 15 4
" 14 "	4	2 13 6	0 11 12	5 " 1	1 6 3

Mr. C. J. Metcalfe has kindly furnished me with the above returns, obtained on treating parcels of dirt from various claims upon the lead.

It will be seen that the quantity of platinum per load varies from 5 to 12 dwt., and the quantity of gold from 1 to 3 dwt., while the total value of the precious metals per load varies from 9s. to 37s.

Amongst the returns will be noticed several trial lots of two loads each from large dumps of dirt, which have yet to be treated. These lots were, in most instances, probably picked samples, and have given a yield in excess of that which will be obtained from the dumps as a whole.

Origin

Origin of the Platinum.

Only three well-authenticated instances of platinum, occurring *in situ*, would seem to be on record. At Sunbury, in Canada, it occurs chemically combined with arsenic.* At Broken Hill, as I have previously mentioned, finely disseminated through ironstone and decomposed gneiss; and Brazil, in veins (?) associated with gold.†

In Russia, where alluvial platinum deposits of enormous extent are to be found, the source of the metal has never been discovered, and is still a matter for conjecture; so a considerable amount of scientific interest is attached to the genesis of platinum in all newly-discovered deposits.

In the vicinity of Fifield and Platina, at an elevation of at least 100 feet above the lead which is now being exploited, outliers from a series of horizontally bedded conglomerates or cemented drifts and shales occur. The conglomerates are composed of rounded or sub-angular quartz pebbles, tightly cemented together by an infiltration of iron oxides. The shales are highly ferruginous and much indurated.

In the absence of fossils, I am unable to speak definitely as to the geological age of these beds; however, having regard to their general character, and the amount of denudation that has taken place since their deposition, I am inclined to think that they are of Tertiary age, or even older.

Upon the top of Jack's Look-out, a low hill which is distant about 2 miles from Fifield in a south-easterly direction, a good section of the beds is to be seen. Here they have been found to contain water-worn grains of gold and platinum, and some prospecting work has been carried out upon them. As is generally the case with widely distributed auriferous drifts, the precious metals occurred in patches, and not in defined "runs." This fact, and the great expense of treating the hard cement, discouraged the miners, and all work has now been abandoned in this locality.

I obtained from the Fifield-Platina lead, boulders of cement which were indistinguishable, lithologically, from portions of the beds upon Jack's Look-out, and I am of opinion that the precious metals in the lead were originally contained in those portions of the conglomerate and shale beds which have been denuded away. I am suggesting, in fact, that the older beds, with their scattered patches of platinum and gold, have been disintegrated and ground-slucied by Nature, and that the deposit now being worked represents the resultant concentrates. If we admit this hypothesis, then the ultimate source of the metals is still an open question. It is possible that the components of the Tertiary (?) beds may have been derived from a source far removed from Fifield.

It was suggested to me that the platinum might have been derived from a reef or reefs in the vicinity of the field. A consideration of the general mode of occurrence of platinum would perhaps cause one to discredit such a theory, and the ascertained facts seem to me to disprove it altogether. The dividing line of the Bogan and Lachlan River watersheds passes through Fifield, and the platinum deposits have been followed up one side of the ridge and down the other; so one or more of the supposititious reefs should be located upon the highest ground; yet, notwithstanding all the sinking and driving that has been carried out, no reefs had been found—moreover, the grains of metal appear to be uniformly waterworn.

General Remarks.

Dry seasons have prevailed since the discovery of the field, and its development has been much retarded in consequence. The washing of dirt has often been completely suspended for many months at a time on account of the shortage of water. At the present time 7,000 loads of washdirt are dumped around the various shafts awaiting treatment.

About 1,200 oz. of crude platinum have already been sent away from the field, and, including the deposits in the immediate vicinity of Fifield, and outside the Fifield-Platina Lead proper, the gold won has totalled about 1,800 oz.

A few of the parties have already worked out all the "pay-dirt" from their claims, while others have a year or eighteen months' work in sight.

A consideration of the circumstances connected with the origin of the platinum, and the fact that it has been found in small quantities over a wide area of country, has made me of opinion that other platiniferous leads are to be found in places under the flats in the district. Prospecting for such leads, however, is a very tedious operation, since the flats are for the most part of great extent, and there is nothing upon the surface to indicate the path of the gutters below.

Small quantities of drift yielding a payable quantity of platinum, associated with gold and tin (cassiterite), have been mined about 10 miles north-east of Fifield, near the village of Burra Burra.

It is possible, though scarcely probable, that there may be a considerable rise in the price of platinum. The price of the refined metal per oz. has during recent years fluctuated from a minimum of 25s. to a maximum of 60s. The latter price was probably due to the market having been controlled for a time by "a ring." I have, however, reasons to believe that the deposits remaining unworked in Russia—the country which produces more than three-fourths of the World's annual supply—are of enormous extent, and that the output could be largely increased if the necessary demand for the commodity arose.

Though no very rich ground has been found at Fifield yet employment has been found for from 150 to 200 men at a time when a field for their labour was sorely needed. Moreover, with the opening up of the field a new industry has been created, and an addition made to the long and varied list of mineral products exported from New South Wales.

I have, &c.,

JOHN B. JAQUET,
Geological Surveyor.

* Am. Jour. of Eng. Sci., 1880, xxxvii, p. 67.

† Geol. and Phys. Geog. of Brazil, Prof. Hart.

Progress Report of the Curator and Mineralogist.

Sir,

Mining and Geological Museum, 15 February, 1896.

I have the honor to submit the following report of work done during the past year:—

The number of minerals and ores submitted for examination has been very large. Of these, 4,816 were sent on to the Assayer to be assayed or analysed, as compared with 3,806 last year, representing an increase of 26½ per cent. This total has only once been exceeded (1888), and then but slightly. The removal to Pitt-street, although beneficial as regards suitability for carrying on the office work, has rendered it more difficult to superintend the Museum, as the distance between the two buildings is nearly a mile, and has also been followed by a distinct falling off in the number of miners and others calling personally for information.

Among the specimens of possible commercial importance received have been cinnabar ore from the Clarence River district, and massive antimonial and arsenical silver ores from near Armidale.

Very many inquiries have been made as to the occurrence and uses of tripolite (*kiesolguhr*), and it is now being introduced for use as an insulator for refrigerating chambers, boiler covering, &c.

The occurrence in New South Wales of antimonial silver ores in quantity, and of interesting igneous rocks, such as norites and peridotites, has been referred to in the Records of the Geological Survey, to which four papers have been contributed during the year.

Early in the year a burglary took place at the Museum. Nothing has been heard of the missing specimens, many of which were of considerable value. The specimens displayed in the show-cases are being relabelled and supplied with suitable headings as rapidly as the pressure of routine duties permits.

There are now on view some 9,000 separate exhibits, and a considerable number of rock and other specimens are arranged for ready reference in the stores. The collection of New South Wales gold ores alone numbers about 600 specimens. The collections are arranged so as to afford as much information as possible, and the assistants and caretaker are assiduous in their endeavours to assist visitors. During the year donations were received from seventy-six persons, and much valuable help rendered by the geological surveyors and other officers of the Department. In the course of another year or so, the work of relabelling will perhaps be sufficiently advanced to justify the preparation of a handbook that shall serve as a guide to the Museum and, it is hoped, be also of educational value.

During the year the section cutter, Mr. Murton, has prepared some hundreds of fossils and rocks for microscopical examination. Mr. Giding, the lapidary, has been occupied more particularly in polishing coral-marbles. He reported very favourably on a white marble from Mudgee. Mr. Harper's aid is invaluable in the Museum; upon him the work of preparing collections of minerals for various institutions has mainly fallen. The very responsible clerical work connected with the assay returns has been most efficiently performed, as heretofore, by Mr. Morrison, who also undertakes some of the blow-pipe tests of samples submitted. Mr. Dobson has continued to devote himself energetically to both office and museum work as required.

As Appendices will be found a list of the persons to whom the Museum is indebted for donations, and of the institutions to which collections have been sent during the year.

I have, &c.,

GEORGE W. CARD.

The Government Geologist.

DONATIONS to the Mining and Geological Museum.

Donor.	Donation
Adams, Mrs. C.	Crystallised mispickel.
Allen, G. K.	Quartz showing gold (several specimens).
Appleton, —	Gold in ironstone.
Armitage, C. C.	Prepared graphite from Ceylon.
Ashton, J. (M.P.)	Dendritic markings.
Australian Drug Company	Tripolite.
Baker, E. and S. R.	Silver ores from Rockvale, Armidale, comprising native silver, pyrrargyrite, horn silver, and stephanite.
Bakewell, Bros.	Collection of clays and ware.
Bensusan, S. L.	Native silver and crystallised galena, elaterite, auriferous bismuth-bearing pistomesite.
Bensusan, A. J.	Mountain leather; auriferous wollastonite garnet rock.
Brown, F. B.	Photographs of the Clyde Ore-smelting Works; gold quartz (two specimens).
Buckley, R.	Stilbite.
Butler, C.	Tourmaline in quartz.
Carruthers, Hon. J. H.	Gold quartz; auriferous pyritous quartz.
Campbell, W. G.	Gold and mispickel in milky quartz.
Chapman, C. W.	Stolzite; phosphate of lead; massive carbonate of lead; carbonate of iron and fahlerz.
Clarke, —	Auriferous pyritous quartz.
Cokehill, T., and M. Constable	Chromite.
Collins, J. H.	Auriferous quartz and country rock at Hill End.
Constable, M.	Samples of chromite.
Copeland, H. (M.P.)	Ores of cinnabar and associated rock from New Caledonia.
Curran, Rev. J. M.	Slate containing selenium.
Darley, Cecil	Limestone and porphyry.
Dodd, J. M.	Gold in slate.
Dun, W. S.	Dyke rock from Long Reef.
Engelen, J. B.	Dolomite.
Evans, —	China clay.
Flannery, M.	Ferruginous quartz and ironstone showing gold.
Fletcher, H.	Galena.
Gilding, George	Polished tablets of Devonshire marbles.
Granstedt, S. H.	Gold in calcite and schist.
Griffiths, G. M.	Rich gold-bearing ironstone.
Grubb, T.	Auriferous magnetic pyrites.

Donor.	Donation.
Hamilton, J.	Ironstained quartz showing gold freely.
Hart, H.	Magnesia alum.
Halgo, H. & Co.	Cobalt ore.
Head, E. A.	Native copper and associated rocks from the Dottswood mine, Townsville.
Hogg, D.	Various specimens from the Murchison gold-field.
Jones, T. (M.P.)	Gold in slate.
Joseph, A. J.	Three photos. of diatoms.
Joubert, C. J.	Turquoise.
Kershaw and party	Free gold in arsenical pyrites.
Lawrence, W.	Auriferous pyritous quartz.
Leoni, N.	" "
Lippman, W. O. II.	Auriferous quartz with veins of mispickel.
Longworth, W.	A series of specimens illustrating the treatment of copper ores at Cobar.
Lorenzen, C.	Auriferous pyritous quartz.
Martyn, T. II.	Auriferous quartz in chloritic schist.
Macdonald, P. Y.	Magnesite.
Muir, B.	Ironstone showing free gold.
Murrell, C. G.	Platinum from Russia.
Montgomery, A.	Blue dolomite from Tasmania.
M'Glew, C. S.	Psilomelane; iron pyrites.
M'Alister, S. W.	Asbestos.
M'Auley, A.	Magnesite, &c.
O'Shanghnessy, J.	Wolfram in quartz.
O'Connor, J.	Scheelite.
Power, F. D.	Pisolite from Carlsbad; hyalite, and other minerals.
Robinson, J.	Auriferous ferruginous quartz.
Rodgers, Captain	Diamond-bearing washdirt.
Rienits, H. G.	Wollastonite; wollastonite with garnets; rocks from the Cox River.
Scott, D.	Auriferous quartz.
Smith, G.	Cerussite.
Smart, T.	A specimen of flint glass manufactured from Surry Hills sand.
Stokes, H. G.	A series of silver ores from different levels in the Silver Spur mine, Texas, Queensland.
Tinms and party	Ferruginous lode stuff showing gold freely.
Thorburn, R. T.	Ore showing free gold
The Caledonian G.M. Coy., Yalwal..	A block of richly auriferous stone.
Thorpe, A. A.	Carbonaceous clay.
Tozer, W.	Quartz showing free gold.
Vessey, G.	Free gold in quartz from New Guinea.
Varley, G. II.	Cinnabar from Yulgilbar.
Waller, J.	Kauri gum; pebbles from the gizzard of the moa.
Walters, —	Brown iron ore.
Walker, J. S.	Wire gold; auriferous stone.
Wills, F. C.	Free gold in quartz.

INSTITUTIONS to which Collections of Minerals have been sent during the year:—

Albury, Industrial Museum.	San Francisco, State Museum.
Bendigo, School of Mines.	Sydney, Olpherts, A. J.
Bourke-street Sunday School.	Sydney, University.
England, The Marquis of Salisbury.	Sydney, The Honorable the Minister for Mines.
Greta, School of Arts.	Sofala, Warden's Office.
Lambton, Mechanics' Institute.	Tambaramba, Public School.
Nundle, Warden's Office.	Wyalong, School of Arts.
North Sydney, Stoddart, W.	Wanganui (N.Z.), Public Museum.
Nairn Museum, Scotland.	Waverley House, Waverley, Sisters of the Church.

Progress Report by Mr. J. C. H. Mingay, F.C.S., Analyst and Assayer.

Sir, Department of Mines, Geological Survey Branch, Laboratory, Sydney, 18 February, 1896.

I have the honor to furnish you with the following progress report of work performed in the Chemical Laboratory during the year 1895:—4,826 numbered samples were received for assay and analysis; 145 quantitative and qualitative analyses made, and a large number of reports given of various examinations of artesian, mine waters, boiler incrustations, retorted amalgam, &c. The total number of assays, exclusive of those made for gold and silver, are 676.

The following figures show the large increase of work received in the laboratory since the year 1883:—

Year 1883	242 samples.	Year 1890	3,323 samples.
" 1884	664 "	" 1891	4,082 "
" 1885	1,428 "	" 1892	3,570 "
" 1886	1,807 "	" 1893	3,015 "
" 1887	2,222 "	" 1894	3,816 "
" 1888	5,245 "	" 1895	4,826 "
" 1889	3,287 "		

The following are some of the assays made:—

Antimony	24	Mercury	23
Bismuth	10	Nickel	4
Chrome	148	Iron	20
Cobalt	8	Platinum	24
Copper	137	Tin	85
Lead	32	Tungstic Acid	14
Manganese	40	Zinc	8

The following analyses were made of waters :—

(1.)	Water from Pera artesian bore.
(2.)	" Dolmorecé Well bore, No. 1.
(3.)	" " " No. 2.
(4.)	" " " No. 3.
(5.)	" " " No. 4.
(6.)	" " " No. 5.
(7.)	" Boatman's artesian bore.
(8.)	" Poisson Point bore.
(9.)	" Dingle Ridge bore.
(10.)	" Gaylong Butter Factory.
(11.)	" Bancnyan bore.
(12.)	" Dungulen Run, 12 miles N. of Walgett, No. 1.
(13.)	" " " " " No. 2.
(14.)	" well at Condobolin.
(15.)	" Wagden's artesian bore
(16.)	" Gidgea Camp bore.
(17.)	" Clifton artesian bore.
(18.)	" Barmedman Battery, near Temora.
(19.)	" a shaft at Wynlong.
(20.)	" Moree artesian bore.
(21.)	" dam at Garangula.
(22.)	" shaft at 150-feet level, Mt. Allen Gold Mine.
(23.)	" Osaca artesian bore.
(24.)	" Currabulla artesian bore.
(25.)	" Mulgarry "
(26.)	" Wanaaring "

Several analyses were made of boiler incrustations and mine waters, with a view of chemical treatment as a means of rendering their action less corrosive on the boilers and tubes.

Eight analyses were made for the Government Printing Office of samples of stereotype metals, also two analyses of a powder, marked "Dr. Letterby's Disinfecting Powder," and a pink fluid, marked "Sanitary Disinfecting and Purifying Fluid," and reports given as to their value for that purpose.

A sample of concentrated beach sand from Shellharbour, on the South Coast, on examination was found to be rich in tin, platinum, and platinoid metals. On assay the concentrates yielded:—

Metallic tin	49 10 per cent.
Fine gold	1 oz. 15 dwt. 22 gr. per ton of concentrates.
Platinum	30 " 10 " 18 " " " "

A few ounces of iridosmine and other platinoid metals are present.

The gold had been extracted by amalgamation.

The retorted amalgam yielded :—

In 1,000 parts.	
Gold	691.4
Silver	43.4
Base metals	265.2
<hr/>	
1000.0	

The base metals consisted largely of copper and a very small amount of lead. Mixed with the metal is a fair amount of heavy concentrates.

The occurrence of gold, tin, and platinum in the beach sands of Shellharbour is interesting, and suggests the possibility of the beach sands from the Queensland border to the Victorian boundary containing these metals in small quantities. This is, I believe, the first recorded instance of these metals being found so near Sydney in the beach sands. Professor Iversidge reports platinum to occur with gold in the Shoalhaven River, county Dampier. The occurrence is recorded of the presence of cobalt in a sample of arsenical pyrites from the Shoalhaven district. The sample on assay yielded:—

Metallic cobalt	9.15 per cent.
" nickel	66 " "

The mineral is very similar in appearance to that obtained from Careoar.

A large number of fire-clays, shales, &c., were examined and practical tests made, with a view of ascertaining their suitability for the manufacture of fire-bricks, porcelains, cement, &c. Owing to the large deposits of chrome iron ore being found at Gundagai and other districts, some 148 samples were received for assay.

The work received this year has been exceptionally heavy, and to perform it in a satisfactory and business-like manner has taxed the capabilities of the staff to their utmost.

It is with regret that I record the decease of the late Mr. C. Hildebrant, junior assistant, who had been connected with the laboratory since it started in 1887. Mr. Hildebrant had qualified himself so as to be able to undertake a large amount of the wet assay work and part of the analyses in hand, the bulk of which since his decease now falls on the assistant and myself. Mr. E. J. Dolan was appointed to the vacant position, the previous office held by him not being filled up at present.

In concluding my report I have to thank the assistant analyst (Mr. H. P. White), also Messrs. Neilson, Fletcher, and others, for the satisfactory and efficient manner in which they have carried out the work entrusted to them during the year.

I have, &c.,

JOHN C. H. MINGAYE,
Analyst and Assayer.

The Government Geologist.

Progress Report by W. S. Leigh, Superintendent of Caves, for the year 1895.

Sir, Department of Mines and Agriculture, Geological Survey Branch, 11 February, 1896.

I have the honor to submit the following progress report on the Caves for the year 1895:—

During the year all the caves, with the exception of Bendithera, have been inspected in connection with their general supervision and improvement works.

With the exception of one or two small openings in the Slattery Cave at Jenolan, and the Wollondilly Cave at Wombeyan, which, when made accessible, may be found to lead to extensive chambers, no new discoveries of importance have been made.

It was intended to explore the southern portion of the limestone on the Rosebrook Estate, near Cooma, the general opinion being that on enlarging and exploring some of the crevices in same, good caves would be met with. The carrying out of this, however, has been held over pending a transfer of the land, the Government having the option of acquiring same by an exchange.

The total amount collected for the use of the magnesium light was £161 19s. 8d., and the expenditure in connection therewith as follows:—Purchase of magnesium wire, £119 7s. 6d.; repairs to lamps, &c., £2 2s. 6d.; total, £121 10s.—leaving a profit for the year of £40 9s. 8d.

The total number of visitors who signed the books at the different caves, inclusive of those to the Kanangra walls, near Jenolan, was 5,115.

Following are particulars showing number of visitors, improvements, &c., at each of the caves for the year 1895:—

Jenolan Caves.

Number of visitors, 988. A number of visitors who did not take quarters at "Cave House," omitted to sign the register, and are not included in this return. In March last, as previously reported, the whole of the old accommodation house, including the first and second class dining-rooms, sitting-room, billiard room and table, twelve bed-rooms, kitchen, pantry, &c., the property of Mr. J. Wilson, keeper, were completely destroyed by fire. Visitors were somewhat inconvenienced thereby, but not to such an extent as might have been expected. Quarters in the new building, usually reserved for visitors alone, had to be set apart for Mr. Wilson's family and servants. Fortunately, there is another place of accommodation (Wallace's) within easy distance, which was taken advantage of by a number of visitors, and, consequently, it has been well patronised since the fire. I may mention that Mr. Wilson and family suffered to a large extent, owing to the loss of all their personal effects. The buildings, but not the contents, were insured. It has been decided to resume the remaining buildings, and erect a new dining-room, kitchen, &c., and let the whole by tender on a ten years' lease.

The Department of Public Works has commenced operations in connection with the extension of the Mount Victoria Road through the Grand Arch. (See Appendix 1.)

The necessary ironwork having been forwarded, two men have been engaged temporarily to further proceed with the work of improving and opening up the Slattery Cave, good progress in which was made last year; but operations had then to be suspended on account of the shortness of funds.

Wombeyan Caves.

Number of visitors, 308. Two men have been engaged temporarily to carry out certain necessary improvements in the Wollondilly and Figtree Caves. This work should be completed in about four weeks. The accommodation buildings have been repainted and otherwise improved inside and out.

Yarrangobilly Caves.

Number of visitors, 458. It is with regret that I have to record the death of the late keeper, Mr. J. Murray, the result of an accident met with on the 18th October. Mr. Murray had been in the Service about eight years, and always took great pride in his work, especially so in regard to the proper preservation of the caves under his charge, and cleanliness as regards the accommodation house. The keepership, thus rendered vacant, was first offered to two of the senior guides at Jenolan in turn, but was declined by each. It was then offered to, and accepted by, Mr. H. Bradley, the acting keeper, whose appointment dates from the 1st of January, 1896.

Wellington Caves.

Number of visitors, 1,850. The necessary ironwork has been forwarded for fencing in the "Altar" in the main cave, and the erection of a handrail down the steps at entrance of cave. Several cases of fossil bones, unearthed by the keeper, have been received by the Department.

Abercrombie Caves and Waterfall.

Number of visitors, 1,070. Tracks have been cut, and handrails, &c., erected at certain dangerous places in the main cave. The Department of Public Works has improved the branch road to the caves, which was previously in rather a dangerous state.

Bungonia Caves.

Number of visitors, 302. No further improvements were carried out here, but it has been decided to build a shelter-shed for the use of visitors.

Bendithera Caves.

Number of visitors, 79.

I have, &c.,

W. S. LEIGH,

Superintendent of Caves.

APPENDIX I.

Sir,

Geological Survey Branch, 4 December, 1895.

I have the honor to report that operations in connection with the opening of a road through the Grand Arch, Jenolan Caves, to connect the Mount Victoria and Oberon Roads, will be commenced by the Department of Public Works within a fortnight.

The undertaking, for which a special vote of £1,500 was granted, has been entrusted to Mr. Brownrigg, Resident Engineer, Lithgow, whom I accompanied in laying out the work. Commencing at the "Turntable," the present terminus, as far as vehicular traffic is concerned, of the Mount Victoria Road, the new road will follow the course of the existing bridle-track for a distance of 9 chains, which section will be 16 feet wide and fenced on the creek side. From this point, M'Ewan's and Cave Creeks, which form a junction here, will be spanned by a bridge, which, including approaches, will be over 80 feet in length, thus bringing the road to the mouth of the Grand Arch, eastern end. Thence the present track will be followed for a distance of about 250 feet under the archway, beyond which, on account of the confined space, it will be necessary to follow the course of the creek for about 200 feet, the road being carried 3 feet above the bed of same by iron girders and buckled plates in the form of a long culvert. In order to obtain the necessary width on the latter section a considerable amount of overhanging rock will have to be dislodged.

From this point, *i.e.*, the end of the culvert, the road will rejoin the present track, and, emerging from the archway at the western end, connect with the Oberon Road opposite the plantation, 150 feet beyond the culvert. The natural features of the archway and surroundings will be interfered with as little as possible, and it has been arranged to carry out that portion of the work under the arch without the use of powder. When this work is completed visitors from the mountains will be landed at the accommodation house, and thus not put to the inconvenience of having to walk a quarter of a mile to and from the coach as at present. It will also prove a great boon to the district people.

I have, &c.,

W. S. LETGII,

Superintendent of Caves.

Annual Report of the Assistant Palæontologist and Librarian for the Year 1895.

Sir,

Geological Survey, Department of Mines and Agriculture, 6 January, 1896.

I have the honor to submit to you the following summary of the Palæontological work and work connected with the Library performed by myself during the past year:—

Records and Memoirs.—Volume IV, Parts 3 and 4 of the Records have been published, and Vol. 5 Part 1, is almost ready for the Press. Of the Memoirs, Palæontology, VIII, Part 3, "Contributions to a Catalogue of Works, Reports, and Papers on the Anthropology, Ethnology, and Geological History of the Australian and Tasmanian Aborigines, Part 3," by Mr. R. Etheridge, Junr., Honorary Consulting Palæontologist; and Palæontology No. IX, "The Fossil Fishes of the Talbragar Beds (Jurassic?)" by Mr. A. Smith Woodward, F.L.S., &c. of the British Museum, have been published.

Miscellaneous Determinations.—The number of fossils submitted for determination has not been very great, but some which are of most interest are here given. I have to acknowledge the courtesy of Mr. R. Etheridge, Honorary Consulting Palæontologist, in giving me advice in many of the determinations:—

1. Siluro-Devonian Fossils from Wellington Caves, collected by Mr. J. Sibbald, Keeper of the Caves, including *Heliolites*, *Syringopora*, *Favosites* (2 species), *Pachypora*, *Tryplasma wellingtonensis*, Eth. fil.; Dendroid Stromatoporoid, allied to *Stromatopora* or *Idiostroma*; Crinoid Stems. *Rhynchonella Wilsoni*, Sby.; *Rhynchonella*, sp.; *Atrypa*, *Cyclonema*, *Worthenia*, *Loxonema*, *Bellerophon et convolutus*, De Kon.
2. Lower Mesozoic Plants from half a mile west of Warialda, collected by Mr. Geological Surveyor Stonier:—*Phyllopteris*, *Alethopteris australis*, Morr.; *Alethopteris* sp.; *Brachyphyllum*.
3. Carboniferous Fossils from three miles south-east of Slaughter-house Creek Homestead, collected by Mr. Geological Surveyor Stonier:—*Spirifera convoluta* (?); *Spirifera*, *Strophomena*, *Fenestella*, Crinoid stems. From 2 miles south of Slaughter-house Creek Homestead, comprising *Diphyphyllum*, *Syringopora*, *Cyathophyllum*, *Zaphrentis*. This lot of fossils is of interest, as, together with the stratigraphical relations of the beds yielding these two lots of fossils as determined by Mr. Stonier, it indicates the occurrence of *Diphyphyllum* and *Syringopora* in Australian Carboniferous rocks.
4. Post-Tertiary Bones from Bearbung, Gilgandra, submitted by Mr. W. L. R. Gipps, comprising:—*Diprotodon australis*, Owen; molar tooth, portion of left upper incisor, and right lower third molar.
5. Jurassic (?) Plants, collected by yourself at Boyce's Selection, Talbragar River:—*Teniopteris Daintreei*, M'Coy; *Thinnfeldia odontopteroides*, Morris; *Thinnfeldia*, sp., *Podozamites lancoletus*, Lindl. and Hutton; *Uxites cf. planus*, Feistm.
6. From a lenticular mass of red shale in Hawkesbury Sandstone, 3 miles south-east of Cookabutta Mountain, Talbragar River:—*Teniopteris* (?), *Alethopteris australis*, Morr.; *Thinnfeldia odontopteroides*, Morr.; *Thinnfeldia*, sp., *Phyllopteris Keistmanteli*, Eth. fil. (?); *Sphenopteris*, *Baicra*, or allied Coniferous plant.
7. Permo-Carboniferous Fossils, submitted for determination by the Technological Museum:—From (a) Jamberoo—*Martiniopsis subradiata*, G. Sby., and var.; *Spirifera vesperitilio* G. Sby.; *Productus brachythærus*, G. Sby.; *Spirifera duodecimcostata*, M'Coy, var.; *Spirifera Clarkei*, De Kon. (b) From Bundanoon—Crinoid fragments, distorted calyx of *Phialocrinus*, *Fenestella*, *Protoretocera ampla*, Lonsd.; *Dielasma saccula*, Mart.; *Productus brachythærus*, G. Sby.; *Productus*, sp., *Spirifera duodecimcostata*, M'Coy; *Spirifera vesperitilio*, G. Sby.; *Spirifera*, sp., *Aviculopecten*, two species; *Chanomya* (?) *Maonia carinata*, Morris; *Maonia*, sp., *Platyschisma*.

8. Carboniferous Fossils, from Parish Eumur, County Darling, collected by Mr. Geological Surveyor Stonier. The fossils are badly preserved and distorted, but serve to prove that the containing beds are Carboniferous:—Crinoid stems, *Fenestella*, *Polypora* or *Phyllopora*, *Rhombopora* (?), *Phillipsia* (pygidium of a new Australian species), *Spirifera*, *Syringothyris*, cf. *cuspidata*, Martin; *Strophomena* (*Leptana*) cf. *analoga*, Phill.; *Orthis resupinata*, Martin; *Productus*, several species.
9. *Taniopteris Daintreei*, M'Coy, from Terabile Creek, submitted by Mr. W. L. R. Gipps.
10. Upper Devonian Fossils, from Currowan Creek, Braidwood district, collected by Mr. Galway, Warden's Clerk, and submitted by Mr. Geological Surveyor Jaquet:—*Rhynchonella pleurodon*, Phill.; *Spirifera disjuncta*, Sby.
11. Carboniferous Fossils from Rocky Creek, County Murchison, collected by yourself:—*Productus*, *Spirifera*, *Orthis australis*, M'Coy; *Rhynchonella*, *Bellerophon*, *Macrocheilus* (?) *Loxonema*, *Enomphalus*, Pteropod crinoid stems.
12. Lower Mesozoic Plants, from a well sunk 8 miles east of Boggy Creek, Narrabri to Moree Road, collected by yourself.—*Taniopteris Daintreei*, M'Coy, *T.* (*Oleandridium*) *Carruthersi*, Ten. Woods, *Baiera*.
13. Carboniferous Fossils, from Gresford, forwarded for determination by Mr. H. G. Rienits:—*Lepidodendron*, *Zaphrentis Culleni*, Eth. fil.; *Zaphrentis*, sp., crinoid stems, crinoid, probably one of the Actinocrinidae, *Griffithides*; *Phillipsia* (probably a new Australian species), *Fenestella*, *Orbiculoidea* (*Discina*) *nitida*, Phill.; *Orthis resupinata*, Mart.; *Athyris*, showing lamellar fringe, *Orthoteles crenistria*, Phill.; *Aviculopecten*, various undetermined Pelecypoda.
14. Permo-Carboniferous Fossils in limestone and silicified, from Parish Panton, County Dudley, collected by Mr. Geological Surveyor Carne:—Crinoid stems and plates, *Fenestella internata*, Lonsd.; *Protorectopora ampla*, Lonsd.; *Spirifera vespertilio*, G. Sby.; *Spirifera tasmaniensis*, Morr.; *Martiniopsis subradiata*, G. Sby.; *Productus*, *Deltopecten illawarrensis*, Morr.
15. Fossils from the Fifield district, submitted by Mr. Geological Surveyor Jaquet (*vide p.*):—(a) Siluro-Devonian Limestone, from 12 miles from Fifield, on Fifield to Trundle Road—*Rhynchonella*, allied to *R. cuboides*, Sby.; *Rhynchonella*, sp., *Spirifera*, *Athyris* (?), *Cyclonema* (?), *Orthoceras*. (b) From 9 miles from Fifield, on the same road, consisting of very indistinct casts—Monticuliporoid Corals, *Pleurodictyum*, *Tentaculites*.
16. Fossils from Yarrangobilly, submitted by Mr. W. S. Leigh:—*Pentamerus Knightii*, Sby.; *Cyclonema*, *Pleurotomaria*.
17. Upper Devonian Fossils, from 10 miles north of Cobar, collected by Mr. Geological Surveyor Jaquet:—*Rhynchonella pleurodon*, Phill.; *Rhynchonella*, allied to *R. primipilaris*, V. Buch.
18. Eocene Leaf (*Cinnamomum Leichhardti*, Ett.), from Warrumbungle Mountains, presented by Professor T. W. E. David.
19. Siluro-Devonian Fossils, from the limestone at Bungonia Caves, collected by Mr. W. S. Leigh:—*Heliolites*, *Favosites* (two species), *Stromatopora*, *Pentamerus Knightii*, Sby.; *Pentamerus*, sp.
20. Post-Tertiary Fern, from Myall Creek, collected by Mr. G. A. Stonier:—Variety of *Pteris aquilina*, Linn.

Mr. E. C. Whittel, when in Tasmania in connection with the Hobart Exhibition, made a collection of Permo-Carboniferous Fossils from various localities around Hobart, which forms a very welcome addition to our small collection of Tasmanian fossils.

Collections of fossils were prepared for the following:—

- Albury Free Industrial Museum.
- Wanganui Public Museum.
- Wesleyan Sunday School, Bourke-street, Sydney.
- Mr. P. F. Adams, small collection.

In connection with the rearrangement of the Museum Collection of Australian Fossils, a great deal of preliminary work in sorting and determination has been done. The whole of the New South Wales Palaeozoic Formations (with the exception of some forms kept out for detailed examination) are now represented by as characteristic a set of fossils as the museum resources will allow of. The Mesozoic Fossils are now being tabletted, and it is hoped that these, together with the New South Wales Tertiary Fossils will be on view by the middle of the year.

In accordance with instructions, I visited the Bantry Bay rock-carvings, and made a short report (published in *Records*, IV, Pt. 4) on those newly exposed.

A large number of microscopic slides of Australian diatomaceous earths have been prepared for examination during the year, chiefly in response to enquiries made by the Australian Drug Company, and other parties. Mr. Card is making a detailed report on the earths, as regards their physical properties and economic value, and it has been thought advisable to prepare a short account of the more characteristic forms of diatoms occurring in the different earths.

During the year the following papers by myself have been published in the *Records*:—

- (a) Notes on the Occurrence of Monotreme Remains in the Pliocene of New South Wales; with plates 11 and 12. *Records*, IV, Pt. 3, pp. 118-126.
- (b) On Additional Aboriginal Rock-carving on the French's Forest Road, near Bantry Bay. Plates 23 and 24. *Records*, IV, Pt. 4, pp. 167, 168.
- (c) Index, &c., to *Records*, Vol. IV (*in litt*).

The Australian Geological Record for the Year 1894, with Addenda for 1891 to 1893. *Records*, IV, Pt. 4, pp. 168-198.

In conjunction with Mr. R. Etheridge, Jun.

II. *Library.*

During the past year 1,455 publications have been registered and placed in the Library, consisting of Societies' Transactions, Reports of State Departments, and separate works and pamphlets. This total is made up of 1,207 volumes, parts of volumes, and pamphlets that have been presented or sent in exchange for departmental publications, and 248 volumes and parts of volumes that have been purchased.

The Library is now in correspondence with 174 institutions and State departments, from which exchanges are regularly received, and there are also numerous personal exchanges.

All donations have been regularly acknowledged.

The principal additions to the Library during the past year have been:—(1.) A large number of Natural History and Physical Science pamphlets, from the Royal University of Upsala; (2.) Geological and Palaeontological pamphlets and memoirs, from the Stockholm Academy of Science; (3.) A complete set of the Transactions of the Federated Institute of Mining Engineers, and (4.) A large number of Geological Quarter Sheets and Mining Maps, from the Victorian Department of Mines.

The Library slip catalogue, for author's names, serial and societies' publications, has been kept up to date, and now contains over 3,000 slips, many of which carry several titles.

During the year the following departmental publications were distributed through the medium of the Library:—

- (1.) Records of the Geological Survey, Vol. IV, pt. 3.
- (2.) do do do Vol. IV, pt. 4.
- (3.) Palaeontology, Memoir, No. 8, pt. 3.
- (4.) do do No. 9.
- (5.) Annual Report of the Department for 1894. (To societies and State departments.)
- (6.) Numerous miscellaneous lots to institutions and individuals.

The general register and other books connected with the Library have been kept up to date.

I have, &c.,

W. S. DUN,

Assistant Palaeontologist and Librarian.

The Government Geologist.

LIST of Fossils registered during 1895.

Name.	Locality.	Donor or Collector.
SILURIAN AND SILURO-DEVONIAN.		
Corals and Brachiopods	Wellington Caves	J. Sibbald.
<i>Pentamerus Knightii</i> and Gastro-poda.	Yarrangobilly Caves	W. S. Leigh.
<i>Favosites</i> , <i>Heliolites</i> , <i>Stromatopora</i> , <i>Pentamerus Knightii</i> , <i>P. sp.</i>	Bungonia	"
<i>Cromus</i> , <i>Polyzoan</i>	Yass	J. B. Jaquet.
<i>Dilymograpus fruticosus</i> , <i>Phyllograptus typus</i> .	Bendigo	W. S. Dun.
DEVONIAN.		
<i>Actinopteria</i>	Capertee	E. F. Pittman.
<i>Rhynchonella pleurodon</i> , <i>R. pinipilaris</i> .	10 miles N.-W. Cobarr	J. B. Jaquet.
<i>Rhynchonella pleurodon</i>	Carrowan Creek	"
CARBONIFEROUS.		
<i>Diphyphyllum</i> , <i>Syringopora</i> , <i>Zaphrentis</i> , <i>Cyathophyllum</i> , <i>Spirifer</i> , &c.	Slaughterhouse Creek	G. A. Stonier.
MOLLUSCA.		
<i>Spirifer</i> , <i>Orthis australis</i>	Parish Eumur, County Darling	"
<i>Phillipsia</i>	Rocky Creek	E. F. Pittman.
<i>Euomphalus cera</i>	Gloucester	B. Dunstan.
<i>Leptodendron australe</i>	7 miles N.-E. Paterson	J. Waterhouse.
	Copeland	L. W. Chubb.
PERMO-CARBONIFEROUS.		
<i>Vertebraria</i>	Lithgow	Miss King.
<i>Glossopteris</i>	Parish Puggoon, County Bligh	J. E. Carne.
"	Warrumbungle Mts.	T. W. E. David.
<i>Stenopora</i> , <i>Chenomya</i>	Singleton	J. Waterhouse.
<i>Brachiopoda</i> , <i>Stenopora</i> , <i>Fenestella</i> .	Hobart, Tas.	E. C. Whittell.
<i>Mourlonia</i> (?) <i>Waterhousei</i>	W. Maitland	J. Waterhouse.
<i>Platyceras unguis</i> , <i>P. cornucapella</i> , <i>P. altum</i> .	Harper's Hill	"
<i>P. altum</i>	Rutherford	"
<i>Martiniopsis subradiata</i> , <i>Ariculopecten</i> , <i>Cardiomorpha gryphoides</i> .	Farley	L. F. Harper.
<i>Strophalosia</i>	Dagworth	T. W. E. David.
LOWER MESOZOIC.		
Plantæ	Warialda	G. A. Stonier.
"	Cookabutta Mt., Talbragar R.	E. F. Pittman.
"	Boyce's Selection, Talbragar R.	"
"	8 miles E. of Boggy Ck.	"
<i>Teniopteris</i>	14 miles E. of Moree	"
<i>Thinnfeldia odontopteroides</i>	Narrabeen	W. S. Dun.

Name.	Locality.	Donor or Collector.
CRETACEOUS.		
<i>Pseudavicula anomala</i> , <i>Glycimeris rugosa</i> , <i>P. australis</i> .	Maranoa R., Q.	G. Sweet.
<i>Aucella marathonsensis</i>	Marathon Stn., Q.	"
Fossil wood	Walsh R., Q.	"
<i>Natica variabilis</i>	Blythesdale, Q.	"
<i>Cyprina Clarkei</i> , <i>unicordium Etheridgei</i> , <i>Maccoyella corbiensis</i> , <i>Nucula gigantea</i> , <i>R. quadrata</i> , <i>Glycimeris sulcata</i> , <i>Cucullia costata</i> , <i>Lima (?) Randsi</i> .	Maryborough, Q.	"
<i>Maccoyella Corbiensis</i>	Bungeworgorai Ck., Q.	"
<i>Pecten</i> , <i>Glycimeris</i> , <i>Mytilus</i> , <i>Cytherea Clarkei</i> , <i>Lima</i> , <i>Pseudavicula</i> , <i>Nucula quadrata</i> , <i>Anchura Wilkinsoni</i> , <i>Yoldia</i> , <i>Modiola linguloides</i> , <i>Belemnites</i> .	Primrose Springs, S.A.	H. Y. L. Brown.
<i>Mytilus rugocostatus</i>	Mt. Hamilton, S.A.	"
<i>Stephanoceras</i> (c. <i>S. lamellosus</i> , <i>S. callowiensis</i> , <i>S. Blagdeni</i>), <i>Ammonites</i> (c. <i>A. lingulatus</i>).	Observatory Bend, Strickland River, New Guinea	"
<i>Cucullia</i>	Irwin R., W.A.	J. M. Paxton.
<i>Belemnites Canhami</i>	Thurloo, Q.	Dr. J. C. Cox.
<i>Callista Taylora</i>	Waratta Ck., Mt. Poole	C. S. Wilkinson.
<i>Serpula</i>	N. S. Wales	"
<i>Rhynchonella</i>	Croydon, Q.	"
<i>Maccoyella Barklyi</i>	"	F. G. Shaw.
<i>Mytilus rugocostatus</i>	Mt. Hamilton, S.A.	"
Fossil wood	Milparinka	J. W. Boulthbee.
<i>Maccoyella Barklyi</i> , <i>Maccoyella corbiensis</i> .	Mt. Poole	A. Lang.
TERTIARY AND RECENT.		
<i>Cinnanomum Leichhardti</i>	Wantialable Ck.	Prof. T. W. E. David.
<i>Pteris aquilina</i>	Myall Ck.	G. A. Stouier.
<i>Unio</i>	Collarendabri	"
"	13 miles N.-E. of Bidura Bore.	W. G. Donaldson.
<i>Macropus giganteus</i>	Quirindi	J. Trevor Jones.

[Plans.]

1896.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

COAL-MINING REGULATION BILL.

EVIDENCE, APPENDIX, &c.,

TO THE

REPORT OF ROYAL COMMISSION.

APPOINTED AUGUST 15, 1895.



Printed under No. 1 Report from Printing Committee, 21 May, 1896.

SYDNEY: CHARLES POTTER, GOVERNMENT PRINTER, PHILLIP STREET.

1896.
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Commission.

VICTORIA, by the Grace of God, of the United Kingdom of Great Britain and Ireland, Queen,
Defender of the Faith, and so forth.

To our trusty and well-beloved

FRANCIS EDWARD ROGERS, Esquire, one of our Counsel learned in the Law ;
JAMES CURLEY, Esquire ; and
JESSE GREGSON, Esquire,—

Greeting:—

KNOW YE, that we, reposing great trust and confidence in your ability, zeal, industry, discretion, and integrity, do, by these presents, authorise and appoint you or any two of you, as hereinafter mentioned, to make a diligent and full inquiry into the questions which arise upon the provisions of the Coal Mining Regulation Bill, which was introduced into the Legislative Assembly of our Colony of New South Wales on the fifth day of September, one thousand eight hundred and ninety-four ; and into all questions which arise upon such amendments proposed in the said Bill as were not agreed to, in order that the Bill may be again submitted to the Parliament of our said Colony, containing such provisions as will in your opinion fully secure the objects of the measure without unnecessary interference with the working of the collieries, or the rights of the proprietors thereof : And we do, by these presents, grant to you, or any two of you, at any meeting or meetings to which all of you shall have been duly summoned, full power and authority to call before you all such persons as you may judge necessary, by whom you may be better informed of the truth in the premises, and to require the production of all such books, papers, writings, and all other documents as you may deem expedient, and to visit and inspect the same at the offices or places where the same or any of them may be deposited, and to inquire of the premises by all lawful ways and means : And we do give you power at your discretion to procure such clerical and other assistance as you may deem necessary for enabling you duly to execute this our Commission : And our further will and pleasure is that you do, within three months after the date of this our Commission, certify to us, in the office of our Colonial Secretary, under your or any two of your hands and seals, what you shall find touching the premises : And we hereby command all Government officers and other persons whomsoever within our said Colony that they be assistant to you and each of you in the execution of these presents : And we appoint you, the said Francis Edward Rogers, to be President of this our Commission, which said Commission we declare to be a Commission for all purposes of the Act 41 Victoria No. 1, intituled "*An Act to regulate the taking of Evidence by Commissioners under the Great Seal.*"

In testimony whereof, we have caused these our letters to be made patent, and the Great Seal of our said Colony of New South Wales to be hereunto affixed.

Witness our Trusty and Well-beloved Councillor, The Honourable SIR FREDERICK MATTHEW DARLEY, Knight, our Lieutenant-Governor of our Colony of New South Wales and its Dependencies, at Government House, Sydney, in New South Wales aforesaid, this fifteenth day of August, in the fifty-ninth year of Our Reign, and in the year of our Lord one thousand eight hundred and ninety-five.

FREDK. M. DARLEY.

By His Excellency's Command,
(Signed) JAMES N. BRUNKER.

Entered on record by me, in Register of Patents, No. 17, page 75, this fifteenth day of August, one thousand eight hundred and ninety-five.

For the Colonial Secretary and Registrar of Records,

(Signed) CRITCHETT WALKER,
Principal Under Secretary.

LETTERS OF INSTRUCTION.

Sir,

Chief Secretary's Office, Sydney, 15 August, 1895.

I am directed by the Chief Secretary to transmit herewith a Commission under the Great Seal of the Colony, appointing you, in conjunction with the other gentlemen named therein, to be a Royal Commission, to make a diligent and full inquiry into the questions which arise upon the provisions of the Coal-mining Regulation Bill, which was introduced into the Legislative Assembly on the 5th September, 1894; and into all questions which arise upon such amendments proposed in the said Bill as were not agreed to, in order that the Bill may be again submitted to Parliament, containing such provisions as will, in your opinion, fully secure the objects of the measure without unnecessary interference with the working of the collieries or the rights of the proprietors thereof.

2. I am desired to add that the Lieutenant-Governor-in-Council has also been pleased to appoint you to be President of the Commission.

3. You will be provided with such clerical and other assistance as may be deemed necessary for enabling you to execute the Commission.

I have, &c.,

CRITCHETT WALKER,
Principal Under Secretary.

Francis Edward Rogers, Esq., Q.C., &c., &c., &c.

Sir,

Chief Secretary's Office, Sydney, 15 August, 1895.

I am directed by the Chief Secretary to inform you that His Excellency the Lieutenant-Governor, with the advice of the Executive Council, has been pleased to appoint you, in conjunction with the other gentlemen named in the margin, to be a Royal Commission, to make a diligent and full inquiry into the questions which arise upon the provisions of the Coal-mining Regulation Bill, which was introduced into the Legislative Assembly on the 5th September, 1894; and into all questions which arise upon such amendments proposed in the said Bill as were not agreed to, in order that the Bill may be again submitted to Parliament containing such provisions as will, in your opinion, fully secure the objects of the measure without unnecessary interference with the working of the collieries or the rights of the proprietors thereof.

2. I am desired to add that the Commission appointing you has been duly forwarded to Mr. Rogers, the President.

I have, &c.,

CRITCHETT WALKER,
Principal Under Secretary.

James Curley, Esq.

Francis Edward
Rogers, Esq.,
Q.C., President.Jesse Gregson,
Esq.

Sir,

Chief Secretary's Office, Sydney, 15 August, 1895.

I am directed by the Chief Secretary to inform you that His Excellency the Lieutenant-Governor, with the advice of the Executive Council, has been pleased to appoint you, in conjunction with the other gentlemen named in the margin, to be a Royal Commission, to make a diligent and full inquiry into the questions which arise upon the provisions of the Coal-mining Regulation Bill, which was introduced into the Legislative Assembly on the 5th September, 1894; and into all questions which arise upon such amendments proposed in the said Bill as were not agreed to, in order that the Bill may be again submitted to Parliament containing such provisions as will, in your opinion, fully secure the objects of the measure without unnecessary interference with the working of the collieries or the rights of the proprietors thereof.

2. I am desired to add that the Commission appointing you has been duly forwarded to Mr. Rogers, the President.

I have, &c.,

CRITCHETT WALKER,
Principal Under Secretary.

Jesse Gregson, Esq.

Francis Edward
Rogers, Esq.,
Q.C., President.James Curley,
Esq.

Sir,

Chief Secretary's Office, Sydney, 23 August, 1895.

With reference to your letter of the 16th instant, I am directed to inform you that the Chief Secretary approves of the employment of Mr. F. W. Carnow as Secretary and Shorthand Writer to the Royal Commission on the Coal-mining Regulation Bill, with remuneration at the rate of £2 2s. per sitting and 9d. a folio for transcribing evidence.

2. I am desired to add that Mr. Brunner also approves of Mr. May, Mining Lecturer in connection with the Technical College at Newcastle, being engaged to assist generally in carrying out the duties in relation to the Commission, on condition that the Minister of Public Instruction concurs in this arrangement.

I have, &c.,

CRITCHETT WALKER,
Principal Under Secretary.

F. E. Rogers, Esq., Q.C., &c., &c., &c.

Sir,

Chief Secretary's Office, Sydney, 11 October, 1895.

I am directed to inform you that the Chief Secretary has approved of the payment of the undermentioned fees to the President and members of the Royal Commission on the Coal-mining Regulation Bill, viz.:—President, £12 12s. per sitting; members, £7 7s. per sitting; the amount to be defrayed from the proposed vote of £2,000 for expenses in connection with the Royal Commission on Coal-mining on the Estimates of 1895-6.

I have, &c.,

CRITCHETT WALKER,
Principal Under Secretary.

The Secretary to the Royal Commission, &c., &c., &c.

EXTENSION OF COMMISSION.

ROYAL COMMISSION ON THE COAL-MINING REGULATION BILL.

WHEREAS it is necessary to extend the time within which the Commissioners are to make their report in the above matter: Now, therefore, I do hereby, with the advice of the Executive Council, extend the time within which the said Commissioners are to make such report for a period of one month—to take effect from the 15th instant.

Given under my hand, at Government House, this 20th day of November, 1895.

FREDK. M. DARLEY,
Lieutenant-Governor.

By His Excellency's Command,
JAMES N. BRUNKER.

ROYAL COMMISSION ON COAL-MINING REGULATION BILL.

MINUTES OF MEETINGS.

APPENDED are the minutes of the meetings of the Royal Commission, appointed on the fifteenth day of August, one thousand eight hundred and ninety-five, "to make a diligent and full inquiry into the questions which arise upon the provisions of the Coal Mining Regulation Bill, which was introduced into the Legislative Assembly of our Colony of New South Wales on the fifth day of September, one thousand eight hundred and ninety-four; and into all questions which arise upon such amendments proposed in the said Bill as were not agreed to, in order that the Bill may be again submitted to the Parliament of our said Colony, containing such provisions as will in your opinion fully secure the objects of the measure without unnecessary interference with the working of the collieries, or the rights of the proprietors thereof."

MONDAY, 19 AUGUST, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 3 p.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.
James Curley, Esq. | Jesse Gregson, Esq.

The Commission was read by the Secretary.

The PRESIDENT, in opening the proceedings, said that the subject entrusted to the Commission was an important one, affecting both employers and employed, and he hoped that his colleagues representing these two interests would have no difficulty in arriving at some unanimity in regard to the subject entrusted to their care. They were called upon to inquire into the questions arising out of the provisions of the Coal Mines Regulation Bill introduced into the Legislative Assembly in September 1894, and to consider the amendments proposed in this Bill that were not agreed to, with a view to the Bill being again submitted to Parliament. The first thing he thought would be to decide upon the method of procedure. No provision had been made as to how the inquiry should be conducted, and as he had, what might be termed, only an elementary knowledge of coal-mining through having had a case or two, he would suggest that Mr. Curley and Mr. Gregson should name any witnesses they may deem it necessary to examine, when the necessary subpoenas for their attendance would be issued by the Secretary.

Mr. GREGSON wished to know whether the scope of the Commission allowed of their inquiring into any legislation at all.

PRESIDENT: We have to deal with the Bill and the amendments in connection with it, and to suggest any other provisions. In that way the inquiry is limited to the Bill.

The PRESIDENT laid on the table a copy of the Bill. He thought that the more important questions were (1) the ventilation; (2) the weighing; (3) the vexed eight hours question; (4) the sizes of pillars under ocean and tidal waters; and (5) the powers of inspectors.

Mr. CURLEY thought these were some of the points, but there were others that had not been touched upon; the Bill had been referred to and reported upon by several Select Committees, and he would like to introduce these reports. He thought these reports would be essential to the inquiry. He would also think it necessary to call additional witnesses.

Mr. GREGSON thought that there was enough literature on the subject to enable the Commission to come to a conclusion without calling any witnesses. The witnesses, he thought, who had given evidence will not have altered their minds, and unless something additional, or anybody could be found to say something new, fresh evidence could not further the object they had in view.

PRESIDENT: For the purpose of arriving at a conclusion we can consult the evidence in point, but I think it would be advisable perhaps to call some of the leading people as witnesses.

Mr. GREGSON: The matter has been under consideration for five or six years, and evidence of a voluminous character has been given touching the state of things in the trade, which are in the same state now as they were then. Witnesses had suggestions to offer then, and they are in no better position to-day than they were six years ago. There was a Commission of inquiry into the coal trade some years ago, and there have been two or three Select Committees from the Legislative Council and one from the Legislative Assembly, but I have no objection to witnesses being called if Mr. Curley wishes.

Mr. CURLEY was of opinion that Mr. Gregson took a negative view.

Mr. GREGSON: Because it is easier to prove.

Mr. CURLEY thought it was Mr. Gregson's duty to prove that these Bills should not become law.

PRESIDENT: I think we should decide to-day how often we shall meet, and after that is done Mr. Curley will no doubt name one or two witnesses he would like to call.

Dates of Meeting.

It was decided to meet on Mondays, at 2:30 p.m., and on Tuesdays and Wednesdays from 10 a.m. till 5 p.m. The next meeting to be held on Monday, the 26th instant.

Mr.

Mr. CURLEY handed in the names of J. L. Fegan, Esq., M.L.A.; Adam Cook, Esq., Chairman, Amalgamated Miners' Association; J. B. Nicholson, Esq., M.L.A.; and Joseph Cook, Esq., M.L.A., Postmaster-General, to be called as witnesses.

The Secretary was requested to procure copies of all Bills, Reports of Select Committees and Royal Commissions bearing upon the subject, also copies of the Reports of the Department of Mines for the previous ten years.

The meeting then adjourned till the 26th instant.

MONDAY, 26 AUGUST, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.
James Curley, Esq. | Jesse Gregson, Esq.

The Secretary laid on the table copies of Bills, Reports of Royal Commissions, and Select Committees of both Houses of Parliament, and the Reports of the Department of Mines asked for at a former meeting. The following witness was sworn and examined:—John Lionel Fegan, Esq., M.L.A.

TUESDAY, 27 AUGUST, 1895.

MORNING SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.
James Curley, Esq. | Jesse Gregson, Esq.

The following witness was sworn and examined:—Adam Cook, Esq. (President, Amalgamated Miners' Association).

TUESDAY, 27 AUGUST, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.
James Curley, Esq. | Jesse Gregson, Esq.

The following witnesses were re-examined:—Adam Cook, Esq. (concluded), John Lionel Fegan, M.L.A. (examination continued).

WEDNESDAY, 28 AUGUST, 1895.

MORNING SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.
James Curley, Esq. | Jesse Gregson, Esq.

The following witness was re-examined:—John Lionel Fegan, M.L.A. (examination continued).

WEDNESDAY, 28 AUGUST, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.
James Curley, Esq. | Jesse Gregson, Esq.

The following witness was re-examined:—John Lionel Fegan, M.L.A. (examination continued).

MONDAY, 2 SEPTEMBER, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.
James Curley, Esq. | Jesse Gregson, Esq.

The following witness was re-examined:—John Lionel Fegan, M.L.A. (examination concluded).

Mr. Curley requested that the Report of the Select Committee of the Legislative Assembly, of which Mr. Fegan was Chairman, should be embodied in the Appendix to the Report of the Commission. —Agreed to.

TUESDAY,

TUESDAY, 3 SEPTEMBER, 1895.

MORNING SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.
James Curley, Esq. | Jesse Gregson, Esq.

The following witness was sworn and examined:—George Henderson, Esq. (Secretary to Illawarra Miners).

Upon the request of Mr. Curley it was agreed that the correspondence and reports on the ventilation of coal mines between himself and Mr. Mackenzie, Examiner of Coal-fields, should be embodied in the Appendix to the Report of the Commission.

TUESDAY, 3 SEPTEMBER, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.
James Curley, Esq. | Jesse Gregson, Esq.

The following witness was re-examined:—George Henderson (examination continued).

Mr. Curley requested that the letters of the inspectors in connection with the Stockton Colliery, to be found in the Appendix to the final Report of Mr. Fegan's Select Committee, should be embodied in the Appendix to the Report of this Commission.—Agreed to.

WEDNESDAY, 4 SEPTEMBER, 1895.

MORNING SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.
James Curley, Esq. | Jesse Gregson, Esq.

The following witness was re-examined:—George Henderson (examination continued).

WEDNESDAY, 4 SEPTEMBER, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.
James Curley, Esq. | Jesse Gregson, Esq.

The following witness was re-examined:—George Henderson (examination continued).

MONDAY, 16 SEPTEMBER, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.
James Curley, Esq. | Jesse Gregson, Esq.

The following witness was re-examined:—George Henderson (examination continued).

On the motion of Mr. Curley, it was agreed that the agreement between the Associated Masters and the District Officers of the Miners' Association of the Hunter River District and the delegates should be embodied in the Appendix to the Report of the Commission.

TUESDAY, 17 SEPTEMBER, 1895.

MORNING SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.
James Curley, Esq. | Jesse Gregson, Esq.

Mr. Gregson: I would suggest that the evidence taken before the Select Committee of the Legislative Council, on the 5th October, 1893, be put in as evidence and be included in the Appendix to the Report of this Commission.—Agreed to.

The following witnesses were examined:—George Henderson (examination concluded), James Thompson, Esq., M.L.A. (sworn and examined).

TUESDAY, 17 SEPTEMBER, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT :—

Francis Edward Rogers, Esq., Q.C., President.
James Curley, Esq. | Jesse Gregson, Esq.

The following witnesses were examined :—James Thompson, Esq., M.L.A. (examination concluded)
Treharne Evans (sworn and examined).

WEDNESDAY, 18 SEPTEMBER, 1895.

MORNING SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.

PRESENT :—

Francis Edward Rogers, Esq., Q.C., President.
James Curley, Esq. | Jesse Gregson, Esq.

The following witness was sworn and examined :—Hon. Joseph Cook, M.L.A., Postmaster-General.

WEDNESDAY, 18 SEPTEMBER, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT :—

Francis Edward Rogers, Esq., Q.C., President.
James Curley, Esq. | Jesse Gregson, Esq.

The following witness was sworn and examined :—Alfred Edden, Esq., M.L.A.

MONDAY, 23 SEPTEMBER, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT :—

Francis Edward Rogers, Esq., Q.C., President.
James Curley, Esq. | Jesse Gregson, Esq.

The following witnesses were sworn and examined :—William Wilson, Elias Arthur Jones.

TUESDAY, 24 SEPTEMBER, 1895.

MORNING SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.

PRESENT :—

Francis Edward Rogers, Esq., Q.C., President.
James Curley, Esq. | Jesse Gregson, Esq.

The following witness was sworn and examined :—Daniel Alexander Wilberforce Robertson.
Plan produced by Mr. Robertson showing the number of splits in the Metropolitan Colliery,
Hclensburgh, was directed to be embodied in the Appendix to Commission's Report.

TUESDAY, 24 SEPTEMBER, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT :—

Francis Edward Rogers, Esq., Q.C., President.
James Curley, Esq. | Jesse Gregson, Esq.

The following witnesses were examined :—Daniel Alexander Wilberforce Robertson, (examination
concluded), John McGeachie (sworn and examined).

WEDNESDAY, 25 SEPTEMBER, 1895.

MORNING SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.

PRESENT :—

Francis Edward Rogers, Esq., Q.C., President.
James Curley, Esq. | Jesse Gregson, Esq.

The following witnesses were sworn and examined :—Thomas Canning, John Odgers, Peter Curran.

WEDNESDAY,

WEDNESDAY, 25 SEPTEMBER, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq. | Jesse Gregson, Esq.

The following witnesses were examined:—Peter Curran (examination concluded), William Lowe (sworn and examined).

MONDAY, 30 SEPTEMBER, 1895.

MORNING SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq. | Jesse Gregson, Esq.

The following witnesses were sworn and examined:—Jonathan Coates, John Estell, William Bower.

MONDAY, 30 SEPTEMBER, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq. | Jesse Gregson, Esq.

The following witnesses were sworn and examined:—Thomas Abel, William Henry Goodman, Thomas Adams.

TUESDAY, 1 OCTOBER, 1895.

MORNING SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq. | Jesse Gregson, Esq.

The following witnesses were examined:—Thomas Adams (examination concluded), Alexander Mathieson, James Fletcher (sworn and examined).

TUESDAY, 1 OCTOBER, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq. | Jesse Gregson, Esq.

The following witnesses were sworn and examined:—James Henry Ronaldson, George Errington.

WEDNESDAY, 2 OCTOBER, 1895.

MORNING SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq. | Jesse Gregson, Esq.

The following witnesses were sworn and examined:—James Henry Ronaldson (re-examined), Andrew Nicol, William Thompson Philpot, David Ritchie.

WEDNESDAY, 2 OCTOBER, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq. | Jesse Gregson, Esq.

The following witnesses were examined:—David Ritchie (examination concluded), David Mason, James Rowan, Inspector of Collieries (sworn and examined).

TUESDAY,

TUESDAY, 8 OCTOBER, 1895.

MORNING SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.

PRESENT :—

Francis Edward Rogers, Esq., Q.C., President.
James Curley, Esq. | Jesse Gregson, Esq.

Mr. Curley : I wish to put in, to be embodied in the Appendix to the Report of the Commission, the reports of Inspector Rowan in connection with the Bulli Colliery explosion,—Agreed to.

The following witnesses were sworn and examined :—Thomas Owen, Henry Hanton, William Quinn.

TUESDAY, 8 OCTOBER, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT :—

Francis Edward Rogers, Esq., Q.C., President.
James Curley, Esq. | Jesse Gregson, Esq.

The following witnesses were examined :—William Quinn (examination concluded), John Archibald Neilson, Duncan McGeachie (sworn and examined).

WEDNESDAY, 9 OCTOBER, 1895.

MORNING SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.

PRESENT :—

Francis Edward Rogers, Esq., Q.C., President.
James Curley, Esq. | Jesse Gregson, Esq.

The following witnesses were sworn and examined :—George Wright Batey, William Kennedy.

WEDNESDAY, 9 OCTOBER, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT :—

Francis Edward Rogers, Esq., Q.C., President.
James Curley, Esq. | Jesse Gregson, Esq.

The following witnesses were sworn and examined :—Peter Bowling, James Cook.

MONDAY, 14 OCTOBER, 1895.

MORNING SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.

PRESENT :—

Francis Edward Rogers, Esq., Q.C., President.
James Curley, Esq. | Jesse Gregson, Esq.

Mr. Curley : I wish to apply for the depositions in connection with Coroner's inquiry at Newcastle into the death of James Hodson, by the Hamilton pit disaster. I think they were sent to the Department of Justice in October, 1889. The Secretary was requested to procure these depositions.

The following witnesses were sworn and examined :—Robert Hay, Thomas Broughall, John Wilson.

MONDAY, 14 OCTOBER, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT :—

Francis Edward Rogers, Esq., Q.C., President.
James Curley, Esq. | Jesse Gregson, Esq.

The following witnesses were examined :—John Wilson (examination concluded), Joseph Brown Barclay, Thomas Arthur Lloyd (sworn and examined).

TUESDAY,

TUESDAY, 15 OCTOBER, 1895.

MORNING SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq. | Jesse Gregson, Esq.

The depositions in connection with the Coroner's inquiry into the death of James Hodson were laid on the table.

A letter received by Mr. Gregson from Mr. Andrew Sneddon desiring to give evidence before the Commission was read. The Secretary was instructed to subpoena Mr. Sneddon for the 22nd instant.

The following witnesses were sworn and examined:—John Owen, Daniel M'Auliffe, James Barnes Nicholson, Esq., M.L.A.

TUESDAY, 15 OCTOBER, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq. | Jesse Gregson, Esq.

The following witnesses were examined:—James Barnes Nicholson, Esq., M.L.A. (examination concluded), Frank Croudace, David Watkins, Esq., M.L.A. (sworn and examined).

WEDNESDAY, 16 OCTOBER, 1895.

MORNING SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq. | Jesse Gregson, Esq.

The following witness was sworn and examined:—John Dixon, Senior Inspector of Collieries.

WEDNESDAY, 16 OCTOBER, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq. | Jesse Gregson, Esq.

The following witnesses were examined:—John Dixon, Senior Inspector of Collieries (examination concluded), William Humble, Inspector of Collieries (sworn and examined).

MONDAY, 21 OCTOBER, 1895.

MORNING SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq. | Jesse Gregson, Esq.

A letter was read from Mr. Michael Yates, stating that he was desirous of being called to give evidence before the Commission. The Secretary was instructed to subpoena Mr. Yates for the 23rd instant.

The following witnesses were examined:—William Humble, Inspector of Collieries (examination concluded), Wilson Rennie (sworn and examined).

MONDAY, 21 OCTOBER, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq. | Jesse Gregson, Esq.

Mr. Gregson handed in a letter received by him from Dr. Robertson, intimating that Mr. J. C. Jones, Manager of the South Bulli Colliery, desired to give evidence before the Commission. The Secretary was instructed to subpoena Mr. Jones for the 22nd instant.

The following witnesses were sworn and examined:—James Jackson, Samuel Rees, Thomas Lionel Bates (Inspector of Collieries).

TUESDAY,

TUESDAY, 22 OCTOBER, 1895.

MORNING SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq. | Jesse Gregson, Esq.

The following witnesses were sworn and examined:—Thomas Parton, Andrew Sneddon, Richard Thomas.

TUESDAY, 22 OCTOBER, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq. | Jesse Gregson, Esq.

The following witnesses were examined:—Richard Thomas (examination concluded), Jacob Carlos Jones (sworn and examined).

WEDNESDAY, 23 OCTOBER, 1895.

MORNING SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq. | Jesse Gregson, Esq.

The following witnesses were sworn and examined:—Harrie Wood (Under Secretary for Mines), Jacob Carlos Jones (re-examined), Thomas Ellis, Michael Yates.

WEDNESDAY, 23 OCTOBER, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq. | Jesse Gregson, Esq.

The following witnesses were sworn and examined:—Henry George Pullin, Jonathan May, Daniel Alexander Wilberforce Robertson (recalled).

MONDAY, 4 NOVEMBER, 1895.

MORNING SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq. | Jesse Gregson, Esq.

Letters were read by the Secretary from the Stockton Coal Company asking that their Colliery Manager, Mr. M'Auliffe, should be re-examined by the Commission, and from Thomas Croudace, Esq., General Manager, Scottish Australian Mining Company, and Robert James Jury, asking to be permitted to give evidence before the Commission.

The Commission decided against recalling Mr. M'Auliffe, and instructed the Secretary to call Messrs. Croudace and Jury for Tuesday the 5th instant, at 2 p.m.

Business—Consideration of Evidence and Bill with a view to Report.

MONDAY, 4 NOVEMBER, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq. | Jesse Gregson, Esq.

Business—Consideration of Evidence and Bill with a view to Report.

TUESDAY,

TUESDAY, 5 NOVEMBER, 1895.

MORNING SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq. | Jesse Gregson, Esq.

Business—Consideration of Evidence and Bill with a view to Report.

TUESDAY, 5 NOVEMBER, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq. | Jesse Gregson, Esq.

The following witness was sworn and examined:—Thomas Croudace, Esq., General Manager
Scottish Australian Mining Company.

Business—Consideration of Evidence and Bill with a view to Report.

WEDNESDAY, 6 NOVEMBER, 1895.

MORNING SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq. | Jesse Gregson, Esq.

Business—Consideration of Evidence and Bill with a view to Report.

WEDNESDAY, 6 NOVEMBER, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq. | Jesse Gregson, Esq.

The following witness was sworn and examined:—Robert James Jury.

Business—Consideration of Evidence and Bill with a view to Report.

MONDAY, 11 NOVEMBER, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq. | Jesse Gregson, Esq.

Business—

Consideration of Draft Report submitted by the President.

Further consideration of evidence and Bill.

Mr. Curley took exception to the inclusion in the Draft Report of an extract from Dr. Ogle's letter to the Registrar-General of Births, Deaths, and Marriages in England, on the grounds that it had never been before the Commission in any shape or form until to-day; and that after examining it he was of opinion that it dealt with a matter that to some extent appeared to him to be foreign to the subject they had in hand, and virtually opened up a new question. The original book from which the letter had been taken had not been before the Commission, and therefore he had had no opportunity to test its accuracy. If admitted at all, he thought it should only appear in the Appendix to the Report of the Commission.

Mr. Gregson explained that an opportunity had not presented itself before to-day to place the figures given by Dr. Ogle before the Commission, and that it was a mere extract, open to anybody to test its accuracy.

Mr. Curley, in reply, considered that the extract raised a question on which not a particle of evidence had been taken, and that he should have seen the document earlier. He thought he had good reasons for objecting to the extract being embodied in the Report.

President ruled that the extract from Dr. Ogle's letter should be embodied in the Report, and that the whole of the parts of the letter referring to coal-mining should be embodied in the Appendix to the Report of the Commission.

TUESDAY,

TUESDAY, 12 NOVEMBER, 1895.

MORNING SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq.

Jesse Gregson, Esq.

Business:—Consideration of Report and Draft Bills.

TUESDAY, 12 NOVEMBER, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq.

Jesse Gregson, Esq.

Business:—Consideration of Report and Draft Bills.

WEDNESDAY, 13 NOVEMBER, 1895.

MORNING SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq.

Jesse Gregson, Esq.

Business:—Consideration of Report and Draft Bills.

WEDNESDAY, 13 NOVEMBER, 1895.

AFTERNOON SITTING.

The Commission met in the Board Room, Chief Secretary's Office, at 2 p.m.

PRESENT:—

Francis Edward Rogers, Esq., Q.C., President.

James Curley, Esq.

Jesse Gregson, Esq.

Business:—Consideration and Completion of Report and Bills.

Mr. Curley desired to bring under the notice of the Commission a letter from a correspondent in Vancouver. In the letter there was a statement to the following effect:—"There is one good thing here, however, that is the eight hours from bank to bank." The correspondent then went on to say that it has been stated by people that the miners there worked ten hours. He gives that statement a denial, and says that they have not done so for the past five years.

On the suggestion of Mr. Gregson, the Commission decided to embody extracts from the Fifth and Final Report of the Royal Commission on Labour in England on the eight-hours question in the Appendix to the Report of the Commission.

Mr. Curley wished included in the Appendix an extract from Mr. Nelson Boyd's book "Coal Pits and Pitmen," pages 223-229,—Agreed to. (*See Appendix F 1.*)

ROYAL COMMISSION ON COAL-MINING REGULATION BILL.

MINUTES OF EVIDENCE.

MONDAY, 26 AUGUST, 1895.

[The Commission met in the Board Room, Chief Secretary's Office, at 2:30 p.m.]

Present:—

FRANCIS EDWARD ROGERS, Esq., Q.C. (PRESIDENT).

JAMES CURLEY, Esq.

JESSE GREGSON, Esq.

John Lionel Fegan, Esq., M.L.A., sworn and examined:—

1. *President.*] I believe, Mr. Fegan, you are a Member of the Legislative Assembly of this Colony? Yes. J. L. Fegan, Esq., M.L.A.
2. For what constituency? For Wickham.
3. *Mr. Curley.*] Previous to your becoming a Member of the Legislative Assembly, what occupation did you follow? I was a miner. 26 Aug., 1895.
4. Have you done practical coal-mining? Yes.
5. How long have you been engaged in that occupation? For some years.
6. What age did you start at—when did you enter a mine? I first worked in a mine when I was 16 years of age. That was in England, and I have been in mines out here for five or six years.
7. What collieries have you worked in here? In the Wickham and Bullock Island Colliery, and collieries in England.
8. What collieries in England? The Seven-Foot and Main Delf.
9. In what district? In Lancashire.
10. Any others? No.
11. What other collieries have you worked in out here? At Anvil Creek, Stockton, Linwood, and Wickham and Bullock Island.
12. Have you held any positions in connection with check inspection, or anything like that? I acted as check inspector for four or five years at the Wickham and Bullock Island Colliery.
13. On the part of the miners? Yes.
14. What duties did you carry out in connection with that office? I went round the mine and measured the air, saw that the men were supplied with props or timber, and took notice of any grievances regarding ventilation and reported to the men and to the manager.
15. Do you know the provisions of the present Act known as the Coal-mines Regulation Act of 1876? Pretty well.
16. What does that Act say regarding the provisions for ventilation? Clause 12, sub-sections 2, 3, and 4 say:—
- (2) An adequate amount of ventilation shall be constantly produced in every mine to dilute and render harmless noxious gases to such an extent that the working-places of the shafts, levels, stables, and workings of such mine, and the travelling roads to and from such working-places, shall be in a fit state for working and passing therein.
- (3) An adequate amount of ventilation shall mean not less (as a minimum) than one hundred cubic feet of pure air per minute for each man, boy, and horse, which shall sweep undiminished along the airway past each working-place.
- (4) Within six months after the commencement of this Act every mine shall be divided into districts or splits of not more than seventy men, and each district shall be supplied with a separate current of fresh air. All intake air shall travel free from all stagnant water, stables, and old workings, and no place shall be driven more than thirty-five yards before the current of air without a cut-through put through or bratticed up within three yards of the face of such working-place.
17. Do you consider that the provisions in the Act meet with the requirements of the different mines of the Colony to-day? No, I do not.
18. What is the date of that Act? 1876. Eleven years before the passing of the English Act in 1887.
19. Four years after the Act of 1872? Yes.
20. How do you arrive at the conclusion that the provisions of the present Act are not adequate to meet the requirements of to-day;—have any accidents taken place? As far as accidents are concerned, men have been slowly poisoned through the inadequacy of the ventilation, and these matters are not reported to the Mines Department in any shape or form.
21. *President.*] That shows the necessity for some Act now? Yes.
22. *Mr. Curley.*] When you say that men have been slowly poisoned, you mean, I suppose, that the air becomes too stagnant and too impure, and that the ventilation is not there in sufficient quantity or purity? Yes; that is what I mean by that statement; and then the latest experts on the subject give a far greater amount of air in non-gaseous seams than the Act of 1876 allows.
23. *President.*] The Act of 1876 prescribed an exact amount? Yes; it prescribed a minimum. Practical men, like Mr. W. Hopton, M.E., for instance, and no one will disparage what he says, says in a supposed conversation with his son in his book "Conversation on Mines," 9th edition.
- Son:* How much air per minute does a man inhale?
- Father:* He requires 100 cubic feet. A candle requires about the same quantity, and a horse 1,000 cubic feet, or ten times that of a man.
- Son:* But if a mine gives off much explosive gas, or black damp, how much air per man is required per minute?
- Father:* Each workman should have about 500 or 600 cubic feet.
- Son:* Then in one district of a mine where ten men are at work, they should be supplied with about 5,000 cubic feet of air per minute?
- Father:* Yes; with about that quantity.

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Mr. Hopton was in one of the most gaseous seams in England. He first proved the practicability of supplying the air in divisional splits as a colliery manager, and after being a colliery manager for years he is now honoured by Her Majesty by being placed in the Civil Service list. We ask 150 cubic feet of air per man, and 200 cubic feet of air per horse. Another authority, Mr. W. Fairley, F.G.S., &c., an eminent colliery manager, in his work, "The Colliery Manager's Catechism," page 22, says:—

CHAPTER 3RD—VENTILATION.

129. What rule is allowed in practice by inquirers as to the quantity of air necessary for ventilating a coal-mine where men and horses are employed? By some it is allowed that 100 cubic feet of air per man and 600 cubic feet per horse will keep the mine in a good sanitary condition.

130. In a mine employing 250 men and twelve horses, what ventilation would be considered necessary? $250 \times 100 + 12 \times 600 = 32,200$. Answer: 32,200 ft. per minute.

131. Are the quantities given in questions 129 and 130 to be considered all that is necessary in fiery mines? No; mines which yield much fire-damp will not be considered efficiently ventilated unless provided with 200 to 600 cubic feet per man per minute.

24. *Mr. Curley.*] Have you seen a later work published by Fairley, "Ventilation made easy;" the date of the edition is 1892, and the one you have just quoted from 1888;—will you just look at page 3, paragraphs 15 and 17:—

15. The quantity of air required in a mine should not be reckoned at less than 150 cubic feet per man per minute, and for each horse five times as much as for a man. In answer to question 12, in Chapter V, 250 feet per man per minute has been reckoned.

17. The air of a mine may be considered good when it is found to exist in nearly the same state as pure atmospheric air, but it becomes noxious as the oxygen is consumed, and as carbonic acid and water are added to it, which takes place by the breathing of animals and burning of lights.

The gases issuing from the rocks likewise renders it more unfit for respiration and more dangerous. It is on this account necessary that a constant stream of fresh air should be made to enter the mine and flow through it, to dilute and render harmless all the noxious emanations, and carry them away as fast as they are engendered.

25. You have stated what the proposed Bill provides. Yes; 150 cubic feet per man, and 200 cubic feet per horse.

26. *President.*] What I do not understand is that five times 150 is 750? We are not asking all that we should.

27. My trouble is that you want a minimum of 150 cubic feet, and that would not be nearly enough where there is gas? Certainly not.

28. You may put in a minimum, and say an adequate amount should be provided not less than 150 cubic feet per man, per minute, and even then you must leave it in mines where there are gases to the inspector? Yes; to the manager.

29. Why do you limit him;—you say 150 cubic feet would not be enough for a man, and then you have to leave it to the manager? For this reason: Where we have no gas there is not the same necessity for ventilation. Where there is gas the manager will be forced to give more than 150 cubic feet of air per minute. Where there is no gas there is nothing to force him. Then it becomes a question between the man and the manager. The manager comes to a man's place, and says there is sufficient ventilation, but there is not sufficient at the face.

30. How do you know there is gas? You notice the gas by a small blue top on the light, and by the smell. Where there is no gas generating there is nothing to force the manager if this minimum quantity is not stipulated in the Bill. If the man says there is not sufficient air, the manager may say there is, and if you do not like it you can take your tools out. There are instances where men have made a report to the manager, and have been sacked for doing so, or some other excuses have been made for discharging the men. We want to have a stipulation in the Bill to be proved by the anemometer, whether the quantity of air goes in or not.

31. In places where there is gas you are quite ready to trust the manager? I will trust him then, because he will see there is sufficient ventilation, otherwise there would be an explosion through insufficient ventilation.

32. Why would there be an explosion? In the majority of collieries we work with the naked light. At the Metropolitan Colliery, Helensburgh, they work with safety lamps. Two hundred and fifty men work there at the present time. The manager supplies them with 350,000 cubic feet of air, or taking the number of men, 350,000 divided by 250 would give over 1,000 cubic feet of air per minute per man. That is why we want a minimum quantity in the Bill. The manager will see if there is any gas, and if there is any he will shift it.

33. *Mr. Curley.*] With regard to this question of a minimum, do you not regard that as an imperative necessity? I would not give threepence for the Bill if it was not in. It is useless to the miners if it is not in.

34. Is it not useless to the miners of any district? As a practical man, yes.

35. You think that for sanitary purposes alone, and in order that the miner may have a proper atmosphere to work in, that there should be a stipulated quantity of air? I do; and that it should not be less than 150 cubic feet of air per minute per man.

36. That in no way interferes with the quantity of air required to deal with noxious gases? Certainly not, because the Bill gives full scope to a manager, who must not have less than a certain quantity. In the Metropolitan Colliery, to show that this does not hinder the manager, or impede him working the colliery as he would like, they send 350,000 cubic feet of air per minute.

37. And why? To render the gases harmless there, and because it is absolutely necessary to do it.

38. Do you think we have been troubled much by gas in the collieries in this Colony;—look at the Report of the Mines Department for 1889, and state what the nature of the accidents have been? The Examiner of Coal-fields reports the number of accidents in 1887, 1888, and 1889 as follows:—

In 1887 there were ninety-four fatal and forty-five non-fatal accidents; eighty-one of the fatal accidents occurring through the Bulli disaster.

In 1888 fifteen fatal and forty-three non-fatal accidents.

In 1889, the year under notice, there have been forty-one fatal and fifty-seven non-fatal accidents. Eleven of the fatal ones happened from falls of coal; 12th to 22nd inclusive, from a crush at the A. A. Company's Hamilton Pit; 23rd to 26th inclusive, from over-winding and falling down the South Burwood sinking shaft; 27th and 28th, from falls of stone from roof of mine; 29th and 30th, from a stone falling and striking sinkers in sinking shafts; 31st and 32nd, through being jammed by skips; 33rd, through being thrown from a trolley; 34th, through being thrown amongst skips; 35th, from falling down a sinking shaft; 36th, through being knocked down by a locomotive; 37th, from an explosion of powder; 38th, through being crushed between trucks; 39th, from being injured by a fly-wheel; 40th, from a fall of timber and clay; and 41st, from an explosion of fire-damp at Monkwearmouth Colliery. Twenty-four

Twenty-four of the non-fatal accidents occurred from falls of coal; 25th to 29th inclusive, from a stone falling and striking sinkers whilst sinking shafts; 30th to 34th inclusive, by injuries received from loaded skips; 35th to 38th inclusive, by explosions of fire-damp at the Durham and Monkwearmouth Collieries; 39th and 40th, inclusive, from explosion of a shot; 41st to 43rd inclusive, from powder explosions; 44th and 45th, through falling from pit-top; 46th, through being knocked down by a truck; 47th, being knocked down by a trolley; 48th, by a loaded waggon; 49th from a fall of stone; 50th, through a blow from a hauling rope; 51st, through falling from pit top; 52nd, from a fall of top-band coal; 53rd, from a fall of stone roof; 54th, from a hauling chain; 55th, by a blow from a prop; 56th, through falling off a skip; and 57th, by a steel drill.

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39. You see that apart from the Bulli explosion there are two or three more references to explosions? Yes, four.
40. At different collieries? Yes.
41. Apart from the question of stagnation that you have referred to, and the provisions of the Bill that was introduced into the Assembly and passed, you think that the quantity of air should be raised higher—that the standard should be raised beyond what is in the present Act? I do.
42. That is more than 100 cubic feet of air per man per minute? Yes. The miners in the Northern district had this question before them in 1889, and by a unanimous vote of the men believed it only fair to the men working in the mines that the quantity of air per man per minute should be raised from 100 to 150 cubic feet.
43. There is a stipulation too with regard to the distance that places should be driven before the air in connection with cut-throughs? The provision in the Act of 1876 is 35 yards, exclusive of cut-throughs, which, in some instances, are 10 yards over.
44. The 10-yard cut-through is exceptional? Yes; some men have had to work 47 yards before the air.
45. *President.*] When they are making it? Before they complete the cut-through. First they work 35 yards, and then in some cases two more yards to have their bords cut out. Then they work 10 yards where the pillar is 10 yards, to get the air through.
46. That is when they are making it? Yes. In some instances pillars have been known not to be 2 yards thick. They have not been driven straight. Through not driving the bords straight they have worked the pillar out without knowing it. If the pillar is on to the left they have gone through before they got 35 yards, through not driving by the instrument.
47. *Mr. Curley.*] The Bill stipulates that that provision is to be altered? Certainly.
48. What is the provision in the proposed Bill for the air? We propose that no place should be driven more than 25 yards without a cut-through being put through.
49. Do you consider that it will materially improve the ventilation of a colliery by having this limit—bords at shorter distances, and cut-throughs at a less distance than under the present Act? Certainly.
50. That would relieve many a serious cause of complaint? Yes; many.
51. And place the miner in a much more healthy atmosphere? Certainly. Of course, brattice is even more preferable, because we do not know what thickness the pillar may be. It is 20 yards thick in some mines, and according to the reading of the present Act it could be 20 yards, 35 yards, or 55 yards before the air. It all depends on the thickness of the pillar whether this 25 yards will be sufficient or not.
52. You think that it is absolutely necessary to have the limited distance with regard to bords and the provision for cut-throughs? Yes, I do.
53. There is also a provision in this Bill, as it went to the Legislative Council, with regard to the size of bords and the minimum width of a pillar? Yes.
- Rule 42.* Where the thickness of cover over the coal seam does not exceed eight hundred feet. In the case of working coal by the pillar and stall system under river or tidal or ocean waters the workings shall be laid off systematically and carefully, and the size of the pillars shall be such as will afford ample support, after exposure to the crumbling effect of the air over many years, and shall not be less than twice the width of the bords or coal wrought out between such pillars. The bords on one side of the headings, levels, or cross-cuts shall, unless prevented by rolls or faults, be driven opposite the bord pillars on the other side of the heading, level, or cross-cut. The minimum width of the pillars of coal shall be eight yards, and the maximum width of the bords or stalls six yards. And in no case shall the pillars under ocean or tidal waters be removed.
- Rule 43.* Every underground main road in a mine, which road is used for the purpose of haulage or for persons travelling therein, shall not exceed sixteen feet in width. And on each side of such road, other than a cross-drift or headway driven across bords in direction of the cleat or on the end, a barrier of coal or stone shall be left of not less than fourteen yards wide. No heading or bord through the barrier of coal shall exceed three yards wide, and such heading or bord shall not, without the express sanction as aforesaid, be less than ten yards apart: Provided that if any cross-drift or headway as aforesaid, or any heading on each side of which no barrier of coal shall have been left be at any time converted into or used as a main road, sufficient support shall forthwith be constructed on each side thereof.
- Rule 45.* Boreholes for the purpose of proving the thickness of the alluvial deposit shall be put down by the owner or manager on all lands fronting the ocean, tidal waters, or rivers where the thickness of the strata and deposits which overlie the coal worked or about to be worked is less than two hundred feet. Such boreholes, at distances not exceeding one hundred yards apart, shall be put down from the surface through the alluvial deposit to the rock, and to the rise of the coal seam worked. An account of the strata and deposits so bored through shall be furnished by the owner or manager to the Inspector when the boring has reached the rock.
- Rule 46.* In mines not under river or ocean or tidal waters worked on the pillar and stall system, where it is intended to remove the pillars, the stalls or bords shall not exceed in width eight yards, and the pillars shall not be less than eight yards wide. Where it is not proposed to remove the pillars they shall be of such dimensions as shall be necessary to support the roof. In mines worked on the long-wall system substantial supports shall be erected sufficient to protect the workmen. In mines worked on the Welsh bords or double-stall systems good, substantial, and sufficient pack walls shall be built, and a sufficient number of props set on each side of the pack walls.
54. Do you think that it is necessary for this stipulation with regard to these pillars? I am certain it is.
55. Do you know of any place where a mine has tumbled down in consequence of the weakness of pillars? I do.
56. *President.*] With people in it? Yes; the A. A. Company's mine.
57. *Mr. Curley.*] Will you kindly explain how pillars are extracted—explain the general system? The usual system worked is the pillar and bord system. To work to the boundary, and then either split your pillars or take them out. Where they are split, a remnant is left, and as a whole it does not support the roof as it ought to.
58. You have read the particulars of those accidents in the report of the Examiner of Coal-fields for 1889? Yes.
59. Some of those accidents are from falls, and reference is made to the crush in the A. A. Company's mine? Yes.
60. What do you know about the crush in the A. A. Company's mine? I only know the evidence that came out at the inquest, and I have seen the fall myself.
61. Were you down the mine? Yes.

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62. What year was that in? In 1889.
63. Were there a number of men entombed there? Yes; I think there were nine.
64. Were there not eighteen? I think there were eighteen entombed, but nine lives lost.
65. Did not seven men make their escape? Some men made their escape.
66. Did not eleven men lose their lives? I know of nine myself. It might have been more.
67. A whole body of men? Yes, a whole body.
68. *President.*] Is there any provision in the present Act about pillars? None whatever. There is a provision in the English Act for places being examined before men go to work. There is no provision in the present Act, but there is a provision in the Bill before the Commission now. A place may be crumbling in, and there is no one to give instructions to the men as far as the law is concerned, *i.e.*, as far as the Act is concerned.
69. Look at Clause 3 of the proposed Bill:—
3. (1) In every mine required by this Act to be under the control of a certificated manager, daily personal supervision shall be exercised either by the manager or by a duly qualified under-manager, in accordance with the provisions of this Act, nominated in writing by the owner or agent of the mine.
- Is there no provision in the present Act for supervision of that kind? I do not think there is.
70. Assuming a manager to be a competent person, would not he see that all these things were carried out properly, knowing how they endanger life? There is no clause in the present Act recognising a competent manager. The 3rd clause does in the proposed Bill, and also the 34th clause in the English Act.
71. The rules you have read, 42 to 46 inclusive, are not in the English Act at all? No, sir.
72. Do not the same dangers exist in England as here? It is because they have had power so long. Colliery owners have been sent wholesale into the Parliament of the country, and the miners at the present time cannot send their men because they would have to keep them. That is one reason.
73. The English Act is the outcome of very careful consideration by the best body of men in England? Yes, and the miners have had to concede many points that they think to be right.
74. I want to know why there should be all this necessity for this detail in the Bill;—if there is a proper manager surely he would see in removing pillars that too much was not removed to render the place dangerous? These clauses have been inserted in the proposed Bill from the report of the Royal Commission on the Ferndale Colliery, where one or two lives were lost. This Commission was composed of Dr. Robertson, Mr. Nielson, Mr. Curley, and other persons, and the report of that Commission is almost the same as the clauses you find here.
75. *Mr. Curley.*] Was there a lengthened coroner's inquiry held in connection with that disaster that took place at the A.A. Company's mine? I believe there was.
76. Do you recollect the verdict of the jury (*see Appendix*)? I do not think I do.
77. Did you hear of a subsidence at the Stockton Colliery about this particular time? It was reported, but I did not see it myself.
78. What about later on? Later on a subsidence took place there, and it was so serious that the colliery manager, Mr. Macaullife, had the men taken out of the mine. I went to Stockton myself, and I found in Fullerton-street something like 40 yards of a subsidence on one side, and in Maitland-street about 30 yards. Some of the houses you could put your arm in between the bricks, and in William-street the plaster of the houses was broken very materially. It made me think that the whole square of streets was settling upon the pillars. The consequence was that I brought the matter up in the House. There was a stipulation in the Act that these men could not go back to the mine until the inspector certified that the mine was safe, but the men went back with the colliery manager's permission. While other men are taken up for breaking the law, these men were allowed to go on working. Up to the present time a certificate has not been given that the mine is safe. Several subsidences have taken place at Stockton through falls in the mine.
79. Do you know the locality of the Stockton mine? Yes.
80. Is it far from the Hunter River and the ocean? It is alongside of the water. Fullerton-street and Maitland-street are about 40 yards from the water.
81. Do you know the depth of that mine? It is 300 and odd feet, I believe.
82. Seeing the proximity of that mine to the ocean waters, do you think it is anything like good management to work with the limited pillars as they did in that colliery when opening it out? I do not wish to say anything against the management of that colliery, because there have been so many managers there. What do I understand by management?
83. The working of the colliery;—has it been worked as it should have been worked? No; it has not.
84. Do you think if pillars had been left of sufficient size a fall would have come to the surface at such a distance? No; a fall would never have occurred if proper pillars had been left.
85. *President.*] Supposing the case of a man who is competent to manage a mine—that he has shown he is by examination and so forth;—would he not be able to know what thickness of pillars should be left, and be able to tell just as well by examination as by legislating for it? It just depends whether he has somebody else over him. In England they had some consulting viewers who wanted to make a dividend. The consequence is, that coal must be got from somewhere to show that it was a good speculation, and in some instances the pit has been proved unfit to work in afterwards. The manager would be able to work it if he was a practical man, and left free to act. That is the reason why there is a clause in the present Bill, that if a consulting viewer orders anything to be done it must be put in a book in order to free the manager from any responsibility.
86. Will you look at the 17th section of the Bill as it went from the Legislative Assembly?
17. In any mine where a consulting engineer, viewer, managing director, or other person has power to give directions as to the mode of conducting the works of a mine either above or below ground, he shall enter such directions in detail in a book to be kept at the mine for that purpose, but, unless required to be produced in a Court of law such book shall not be open to inspection by any person other than the Chief Inspector or an Inspector.
- That is the clause in which we do not think the manager should be interfered with.
87. You agree to that clause being struck out? No. If this clause is left in, and the manager does change his method of working, the right man will suffer the penalty.
88. If the manager is left free and anything wrong is done, would he not be the person to suffer the penalty? That is what I mean: but managers are not allowed to be free.
89. Who interferes with the colliery manager? The colliery owners. The pit is spoiled up at Stockton.
90. *Mr. Curley.*] You think it is just possible that while limited pillars might be left at Stockton Colliery the manager might not be responsible;—he might have been told to work according to a Board of Directors? Yes.

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91. *President.*] Why could not the viewers be got at too? They ought to be got at.
92. If one man is likely to be corrupted, why not another; the manager, you say, is not left free;—why does the viewer make the mine any more safe? The viewer is looked to by the Board of Directors, and the manager is looked to to carry out instructions.
93. I, as a manager, regard the value of lives; if I am dishonest, I risk these lives for the benefit of a Company, or whoever it may be;—why is not a viewer liable if he is competent to give directions? When orders are given to a manager they should be left in a book. I want the person who gives the orders to be responsible. If orders are given by directors or viewers they should be put in a book, and this would absolve the managers.
94. *Mr. Curley.*] In a case of that description there might be no corrupt motive whatever, but serious mistaken mining judgment? Yes; that would result in loss of life.
95. That is what you want to guard against by a provision of this character? Yes; at present the manager has to carry out these instructions or else leave the place, and he is not always ready to leave the place.
96. There is nothing imperious in a provision of that character? Nothing wrong whatever in it.
97. Do you not think that the opposition arising from this is rather that the principle is an innovation than anything else? I can say that it does not interfere with the management as far as the miners are concerned, because they do not see the books, and it is only in case of accident these books will be produced.
98. *President.*] You are assuming that the manager does something that he knows to be wrong? Certainly.
99. That because it is his bread and butter he dare not leave his position; therefore he must carry it out? That is the position.
100. Supposing that the inspector or anybody else gives the directions, how does that help the matter? The inspector has no right to interfere with the management.
101. If the manager is competent he knows the directions are wrong and still he carries them out;—how are the men safe by that? Under the clause we are discussing it comes home to those who give these written instructions.
102. If there is an accident in which men are maimed or killed, what satisfaction is there in bringing it home? We want to prevent accidents. Surely the law should deal with those who have been the means of bringing on those accidents, as in case of felony or murder or any other offence of that description. That would mean that in future the responsible parties would be more careful. Now they get off and lives are sacrificed, but if it came home once or twice they would be very careful in seeing that it did not occur again.
103. Supposing I am a director of a mine, and I say "Take out those pillars" or only leave them such and such thickness, and these are not thick enough to support the mine, and that the manager knows that what he is doing will have the effect of risking the lives under him, I do not see how he can be absolved? He is in an awkward position if he has to leave his work rather than do it.
104. Then, with a viewer or managing director, the manager would be punished for knowing it was wrong? Yes; the point is that the manager is not working the mine really. The manager, according to the proposed Bill, would be manager; but the overcoer, who is above him at present, gives instructions, and he has to carry them out or leave his place. The other man is free. The other man should pay the penalty, and not the manager.
105. *Mr. Curley.*] Is it not a question of discipline? Yes; as far as the manager is concerned.
106. He has the law laid down by his superior officer, who has control of the colliery and simply issues an order, and the manager has to carry out that order in an executive way? Yes; either that or leave it.
107. Or he becomes insubordinate, and must leave under any circumstances? Certainly.
108. In a case of that description, could not the manager object to the order? Yes; he could do that.
109. And if there was a Board of Directors he could appeal to them? Yes.
110. Would not that, then, originate a good deal of unpleasantness between the subordinate and chief manager? Yes; it would be a case of the survival of the fittest. It would depend on who was of the greater value to the Company. The man with the position generally has the best of it.
111. You think that, in the light of past experience in mining, as carried out in this country, that the provision in the Bill that we have been discussing is absolutely necessary? I do; absolutely necessary.
112. Before we came to this matter we were on the question of ventilation. There is something stated in the Bill about carrying the air to within 15 yards of the face. Will you look at page 23, clause 49-16, sub-clause III.
- Within six months after the commencement of this Act, every mine, unless worked on the long-wall system, shall be divided into districts or splits of not more than sixty men exclusive of wheelers and horses; and each district shall be supplied with a separate current of fresh air, which shall be taken to within fifteen yards of each working face by brattice or otherwise where gas does not exist, and to within three yards of the working face where gas does exist.
- ? Yes; the Legislative Council have struck that clause out.
113. Do you believe in that provision, Mr. Fegan? I do.
114. Do you think that provision is necessary in the Bill? I do, for reasons I have before stated. We do not know what thickness pillars are, and this provision will surmount the difficulty by having air carried 15 yards from the face.
115. There is something with regard to return airways, to the effect that they shall not be used as travelling roads. This is struck out as well by the Legislative Council. Will you look at the latter part of clause 41, Rule 1, page 24:
- And in single headings, or where gas is known to be generated, it shall be bratticed up to within three yards of the face of such working place. And no return airways shall be used as travelling roads. In the case of mines required by this Act to be under the control of a certificated manager, the quantity of air in the respective splits or currents shall at least once in every month be measured and entered in a book to be kept for the purpose at the mine.
- Do you think that is also necessary in the Bill? I think it is perfectly right there.
116. What is the effect of the air on men with regard to travelling roads? The return airway is where the vitiated air is from the stables and horses, and the air is sufficient to poison men at times. It is unhealthy.
117. In the great bulk of mines they are not used as a rule? No; I do not think so.
118. This is a provision in the Bill, so that they cannot be made use of? Yes.
119. *President.*] In properly conducted mines these roads are not used? No; they are not used.

J. L. Fegan, Esq., M.L.A. 120. Do you think it is necessary to legislate for this;—there is no use legislating for what is unnecessary? If there is no legislation managers can make their travelling road their return air-way. There is not much love lost between managers and men at present. Every advantage is taken by managers as things are at present.

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121. Is not that unfortunate? Yes; I have said that all along. There are exceptions, I must admit.

122. In any decently conducted mine do you think there is any need for apprehension that the return airways will be made travelling roads; do you think it is serious enough for the Legislature to interfere;—is it a matter of such moment? I think, that while we are legislating for ventilation, we ought to provide that men should not be forced to go into these roads. When I was check inspector, I used to be laid up at times when I went to these roads to examine them. It was really unhealthy to go through there.

123. Were you obliged to go through there? Yes; to see that the return airways were free, and I found that they were not the most healthy to travel in.

124. Is it a matter of sufficient importance to legislate upon;—is it a real practical grievance? They have done many things in the northern district, and I want to stop them forcing men into these positions.

125. *Mr. Curley.*] Do you recollect that an Executive Committee sat to draw up amendments? Yes; an Executive Committee of the Miner's Association. I was a member of that Committee in 1887.

126. One of the provisions, I think, had reference to not travelling in return air-ways? Yes; and it was one of the suggestions before the conference with the employers, and the men would not give way in any shape or form. I had the honour to preside over it.

127. The men considered this a very important provision? Oh, yes. Another reason why we do not want this is that when men have finished hewing coal and are coming to the shaft to ascend, they will be put in the return airway, in order that coal may be wound. We know that air, after it has been travelling through fifty or sixty men is not healthy to inhale. There is a lot of carbonic acid gas.

128. This matter brings us back to the competency of managers, and so on;—do you think it is absolutely necessary that mines should be under the control of efficient managers? I do.

129. *President.*] The miners, I presume, are satisfied with the Bill as it went from the Legislative Assembly? Yes, perfectly.

130. The matters in dispute are the amendments made by the Legislative Council? Yes, certainly.

131. *Mr. Curley.*] Would you be willing to agree with the amendment as suggested by the Council on page 2, Rule 3—

(i) In every mine required by this Act to be under the control of a certificated manager, daily personal supervision shall be exercised either by the manager, or by an under-manager, nominated in writing by the owner or agent of the mine.

—? I do not think there is much in this. There is something in Rule 4, "a contractor while so contracting."

132. *President.*] That means a contractor for getting minerals? ———

133. *Mr. Curley.*] With regard to Rule 5, on the same page, there is only the alteration of two words, "of competency"? Some men will receive certificates of competency on account of their examination; others will receive certificates for service. There are some men who are as good managers as can be found who could not pass the usual examination. I think that sub-section 2 of Rule 5—

(ii) For the purpose of ascertaining the persons to receive certificates of competency for the purposes of this Act, examiners shall be appointed by a Board consisting of—

should remain as it is proposed, because some men, from service, would be managers, who are not competent to pass an examination. When the English Act of 1872 was passed, certificates of service were granted to colliery managers, and some of these managers were superior to men who had passed their examinations, or quite as qualified.

134. *President.*] What sort of examination have they to pass;—what would the examination be in? The examinations would be theoretical and practical. First, on the Coal Mines Bill; then, on the theory of ventilation, &c.—written or oral.

135. Is that hard to understand? Some of us have not learnt the matter yet, although we have studied it for years.

136. Is that a thing that they would not practically know? Perhaps so; but if you gave them pen and paper they might not be able to write what they know. Part of the examination would be geometry, geology, mathematics, and surveying. Some men understand how to do these things, but could not describe them.

137. Look at page 37 of MacSweeney's book on the English Act, reference 3:—"Each Board shall make, from time to time, to a Secretary of State, a report of their proceedings; and of such other matters as a Secretary of State may from time to time require"? The '72 Act only gives certificates of service to managers. Then fifteen years elapsed to the passing of the '87 Act, when all managers were supposed to be competent, or to have this certificate of service. In the 1887 Act, they only granted certificates of service to under managers. In the Act, to managers and under managers certificates of service are to be given.

138. *Mr. Curley.*] Your reason for adhering to the clause in the Bill as it went from the Assembly is that many competent men, who have had long service, may be thoroughly competent, and yet could not go through an examination? Yes; it would be an injustice, and I for one do not want to see it done.

139. *President.*] Do you not think it is a good thing in future for all men to be examined; it saves all the present people? It provides for five years' experience.

140. Do you not think that future men should pass this examination? Yes; I believe in that. The Assembly had it "for the purpose of granting certificates of competency and service, the Board of Examiners shall be appointed, consisting of, &c."

141. That must be read with sub-section 8, which saves everything? I am not in favour of the Board granting certificates of service.

142. *Mr. Gregson.*] There is an agreement as to the constitution of the Board? Yes; the Board in England is under the direct control of the Home Secretary. They have 648,000 miners and others about collieries. Here we have 12,000 miners—perhaps less than that. In England there are so many different interests. There are only three miners on the Board here. The consequence in some cases has been that men are allowed certificates as far as the examination is concerned, while with others—working miners—who have no influence at court, the examination is made as strict as it possibly can be. We want fair play. The owners have no more right of representation any more than the miners. In an examination both parties ought to be represented by an equal number. Where there is a Board of nine, and only three of that

that

that Board representatives of the miners, the majority will appoint men who will look after their own interests. In the Board, as proposed to be constituted, there are six votes to three, and if you are Mr. ^{J. L. Fegan, Esq., M.L.A.} so and so's son you will get through. 26 Aug., 1895.

143. It is for the examiners to say who gets through? Yes; but there are six against three, when certain names are proposed to receive certificates of competency. Six against three.

144. What do you suppose their interest would be? To get the most competent men, not men with silver spoons in their mouths.

145. Would anybody on that Board have a different interest to that? I could not say until I see the names.

146. *President.*] You seem to think that examiners will be appointed who will favour their own party? Yes.

147. *Mr. Gregson.*] In what way could they do that? There are several names proposed, and you know how far their sympathies go with a certain class.

148. Say for example that their sympathies are with the mine-owners. In what way will that effect the competency of the Board of Examiners? Say that when this Board is appointed it is composed of six men who are in close compact with the colliery owners. As a man who takes a prominent part in Union organisations I come before the Board; through its compositions I am put through a far severer test than the son or nephew of one of these men sitting on the Board!

149. Is not that rather a good thing? I do not object provided the test is the same all through. If it is a friend he may be allowed to sit near to two of these examiners and be put through an oral examination. Something like this:—The next; your name is So and So. Oh, yes! How is your father? Fairly well thank you! A few questions are put, and he is allowed to go out of the door.

150. Do you know that that man is not as competent as the man who has had to go through the severe examination? I want him to go through the same ordeal as the other man, and by having three on each side you will be able to get competent men who will show no favour in any shape or form. It is a fact to-day that the granting of certificates has become almost exclusive to families of engineers. I hope that state of affairs will never come to New South Wales!

151. *President.*] Is that in England? Yes, in England. I want the class I belong to to improve too.

152. *Mr. Gregson.*] Should the composition of the Board be ten or seven? Having respect for the lives of the people I represent, I say that this Board is too large by three, and not fairly representative to appoint these examiners. In my opinion to get a properly representative Board the owners and managers and employees will do.

153. *Mr. Curley.*] You mean to say that the proposition laid down in the Bill so far as the Assembly is concerned, that gives both owners and workmen an equal opportunity with regard to the granting of certificates meets with your approval? I do; I am in favour of the Bill as sent from the lower House.

154. Will you kindly look at Rule 6 on page 4, sub-section 1, "Certificates of Service in case of Under-managers."

6. (1) A certificate of service shall be granted by the Minister to every person who satisfies the examiners either that before the passing of this Act he was exercising, and has since that date exercised, or that he has at any time within five years before the passing of this Act, for a period of not less than twelve months, exercised functions substantially corresponding to those of a manager or an under-manager in a mine?

That Rule has been agreed to by accepting the Councils amendments—the new Clause.

155. Will you look at rule 8, on page 3, "Qualification and attendance of engine man":—

8. Subject to the provisions of section nine of this Act in any mine which is usually entered by means of machinery, or where any shaft, plane, or level is used for the purpose of communication from one part to another part of a mine, and persons are taken up or down or along such shaft, plane, or level, by means of any engine, windlass, or gin, driven or worked by steam or any mechanical power, a competent male person not less than twenty years of age, and being the holder of a certificate of competency or certificate of service, shall be appointed for the purpose of working the machinery which is employed in lowering and raising persons therein, and shall attend for that purpose during the whole time that any person is below ground in the mine, and such person shall have charge of all ropes, chains, or tackle connected with such machinery. Where any windlass, gin, or machine used for any of the purposes aforesaid, is worked by an animal or by manual labour, the person in charge of such engine, windlass, or gin, or of any part of the machinery, ropes, chains, or tackle connected therewith, must be a competent male person not less than eighteen years of age. Where the machinery is worked by an animal, the person under whose direction the driver of the animal acts, shall for the purposes of this rule be deemed to be the person in charge of the machinery.

Dr. Robertson in his evidence before the Committee which I had the honor to be chairman of, conceded that point.

156. *Mr. Gregson.*] Where was that evidence given? It was given before my Committee on 4th April, 1894:—

1378. *Chairman.*] I suppose you desire that the most competent men should take charge of your machinery as engine winder? Yes; I am very particular about engine-drivers.

1379. You believe that they ought to thoroughly understand their work? Yes.

1380. Do you think it is sufficient for a man to know that he has enough steam, or is it better that he should thoroughly understand all about the pressure and so forth? He would be no worse for that knowledge, but an ordinary engine-driver has nothing to do with that. You can get boilers guaranteed for a certain amount of pressure, and you work with about half that. Every body who has expensive machinery would desire to put it under the charge of the most competent man?

1381. You have said that you were in favour of managers having certificates? Yes.

1382. Do you think that the underground managers ought to have certificates? Yes; but as a rule underground managers are taken from the coal face, and you must not expect in them the same amount of education that would be possessed by a trained manager.

1383. Do you know that such is not required even under the English Act? When I left England underground managers had not certificates; but underground managers do get certificates under the present Act.

1384. There is a clause which stipulates that underground managers shall have second-class certificates? Yes; I should be the first to agree to that, if you could prove that no injustice would be done to a deserving class of men. You take underground managers from the best men in the mine, and you must give them time for education, and see that no injustice is done to them. In that respect I have very little to add to the recommendation which I made in one of those reports of the Commission of which I was President, namely, that the examination to a large extent should be oral.

1385. Do you believe that an examination ought to be passed by a deputy? Yes; but all the examinations should be made as practical and as fair as possible.

1385½. You believe that a man who takes charge of £10,000 or £12,000 worth of machinery ought to be a competent man? Yes.

1388. And that he ought to pass an examination? Yes; to a certain extent only.

That does not bear out your statement? Perhaps not altogether.

J. L. Fegan, Esq., M.L.A. 157. *Mr. Curley.*] Do you know whether that is the law in any other Colony? I believe it is the law in Victoria. The engineman has sometimes to let down as many as 600 men, and we want a man who thoroughly understands his work. Where there are so many lives in jeopardy he ought to be a man who thoroughly understands his work. During the Broken Hill strike a man was examined as to his competency, and he knew so much that he pulled men over the guard. Two or three men were killed through his incompetency in managing his engine.

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158. Rule 8, on page 3, "Qualification and attendance of engineman" (*see Appendix A*). I understood you to say that the Assembly had agreed to that clause? No; the new clause. As the Bill left the Assembly that part of it should be retained. The Assembly have agreed to the new clause 8, on page 4; but not with reference to engine-drivers. We still adhere to the old clause 8.

159. This new clause 8, on page 4, with regard to the granting of certificates;—have the Assembly agreed to that? The old clause 8 we have not agreed to; but the new clause 8 was agreed to—"Granting of certificates of service to existing managers."

160. Rule 9, sub-sections 1, 2, and 3, on pages 4 and 5, the Assembly want to re-insert:—

9. (i) A certificate of service shall be granted by the Minister to every person who satisfies the examiners either that before the passing of this Act he was exercising, and has since that date exercised, or that he has at any time within five years before the passing of this Act, for a period of not less than twelve months, exercised functions substantially corresponding to those of an engine-driver.

(ii) Every such certificate of service shall contain particulars of the name, place, and time of birth, and the length and nature of the previous service of the person to whom the same is delivered; and a certificate of service may be refused to any person who fails to give a full and satisfactory account of the particulars aforesaid, or to pay such registration fee as the Minister may direct not exceeding that mentioned in the First Schedule to this Act.

(iii) The Minister may from time to time appoint a Board to examine candidates for certificates of competency, and may by regulations prescribe the mode of conducting such examinations and granting such certificates, and the conditions under which such certificates or certificates of service shall be held, or may be suspended or cancelled; and may from time to time make, alter, and revoke such regulations as aforesaid.

? Yes.

161. Rule 10, sub-section 1, on page 5:—

10. If at any time representation is made to the Minister by an inspector or otherwise that any manager or under-manager holding a certificate under this Act or under any Imperial Act is by reason of incompetency or gross negligence, unfit to discharge his duties, or has been convicted of an offence against this Act, the Minister may, if he think fit, cause inquiry to be made into the conduct of the manager or under-manager, and with respect to every such inquiry the following provisions shall have effect:—

(i) The inquiry shall be public, and shall be held at such place as the Minister may appoint by such District Court Judge, Police Magistrate, or Stipendiary Magistrate, or other person or persons, as may be directed by the Minister, and either alone or with the assistance of any assessor or assessors named by the Minister.

What have you done with that; has the Assembly agreed to that? No; that is a very important matter. For this reason:—Appoint a District Court Judge, Police Magistrate, or Stipendiary Magistrate, &c., with all respect to the ability of the gentlemen sitting as referees on questions affecting miners, they do not seem to get hold of them. I have great respect for Mr. Oliver, and Mr. Barton; but they do not seem to get hold of the technicalities of mining. Mr. Brunker seemed to get hold of them, and the field should be open for as good a man as we can possibly get.

162. You think that some outside persons could be got who would understand the technicalities of mining better? Yes; a retired colliery manager or inspector, or others. The field should be wide and open. It should not be limited.

163. Sub-section 5, of Rule 10, page 5:—

(v) The person or persons appointed to hold the inquiry in this Act section and in section eleven referred to as the court, shall, on the conclusion of the inquiry, send to the Minister a report containing a full statement of the case, and the opinion of the court thereon, and such report of, or extracts from the evidence, as the court may think fit.

What do you think of that? I think there is nothing in that. I think it is all right.

[Witness withdrew to be recalled later on.]

TUESDAY, 27 AUGUST, 1895.

[The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.]

Present:—

FRANCIS EDWARD ROGERS, Esq., Q.C. (PRESIDENT).

JAMES CURLEY, Esq.

JESSE GREGSON, Esq.

Adam Cook, Esq., President, Amalgamated Miners' Association of the Northern District, sworn and examined:—

A. Cook, Esq. 164. *Mr. Curley.*] What occupation do you follow? Coal-mining.

165. How long have you been identified with mines? About thirty-two years.

166. You went into a mine at a pretty early age? Yes; at 11 years of age.

167. Was that in the United Kingdom? Yes; in Scotland.

168. How many mines did you work in there? In about half-a-dozen, I suppose.

169. Can you give us the names of them? I worked in the Town Hill Coal-mine, and in the Logally Ironworks Company's Mine, and one or two others.

170. Have you worked in mines in this Colony? Yes.

171. How long have you been out in the Colony? About sixteen years.

172. And what mines have you worked in out here? I have worked at Joadja Creek and Hartley Vale Shale-mines, and Coal-mines in the Northern District.

173. What coal-mines have you worked at in the Northern District? In the Co-operative Mine, Hetton, and in the Newcastle Wallsend Colliery.

174. You are President of the Amalgamated Miners' Association? Yes.

175. How long have you held that position? For about four years.

176. Have you held any prominent positions in connection with the miners' lodges? Yes; all of the offices in connection with the miners' lodge: all positions with the exception of treasurer. 177.

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177. You have held the position of secretary, I presume? Yes.
 178. And the position of delegate? Yes.
 179. And the position of chairman? Yes.
 180. And of check inspector? No; I have never acted as check inspector.
 181. Have you given evidence before in connection with the Coal Mines Regulation Bill? Yes; on two different occasions.
 182. Before Select Committees? Yes.
 183. What Select Committees have you given evidence before? At one appointed by the Upper House, and one by the Legislative Assembly.
 184. Upon the last occasion what Select Committee did you give evidence before? The Committee of which Mr. Pegan was Chairman.
 185. Is that a copy of the evidence taken before that Committee (*handing witness evidence*)? Yes; I see my name here, and I was supplied with a copy something similar to this, and the evidence is correct.
 186. You have looked over the evidence? Yes.
 187. Have you also read over the Bill that passed the Assembly some time ago? Yes; I have read that Bill.
 188. You have read the latest Bill? Yes.
 189. Is there any material point in connection with the evidence that you have given that you would like to refer to again? Well, I do not know that there is very much. I think I explained myself as clearly as I could on the last occasion, but there is one point in connection with the ventilation. On that occasion I said I was a thorough believer in the 150 feet per man minimum. I made the following statement:—

The first matter that I should like to touch upon, and which I think most important as affecting the health and comfort of the men, is the question of ventilation. A majority of the miners in the district I belong to would be perfectly satisfied with the alteration provided for in the Bill recently before the Legislative Assembly. I am a thorough believer in the 150 foot per minute per man minimum. I think that is the least quantity of air that ought to be guaranteed for sanitary purposes. I believe there is considerable difference of opinion about bratticing and short pillars. I am a believer in short pillars. I think it would be a great deal better, and it would be satisfactory to the majority of the miners, if cut-throughs were made not more than 20 or 25 yards apart at the utmost. Some people say that that would entail extra expense to the proprietors, but I think that would be counterbalanced by other benefits. In most of the collieries they have a system of taking out the pillars. In several of the collieries in the district which I belong to it is the custom when taking out the pillars to have extra cut-throughs cut across the centre of the pillar, and take one-half of the pillar down and leave the other half of the pillar up. But I maintain that these extra cut-throughs would not be necessary if the pillars were shortened. I think it would be a great advantage both to the miners and to the proprietors. If the 150 feet of air was always confined to the headings near the working-places, it follows, as a matter of course, the working-places would be kept free of powder smoke and impurities. There are great complaints in the northern district about miners filling dirty coal, and in several of our seams in the northern district there is a considerable number of bands and other refuse. There are the twopenny bands, and brass and kerosene, and other refuse in the seam, and the coal, as a general rule, is very difficult to get. In fact, you can scarcely get any coal without using a considerable amount of powder, and the place is always pretty well filled with smoke. If the air was kept sweeping along the heading nearest the working-places they would be kept free of powder smoke, and you could get clean coal. Men are sometimes punished severely for sending up small quantities of dirt in the coal. As regards the question of bratticing, it is not a question of expense altogether, though of course this has to be taken into consideration. It is not altogether what we should like, but what we can get. That is the most important consideration with me. I think it would be difficult to take the bratticing up the bord where there is a very soft roof. The roof would be coming down and interfering with the bratticing, and the air would be escaping. Some of our seams are between 8 and 9 feet high. I am most decidedly in favour of shortening the pillars. It is absolutely necessary that they should not be more than 25 yards apart, because in my experience I have seen men working at least 45 yards in front of the current of air. Under the present system the cut-throughs are supposed to be 35 yards apart. But after driving that distance, I have seen where another 2 yards had to be taken out for the width of the cut-through, and then drive 8 or 9 yards through the pillar, making a distance of 46 yards, before a fresh current of air could be got. As regards the ventilation question, there is no matter which has been talked about more freely amongst the miners for a number of years than the miners being allowed to travel on the return air-way. That is a thing which ought to be absolutely prohibited. I believe it is the custom in some collieries for men to be allowed to travel in return air-ways, but we know that the powder smoke and other impurities go into that air-way, and it is bound to be injurious to men travelling in it after a hard day's work.

I see no reason to alter my opinion since. There is a lot said about this air being taken into the working places, about bratticing and shorter cut-throughs. I am in favour of the 25-yard cut-throughs instead of bratticing each bord up. There is no necessity for that unless there are signs of gas. A bit of bratticing at the end of each bord so as to catch the air to go into the bord would be a very great improvement indeed, and keep the places clear of powder smoke. I should like to see 3 yards of bratticing in each bord at the entrance to the bord.

190. Do you think that would be an item of any serious cost to the colliery? No; I do not see where the cost would come in. It would be a mere trifle. If the place was kept free of powder smoke the proprietors would get cleaner coal. The brattice would have to protrude on to the heading in order to accomplish this.
 191. The question of cleaning the coal is a matter you have given evidence upon already? Yes, and I have nothing to add to that.
 192. In your previous evidence, have you referred to the number of men in a split? I do not think there was much said about that. I was satisfied with the alterations made in the Legislative Assembly.
 193. I presume that you know from what has come under your notice that numbers of the mines in the northern district contain fire-damp? Yes, judging from what has taken place at some of the collieries, and by the reports in the newspapers, also by the complaints made to the Miners' Association.
 194. Have you seen the correspondence that passed between Mr. Mackenzie, Examiner of Coal-fields, and myself some time ago [*see Appendix G*]? Yes.
 195. It deals principally with ventilation, gas explosions, and general matters pertaining to the regulation of the mines? Yes.
 196. Does it not bring under the notice of the Examiner of Coal-fields all these matters in a very pertinent way? Yes.
 197. Do you know, Mr. Cook, the year in which the last Coal Mines Act came into operation? In 1876, I believe.
 198. We have had no amended mining legislation since then that has actually become law? No.
 199. Measures have passed the Assembly on former occasions? Yes; several have, and that is all the length they have got.
 200. Do you think, from your past experience, that it is time that amended legislation should take place? Yes, I do.
 201. And that that legislation should be of an effectual character? Yes, certainly.

A. Cook, Esq. 202. Have you given any evidence with regard to the minimum size of pillars? I do not think I said very much about that, because I think that will have to depend on the nature of the coal and the nature of the strata above. It might be possible to have a minimum, say 6 yard pillars, in width.

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203. Do you know that the Bill stipulates for a minimum of 8 yards? I take it that is under tidal waters.

204. Will you look at page 32 of the Bill:—

Rule 46. In mines not under river or ocean or tidal waters worked on the pillar and stall system, where it is intended to remove the pillars, the stall or bords shall not exceed in width 8 yards, and the pillars shall not be less than 8 yards wide. Where it is not proposed to remove the pillars, they shall be of such dimensions as shall be necessary to support the roof. In mines worked on the long-wall system substantial supports shall be erected sufficient to protect the workmen. In mines worked on the Welsh bords or double-stall systems good, substantial, and sufficient pack-walls shall be built, and a sufficient number of props set on each side of the pack-walls.

I was under the impression that the minimum laid down was 6 yards and 8 yards under tidal waters. This must of necessity depend on the nature of the roof, and the nature of the coal.

205. Is it not better to be on the safe side? Most decidedly.

206. Do you think there is any serious harm done if the minimum is stipulated for 8 yards? Of course there are several things to be taken into consideration. If the roof is good, it would be a waste of mineral to allow that extra 2 yards to be taken in.

207. The pillars are removed later on? Yes; but there is a probability of losing pillars, because there is not sufficient to begin with.

208. Is not that a substantial reason why they should be 8 yards? Yes.

209. What has been the usual custom in the collieries you have worked in;—what size pillars have been left? Where I am working now the pillars are 8 yards in width.

210. Where is that? At the Newcastle-Wallsend Colliery. Afterwards these pillars are taken out.

211. Sometime they put their supports in packs timber and refuse? Yes. I have not had much experience in the Wallsend Colliery, but I was eleven years in the Co-operative Colliery, and they were not particular there. The miners sometimes could have walked through the pillar.

212. Was that not under circumstances where the management had the whole business in their own hands? Most decidedly. It was the overman's duty to see the pillars were kept safe.

213. Under that system have you ever known any serious fall to take place in the Co-operative Colliery? Yes; I remember one about eight or nine years ago. A very large fall it was, too.

214. What was the effect of that fall; did it travel over those weak pillars? Yes; it closed up a considerable portion of the mine, threw men out of employment, and put the management to serious expense. Men had to go idle, and caviel three or four men in one bord. As a general rule two men only work in one bord. The men had to be double-banked. This place had to be won out again, and that was a lot of expense to the management.

215. That meant the internal demoralisation of the mine for a time? Yes; to a very great extent.

216. With regard to the weak pillars in that instance, would the great bulk of them be lost forever? Yes; completely lost.

217. Would that not be a loss to the owner of the coal for the time being? Undoubtedly.

218. A loss to the Company? Yes.

219. And would it not be a national loss as well? Yes; there is no question about it, because the coal was of first-class quality, and through the disaster it was an impossibility to get that coal at any future time.

220. If pillars had been left there of a sufficient size to have supported that roof, and if they did come away, would not the great bulk of that coal have been got afterwards? If the pillars had been sufficient the fall would not have taken place at all.

221. In the working out of pillars, a strong roof will stand for a considerable time, will it not? Yes.

222. It will stand until you have worked out a large sectional area with pillars in it, and after you have taken them out it will still stand? Yes.

223. When that occurs, is there not a tremendous amount of pressure when that roof makes a break? Yes, because there is such a wide area.

224. Will it not then require a good substantial pillar? Yes, it would.

225. Is not that a reason why sufficient pillars should be left? Most decidedly; but I am not able to say what is sufficient. It would depend on the nature of the coal and the nature of the strata. I should say not less than 6 yards.

226. With regard to the strata, where a large area like that is left, would not a 6-yard pillar sometimes be too weak for to break that off when it came to be an extensive area of heavy weight? In many cases it would.

227. Even where the strata is thin, but you have a strong roof, with a great pressure all at once you must have some substantial power to break it off when it falls? Yes; pillars should be strong enough to prevent that taking place.

228. Have you heard of other collieries in the district where falls have taken place in a similar way with similar results, and even worse results? I have heard of one with worse results.

229. Where was that? At the A.A. Company's mine, but I have no knowledge of it except by report and what I have read in the papers; still it is quite enough to arrive at the conclusion that if sufficient pillars had been left the fall would not have taken place.

230. In the working out of pillars, the men rely on the main roads as their outlet to get away? Yes.

231. Is there not great danger to life when these pillars are left weak and a big fall takes place;—is it not liable to shut up the main way and prevent the men getting out? Yes, it is more liable with weak pillars.

232. Have you heard tell of falls in any other collieries;—have you heard of any creeps at Stockton? Yes, I remember something happening there about two or three years ago.

233. Have you heard of anything happening at Burwood? Yes.

234. Have you heard of any extensive fall at Wallsend? Yes.

235. Do you know whether the men have been thrown out of work at Stockton in consequence of a similar fall taking place there? Yes; the whole of the men at Stockton were thrown out in consequence of a threatened fall.

236. You mean as distinguished from a creep? Yes.

237. I would like to direct your attention now to this provision in the Bill with regard to working under tidal waters. You will find it on page 31, rule 42:—

In the case of working coal by the pillar and stall system under river, or tidal, or ocean waters, the workings shall be laid off systematically and carefully, and the size of the pillars shall be such as will afford ample support, after exposure

to the crumbling effect of the air over many years, and shall not be less than twice the width of the bords or coal wrought out between such pillars. The bords on one side of the headings, levels, or cross-cuts, shall, unless prevented by rolls or faults, be driven opposite the bord pillars on the other side of the heading, level, or cross-cut. The minimum width of the pillars of coal shall be 8 yards, and the maximum width of the bords or stalls 6 yards. And in no case shall the pillars under ocean or tidal waters be removed. A. Cook, Esq.
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I think that is a very wise and reasonable provision, because I do not think proprietors can be too careful when working under tidal waters. There is a double danger to people working below; they run the risk of being crushed and also of being drowned.

238. Supposing you heard that any colliery, situated under tidal waters, had pillars left 1 and 2 yards in thickness, and bords a width of 10 yards in some cases—that is, bords had been worked a width of 10 yards, and pillars in some cases 2 yards, would you consider that colliery had been worked in anything like a careful way? Certainly not.

239. How would you describe the management of that mine? No punishment too severe could be inflicted on any one that allowed such a thing to be done.

240. If a reference to something of that kind can be found in one of the Colliery Commission's Reports, referring to a colliery where that has been done, do you not think that is the best proof that a time has come for a change in that respect? I should think fresh legislation is very necessary if that is correct.

241. Any manager of a colliery would be unfit for his position where that is done? Yes.

242. Can you conceive that a manager may be forced to get out in the early stages of a colliery quantities of coal, irrespective of how the coal is worked? I suppose the colliery manager is under the control of a Board of Directors, but it is the duty of the manager to see that the mine is worked properly. I cannot think of a manager being compelled to do anything of that kind.

243. Is it not possible that the directors might be anxious to get out coal, and that the manager might have to do this to keep his position? Probably that might be the case, but I do not think that any level-headed manager would do a thing of that kind.

244. *President.*] A manager like that would be a sort of criminal, would he not? Yes; I should think he would rather give up his position, but there are managers who would do that, or anything else the directors told them.

245. You have already given us an instance of where pillars have been left too thin, and in consequence large quantities of coal have been lost;—I think you mentioned the Co-operative Colliery? Yes.

246. Put aside the question of safety;—was that not a big commercial loss to the company? It must have been. There is no question about that, I should think.

247. In the case of a colliery that is working under tidal waters, would not the directors have an opportunity of knowing this? I should think so.

248. Would they not have an opportunity of inspecting the mine and inquiring the width of the bords and working of the mine? Yes, they could get to know; but that shows the necessity for being extremely careful in driving the bords under the tidal waters. The bords should be driven by sights. The deputy gives you the line to go by that insures a uniform size.

249. That is absolutely necessary, is it not? Yes.

250. That would be a wise regulation in other cases, even on dry land, that they should be the width they are expected to be? Yes; in turning off a bord you may get 6 or 8 yards, but you do not get a uniform width, and you should get a uniform width as near as possible.

251. That would be bad management, would it not? Yes; certainly, sir.

252. *Mr. Curley.*] Have you heard of accusations being brought against miners being anxious to rob the pillars? Yes; but no case has come under my own particular notice. I have never seen miners rob pillars myself.

253. *Mr. Gregson.*] Who does rob them, then? Of course, if the pillars are robbed, the miner must do it.

254. *President.*] Have the miners any right to touch these pillars? No.

255. *Mr. Curley.*] Is this not a fact,—that the manager can come in at any time if he thinks the bord is going too wide, and put a mark on and say that the miner has to leave so much on in order to get the pillar a certain size? Yes, that is done.

256. And it is the miner's duty to follow that out? Yes; and if he does not do it he is liable to be dismissed.

257. Have you referred to the working hours? Yes; I did very particularly.

258. And you still are of the same opinion as regards the working hours? Yes; I believe there is a greater necessity now than ever.

259. *President.*] For what? For legalising the eight hours in connection with coal-mining.

260. What do you mean by legalising the eight hours;—do you mean to make it an offence to work longer? Yes; unless there is a creep or a fire, or other case of extreme urgency.

261. No one can compel a miner to work more now unless he chooses? No; not to my knowledge.

262. And yet you wish to take that choice from them? Most decidedly. When the liberty of the subject affects others I think his liberty should be taken away from him at once. We are supposed to work eight hours, but I question whether they do now, simply through the conditions imposed by the proprietors during the last year or two. Eight hours is quite enough to work underground, and if a man cannot obtain a living in this time it is time for him to give it up. There has been no trouble with the proprietors in connection with this matter.

263. *Mr. Curley.*] Do you know that there was a provision on this subject in one of the agreements between the proprietors and mine owners; I have the agreement here;—will you kindly look at clause 7, and tell me what it says (*see Appendix H*)? The daily hours for drawing coal shall be eight.

264. Was that obtained in a mutual way? Yes.

265. Is it not very difficult to control matters with regard to the uniform working of hours in consequence of tunnels at some of the collieries, and a few men being disposed to work any hours? Yes; it is a very difficult thing to control anything like that.

266. Is not that liable to lead to very serious danger in some cases? Yes; running in here and there any time they have a mind to. At the Hetton Colliery the system works first-class, and without any friction with the manager. There are two shifts, a front shift and a back shift. The front shift men are not let down before 6 o'clock and come back at 2, and the back shift is let down at 8 o'clock, and they come back again at 4 o'clock. At the Colliery I am working at now it is different, some of the men go

A. Cook, Esq. in at any time they like. This gives these men an opportunity to work ten or twelve hours a day to make a little more money, and the management, when any trouble comes, point out what these men are earning, which has an effect upon the others, and God knows where it might end.

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267. What is the rule with regard to a man coming to his work in the morning—is he supposed to see some mark to indicate that his place has been examined? I believe that is done at Hetton, but I am not aware that it is done at Old Wallsend.

268. Have you ever noticed any mark? No.

269. Have you been on the front shift? Yes; but I would not swear that it has not been done.

270. You have not observed any mark yourself? No.

271. Do you think that is a very necessary precaution to take? Yes; where there is the slightest appearance of gas it is very necessary. In tunnels where there is no sign of gas I do not think I would be anxious upon a provision of that kind, but where there are any signs of gas the places should be inspected before the men start work.

272. Even where gas is not given off, is it not possible it might be given off at any time? I would not like to say what is possible and what is not possible. It would be rather strange if there was gas where it was never heard of before.

273. You have heard tell of the gas explosion at Wallsend? I have. I believe two or three men have been burnt at that colliery.

274. *President.*] Does gas come so suddenly that you would not know anything about it? Gas may accumulate in the night, and the place may be standing full of gas in the morning. A miner going in with a naked light would cause an explosion, whereas the man going through before him would find out the existence of gas.

275. If the man does his duty the other man would not be allowed to go? Just so.

276. How many men are there employed in the Wallsend mine? Close upon 600 miners, I should think.

277. *Mr. Curley.*] Where this system prevails of men entering a mine as they please, and where gas is known to exist at these collieries, is that not a reason of itself why there should not be more firm discipline with regard to working hours? Yes; because where there is gas the man would not be allowed to pass a certain point until the deputy had reported.

278. *President.*] Why do you want to legalise the eight hours? Because it would be injurious to others in the district, if individuals are allowed to do as they please.

279. *Mr. Curley.*] Would a uniform starting point be made mutual with the men and the manager of the colliery? Yes.

280. Could not the management insist upon men coming to the mine in regulation fashion? Yes.

281. They could do so at present if they chose? Yes.

282. There is some reference in this Bill in connection with plans being submitted to some officer of the municipality. Will you look at Rule 28 of the Bill, section 5, on page 14.

(v.) Every copy or tracing as aforesaid, shall be deposited in the principle office of the Department of Mines and Agriculture, and, except as evidence in a Court, no copy or tracing thereof shall be furnished, nor information in relation thereto given, nor shall such plans or tracings be open to inspection unless the Minister shall order that any owner or lessee of the land or of the surface thereof, or the officer of any municipality whose rights or interests may be affected by the working of the mine be permitted to see such portion of any plan or tracing as affects the right or interest of such owner, lessee, or municipality.

I do not think that goes far enough to suit me. This simply looking at the plan would not be an advantage at all. I have some knowledge as far as the municipalities are concerned, and think that the officers of the municipality should have the right to make a periodical inspection, to see that the roads are left in a safe condition. That right is not here. An amount of damage has been done in the municipality that I live in through undermining streets, and completely ruining them in many instances. If the officer of the municipality could have inspected these places a great saving of damage would have been made.

283. With regard to the boundary of any abandoned mine, do you consider that an absolute necessity;—will you look at clause 3, of rule 28, on page 14:—

(iii) The plan of the workings shall have delineated on it the position of all shafts and boreholes sunk within the colliery surface boundary, with the depth to and thickness of the coal-seam passed through written alongside any shaft or bore-hole; and in addition to the plan hereinbefore provided for, there shall also be so provided, if required, a surface plan on the same scale, showing thereon all streets, roads, buildings, creeks, rivers, bays, swamps, navigable waters, and limits of any tidal waters within the said boundary.

I see nothing wrong with that as it stands.

284. You think that that subsection should be embodied in the Bill? Yes, decidedly.

285. The reference here to the Crown having lost revenue, is it not necessary to have a clear definition of boundaries upon plans? I think so.

286. May not a man who is working close to the boundary of an abandoned mine come upon a lodgment of gas through having exceeded the boundary;—if the boundaries are not on the plan, would it not be possible for the colliery to work into that? Yes.

287. Supposing it were standing full of water or a flooded mine, would there not be danger from that source as well? Yes; if they thought it was all solid coal there might be a danger from that source.

288. With regard to the eight-hour business, have you noticed anywhere where the Council has given reasons to this effect, that the miners were contractors, and could almost leave the mine when they pleased? I believe statements something similar to that have been made.

289. Can a miner leave a mine when he pleases in the way that is intended to be conveyed? I do not think he could without running the risk of being discharged.

290. If the miners were to act in that way, and the output of the colliery was interfered with, what would take place? A lot of them would be discharged from the colliery.

291. Then, you say they cannot do anything of the kind? No; in very few of the collieries in the district, if at all. In Hetton a man cannot get up the pit until certain stated times fixed by the manager.

292. With regard to the coming out of the mine, is it not absolutely necessary that the time should be stated when men should come out? I think it better to have a stated time, not two or three now and two or three at another time. I am a thorough believer in the eight hours. It is quite long enough for men to work. I go for legalising it because it is quite long enough for any man to work. If the proprietors were to take a stand and say that the men should work nine or ten hours, probably the men would have to do it.

293-4. *President.*] I do not think that is likely? No, perhaps not; but they would have the power to.

295. *Mr. Curley.*] Will you look at the reasons given by the Council with regard to clause 21 of the Bill, and the remarks upon the Stockton Mine, to be found in the Minutes of the Proceedings of the Legislative Council, 13th June, 1895, page 224—

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Insists upon its omission of clause 21, and the insertion of a new clause in lieu thereof,—because the new clause, which is an exact copy of section 41 of the British Act of 1857, provides all that is necessary to enable an Inspector to do his duty if he understands his work, whilst, on the contrary, if clause 21 were retained, it would hand over in an arbitrary way the whole of the mining operations of this Colony to the whim and caprice of, it might be, an incompetent Inspector, and would give him too absolute a power, which is undesirable. The power he possesses now under the present Coal-fields Regulation Act is quite sufficient, if not too extensive as it is, whilst the substitution of section 21 in lieu of the law as it now stands would endow the Inspector with such substantial power that, at his will, he could ruin any mining company if he thought fit. All he would require to do, without rhyme or reason, would be to announce to the colliery manager that it was his wish the men should be withdrawn from the mine, in which case 400 or 500 men would be thrown out of employment, and a repetition of what occurred at the Stockton Mine possibly be the result. In that case the mining authorities declared the pit unsafe, ordered the men to be withdrawn, and the men themselves, after some enforced idleness, petitioned the manager to be allowed to go back to work, as the mine was safe, notwithstanding the opinion expressed to the contrary by the mining authorities. The men went back to work, and have been at work for the last two years, in the face of the order that they should be withdrawn, and the fact that a prosecution was instituted against the manager for not complying with the mining authorities orders, the manager being fined for working, what was then alleged, a property which was unsafe, but which, as has already been stated, has been at work for two years since, and is at the present moment in operation.

Do you think that the powers of inspectors should be pretty well defined, and that they should have substantial authority? Yes, under certain conditions, but not to interfere materially with the management of the mine. The inspector should have power to order the withdrawal of the men. I believe that in the present Act he has the power to request the manager to withdraw the men.

296. Will you look at section 21 and subsections 1 to 5, on page 8 of the Bill, "Powers of inspectors, &c.," and Rule 7, on page 25, "Withdrawal of workmen in case of danger,"—

21. An inspector under this Act shall have power to do all or any of the following things, namely:—
- (i) To make at least once in each month such examination and inquiry as may be necessary to ascertain whether the provisions of this Act relating to matters above ground or below ground are complied with in the case of any mine.
 - (ii) To enter, inspect, and examine any mine, and every part thereof, at all reasonable times by day and night, but so as not to impede or obstruct the working of the mine except when absolutely necessary.
 - (iii) To examine into and make inquiries respecting the state and condition of any mine or any part thereof, and the ventilation of the mine, and the sufficiency of the special rules for the time being in force in the mine, and all matters and things connected with or relating to the safety of the persons employed in or about the mine or any mine contiguous thereto, or the care and treatment of the horses and other animals used in the mine.
 - (iv) To exercise such other powers as may be necessary for carrying this Act into effect, and shall enter in a book to be provided by the owner or manager a report of any defect, or anything in or about the mine tending to endanger the safety or health of the miners employed therein.
 - (v) To require the manager to withdraw the men from the mine if at any time he finds that, by reason of inflammable gases prevailing in any mine or part thereof, or of any cause whatever, the mine or the said part is dangerous; and no person shall, except so far as is necessary for exploration or inquiry into the cause of danger or the removal thereof, be readmitted into the mine or such part thereof as was found dangerous, until the same is stated by the Inspector to be safe.

Every person who willfully obstructs an Inspector in the execution of his duty under this Act, and every owner, agent, and manager of a mine who refuses or neglects to furnish to the inspector the means necessary for making any entry, inspection, examination, or inquiry under this Act, in relation to the mine, shall be guilty of an offence against this Act.

Rule 7. If at any time it is found by the person for the time being in charge of the mine, or any part thereof, that by reason of inflammable gases prevailing in the mine, or that part thereof, or of any cause whatever, the mine or that part is dangerous, every workman shall be by such person withdrawn from the mine or part so found dangerous, and a competent person appointed for the purpose shall inspect the mine or part so found dangerous, and if the danger arises from inflammable gas, shall inspect the mine or part with a locked safety lamp; and in every case shall make a true report of the condition of the mine or part; and a workman shall not, except in so far as is necessary for inquiring into the cause of danger or for the removal thereof, or for exploration, be readmitted into the mine, or part so found dangerous, until the same is stated by the person appointed as aforesaid not to be dangerous. Every such report shall be recorded in a book which shall be kept accessible to workmen at the mine for the purpose, and shall be signed by the person who made the inspection.

Do you think that is a satisfactory reason for the Council to assign with reference to the Stockton Colliery? No, I do not. I think that is a power that ought to be vested in the Government. I do not think an inspector would do anything detrimental to the proprietors or the miners. Where life is concerned the position is an urgent one, and inspectors ought to have the power to order the men out of the mine.

297. Will you look at the letter on the Stockton Colliery, dated 8th February, 1894, being a report from Mr. John Dixon and Mr. William Humble, Inspectors of Collieries, to Mr. John Mackenzie, Examiner of Coal-fields, to be found in the Appendix to final report of the Select Committee, presided over by Mr. Fegan (*see Appendix I*); also look at the 7th clause of the letter from Mr. John Mackenzie, Examiner of Coal-fields, to the Under Secretary for Mines and Agriculture, dated 21st February, 1893, to be found on page 43 of the Appendix to the same report:—

7. In conclusion, I beg to state that I have seen Messrs. Dixon and Humble's report of 18th instant on the innsh of water, &c., which I fully agree with and forward you herewith. The men having been withdrawn by the manager, work cannot be lawfully resumed until I or an Inspector state that the mine is safe, which we cannot at present say.

I have, &c.,

JOHN MACKENZIE,
Examiner of Coal-fields.

The Under Secretary for Mines and Agriculture.

Do you think the men were withdrawn there without rhyme or reason? No; I do not think so.

298. It was a grave and serious matter? Yes.

299. The manager withdrew the men in the first place? Yes; because the danger was of such a glaring character that he could not get away from it.

300. And the inspector stated that the men were not to resume work until the mine was safe? Yes.

301. Look at the letter dated 8th February, 1894, the report in connection with Stockton Colliery from Mr. Dixon and Mr. Humble. What do they say with regard to the subsidence there. Read the 6th clause:—

6. Since our previous inspection, a portion of the old workings in the No. 3 District, amounting to an area of about 7 acres, has fallen and caused a subsidence of the surface at the junction of Maitland-street and Fullerton Cove Road.

We travelled the outskirts of a considerable portion of this fallen ground, and did not hear anything indicative of further disturbance, neither did we see any sign of water coming from the fallen ground.

To-day we walked over the surface where the subsidence has taken place. The greatest depression appears to be at the junction of the two streets, many of the kerbstones being split and disjointed, and in several places the asphalt guttering

A. Cook, Esq. guttering was fractured. The retaining-walls, stone steps, and fences of several houses in both streets bore evidence of disarrangement, the two former being fractured, and the latter thrown from their original upright position.

27 Aug., 1895. —? It shows there must have been some queer work going on below.

302. Also look at, and read, the 7th clause of the same report?—

7. Before leaving the colliery to-day, we entered the following report in a book at the colliery :—

Stockton Colliery, 8 February, 1894.

Our inspection of the above colliery on Tuesday and Wednesday, the 6th and 7th instant, has revealed nothing that would justify us in altering the opinion expressed by us, and entered in this book on the 13th February, 1893, and referred to by us on the 14th December, 1893.

—? It only shows that they were not in a position to report that the mine was safe, and still the men had resumed work.

303. *President.*] Were the men made to do so, or did they do so of their own accord? It was at the men's own request. There was a general inspection made, the employers and men being both represented, and they decided to resume work.

304. *Mr. Curley.*] Has there been a subsidence there since? Yes; a creep.

305. It has actually come to the surface? Yes.

306. You think that the powers of inspectors should be pretty definite? Inspectors should have absolute power in cases of that kind. Nobody should be in a position to question it at all.

307. Have you known of any serious collapse of a shaft when the men were at work and in the pit at the time? Yes; at South Waratah a couple of years ago.

308. Do you know whether that took place on the 28th April, 1893? I cannot say the date.

309. You know that it did take place? Yes.

310. As an executive officer of the Miners' Association that came under your notice by a communication from the local secretary of the colliery? Yes; and we communicated with the Mines Department.

311. Do you know how long some men were in the pit before they got up that day? The greater part of the following night—a considerable time after the accident happened. They had to be drawn up the air-shaft.

312. Do you know, in connection with that communication, whether any reference was made to a creep bordering upon the furnace shaft where the men had to come out? Yes; that was brought under our notice as well.

313. These two matters were brought under the notice of the Examiner of Coal-fields at the time? Yes.

314. Do you know whether the collapse of that shaft prevented the men from working? Yes; the men were about three or four months out of work.

315. Are you sure that is the correct time? I think it was about that time.

316. With regard to this alleged creep near this furnace shaft, do you not think that shafts should always be well secured by a substantial pillar of coal between them? Most decidedly. Of course the shaft is the outlet for the whole of the coal got by the miners. It is good management to see that this is done.

317. Do you know whether circumstances of that character ever arose in connection with the Newcastle Company's colliery? I have no knowledge of it.

318. *President.*] A good manager would know his duties in this respect? Yes; he ought to.

319. There would be no object gained by his putting the shaft in any dangerous place? It is only after the shaft has been sunk and they are taking out coal that they do not leave sufficient support near the shaft, and it threatens to collapse until it collapses altogether. We assume that that was the cause of the collapse of that shaft.

320. *Mr. Curley.*] It might have been liable to have closed in the furnace-shaft altogether. It might have been.

321. Will you look at the provisions in the Bill for shafts in section 43 on page 21.

43. (1) After the commencement of this Act, the owner, agent, or manager of a mine shall not employ any person in the mine, or permit any person to be in the mine for the purpose of employment therein, unless the following conditions respecting shafts or outlets are complied with, that is to say :—

- (a) There must be at least two shafts or outlets, with which every seam for the time being at work in the mine shall have a communication, so that such shafts or outlets shall afford separate means of ingress and egress available to the persons employed in every such seam, whether the shafts or outlets belong to the same mine or to more than one mine.
- (b) Such shafts or outlets must not at any point be nearer to one another than fifteen yards, [and there shall be between such two shafts or outlets a communication not less than four feet wide and six feet high, and in the case of communications made after the commencement of this Act between shafts or outlets, not less than six feet high.
- (c) Proper apparatus for raising and lowering persons at each such shaft or outlet shall be kept on the works belonging to the mine, and such apparatus if not in actual use at the shafts or outlets shall be constantly available for use.

The Bill provides 50 yards, the Council amended it to 15 yards, and the Assembly put it at 30 yards as a compromise :—do you think that is anything like a reasonable distance? I prefer the 50 yards myself.

322. A colliery like the Metropolitan Colliery at Helensburg is a great depth? Yes.

323. Would it require a substantial pillar in a case of that kind? Yes.

324. And if we are to have collieries like that proposed at Cremorne, it will require a great deal more? Yes; a great deal more than 15 yards. In the event of a creep affecting one shaft, I think that under ordinary circumstances it might be expected to find its way across 15 yards of a pillar and affect the other shaft; whereas, if 50 yards were left, it would be an absolute impossibility for the other shaft to be affected, and so nothing of that kind could take place.

325. Have you had any knowledge of taking out pillars in England or Scotland? No.

326. With regard to the question of check-weighing, have you given evidence on this subject? Yes; I have.

327. Do you still consider that the appointment of a check-weighman should entirely be in the hands of the men, as provided for in this Bill? Yes, I do. The men pay the check-weighman, and they should have the right to make the selection. I do not see that the proprietors have anything to fear from anything of that kind, because his duties are defined by law, and they can remove him at any time if he violated the law.

328. With regard to the check-weighman being selected under the present system from the employes of the colliery, have you known any instance where that was done and the colliery stopped work for a few weeks, and upon work being resumed the check-weighman was again objected to as not being an employe of the colliery? Yes; not very long ago at the Lambton Colliery in Newcastle.

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329. Did the Lodge Secretary communicate it in any way? Yes; he did.

330. Have you the communication with you? Yes.

331. Will you please read it? Yes.

Mr. James Curley, Miners' General Secretary,—

Now Lambton, 17 May, 1895.

Dear Sir,

I am directed by my lodge to forward to you a motion passed by the Lambton miners, on 15th May instant:—
 "That the district officers use every endeavour in their power to have a clause inserted in the new Coal-mining Act, whereby the employees of any colliery may have the power to appoint any man to fill the position of check weighman, whether he be an employee or not of the same colliery."

The reason of this motion is in consequence of the action of the management of the Lambton colliery in the case of Treharne Evans, after the stoppage of the colliery for five weeks, the management did not consider him (T. Evans) an employee of the colliery, and refused to recognise him as one to be nominated for the position of check-weighman.

My lodge consider it a great injustice to anyone who may be appointed to such position to be cut off without any redress.

Yours, &c.,

DAVID PATERSON,
 Secretary.

332. That communication is from the Lambton Lodge Secretary? Yes.

333. Do you think it is also necessary that each of the parties in the mine should contribute their share of the payment to the check weighman? Most decidedly.

334. Are there not some cases where miners are paid for large and small coal filling away together? Yes; at Wallarah and at the New Lambton tunnel.

335. Do you think that the men should also have the right to be paid by weight? Yes, of course.

336. Do you think that the operation of this Act should not apply (say) to a limited number of men. The Assembly says twenty men, and Council amend that to thirty men. Sub-section (1v), of rule 38, says:—

(iv) Where it is proved to the satisfaction of the Minister, in the case of any mine or class of mines employing not more than twenty persons under ground, to be expedient that the persons employed therein should, upon the joint representation of the owner or owners of any such mine or class of mines and the said persons, be paid by any method other than that provided by this Act, such Minister may, if he think fit, by order allow the same either without conditions or during the time and on the conditions specified in the order.

—? I think every miner ought to be paid by weight.

337. Do you know of a colliery where a demand was made to be paid by weight? Yes; at the Northern Extended Colliery, or Gartice.

338. Was the manager approached on the subject by the men? Yes.

339. Was there a document sent requesting this to be done? Yes; I believe so.

340. And the manager declined to do it? Yes, he declined.

341. And the matter has been referred to the Minister? Yes.

342. What was his reply later on? I have a copy of his reply.

343. Will you please read it?

Sir,

Department of Mines and Agriculture, Sydney, 20 August, 1895.

Adverting to my letter of the 3rd ultimo, in reference to the mode of payment at the Gartice Colliery, I have the honor, by direction of the Secretary for Mines and Agriculture, to inform you that in view of the opinion of the Attorney-General there appears to be no power to compel the owners of this colliery to pay by weight unless they choose to agree with the miners to pay them according to the weight of the mineral gotten.

I have, &c.,

HARRIE WOOD,

Under Secretary

(per P.H.O.)

James Curley, Esq., Secretary, Amalgamated Miners' Association, Newcastle.

344. It appears that under the present Act there is no power to pay by weight? Apparently not.

345. The general custom throughout the district is, as a rule, to pay by weight? Yes; that is the general custom of the district at the present time.

346. Has not this same proprietor been appealed to on former occasions? Yes, repeatedly to my own knowledge. I have interviewed him some years ago with the other district officers.

347. Do you know what was done in connection with the latest request;—do you know of any men being discharged? Yes, one in particular. There might have been more.

348. Do you remember there were four? I know of one; probably there were four.

349. Do you know of a man named Bradley? Yes, well.

350. Do you know that he and his mate were discharged? Yes, now I come to think about it.

351. Do you know whether his mate was reinstated? Yes, I believe so; but not Bradley.

352. Do you know a party by the name of Taylor, who was delegate for that colliery? Yes; I think I remember that gentleman.

353. Do you know whether Taylor and his mate were discharged as well? I cannot bring it to my recollection just now.

354. Do you know that Taylor was a delegate? Yes.

355. Might he not have been discharged without your knowledge? I think it would have been brought under my notice as an Executive Officer, but I forget the names just at present. I know that he was delegate.

356. Mr. Gregson.] You have had sixteen year's experience in coal-mining in Scotland, Mr. Cook? Yes.

357. In what part of Scotland was that? In Fifeshire.

358. What was about the thickness of the seam there? The seams vary very much. They range from 3 feet thick up to 6 and 7 feet.

359. What was the thickness of the seam you were working in? About 5 feet thick, but it was worked on the longwall system.

360. All longwall? Yes; most of the pits there were worked on the longwall system.

361. Have you ever worked bord and pillars there? Only as a boy.

362. What was the depth of the shaft? About 300 feet.

363. Do you think from your experience in New South Wales that there is any material difference in the conditions of working here and the parts of England you know? Of course my experience in the old country was confined to the long-wall system, and I have not seen any of that in this country.

364. In that respect there is a difference? Yes; there is a considerable difference there.

365. Is there any other difference you can call to mind? It appears to me that miners take a great deal more out of themselves in this country than they do in the old country.

366. Do they work harder? They appear to me to do so. I never saw men in the old country without a shirt of some kind on, but here they work without anything on in the shape of a shirt.

367.

- A. Cook, Esq. 367. What would be the temperature of the workings at home? That I cannot say. There was always a good circulation of air where I worked in the long-wall. There is very little difficulty in ventilating a mine under the long-wall system.
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368. I wish to know about the temperature;—what would be the average temperature there? I cannot tell you.
369. It is very much colder there? Yes.
370. Would not that explain the difference in the clothing you have referred to? No. So far as the temperature is concerned I do not think there is very much difference between the old country and this country.
371. What is the average temperature here below ground? I suppose it is between 66 and 70 degrees.
372. Is not that summer heat in the old country, where you come from? Pretty close up to it.
373. Do you think that a man's stamina is as good here as in the old country;—that he is capable of doing hard work here as well as in the old country? I think so.
374. That he does work here as well as in the old country? Yes; he ought to do as good a day's work.
375. There is nothing to prevent him doing so here—climatic conditions or otherwise? On top a man might not be able to do as good a day's work here, but I do not think that has much to do with the work below; that depends on the fans and furnaces.
376. If the temperature is naturally cooler in England than here, would it not make a difference down below? I do not think it would make very much difference. Of course the further you go down the warmer it gets. The temperature on the top will have very little to do with the air below.
377. You cannot cool the air after it gets into the mine;—you seem to think the temperature would be reduced? I cannot speak from a scientific point of view, but I do not think there is any difference.
378. A miner here is under no worse conditions than in England? I do not think so.
379. That being the case, do you think that the provisions in the Coal Mines Regulation Act as obtaining in England are inapplicable here? I think a few of the conditions could be improved upon.
380. You do not think on the face of it that it is wrong? I would be prepared to accept the English Act with a few improvements.
381. Are there any conditions in the Act that would make it unworkable in this country? I suppose it could be made workable even as it stands at present.
382. Are there any reasons in your knowledge that would prevent the present Coal Mines Act of Great Britain being worked here? I do not know of anything to prevent it being carried out here.
383. There are no conditions whatever, as far as you know? I do not see anything in the conditions of climate or other things to prevent the Act working here.
384. You would rather remain under the present Act than have the English Act? Yes; rather than have the English Act in its entirety working here.
385. With regard to the provisions in the proposed Bill for ventilation—that will include the minimum, and the distance of the cut-throughs, and the bratticing, and all the different arrangements the Bill seeks to provide for giving miners ventilation? Yes.
386. You have, I suppose, read the English Coal Mines Act? Yes, but not very carefully.
387. Does that Act contain any of these provisions? I know it does not provide for a minimum.
388. And nothing about cut-throughs? Yes.
389. And nothing about bratticing? I believe that is correct.
390. What does the English Act provide? An adequate amount.
391. What do you understand by the word "adequate"? Sufficient.
392. I will read rule 1 of section 49 on page 76 of MacSwiney's work on the English Act:—

VENTILATION OF MINE.

Rule 1.—An adequate amount of ventilation shall be constantly produced in every mine, to dilute and render harmless noxious gases to such an extent that the working-places of the shafts, levels, stables, and workings of the mine, and the travelling roads to and from those working-places shall be in a fit state for working and passing therein.

In the case of mines required by this Act to be under the control of a certificated manager, the quantity of air in the respective splits or currents shall at least once in every month be measured and entered in a book to be kept for the purpose at the mine.

Do not you think that that clause does away with the necessity for all these provisions? No; not in my opinion; because who is to be the judge of what an adequate amount of ventilation is?

393. That is the question I was going to ask you;—what are the powers of the inspectors? To see that the Act is carried out.

394. And the Act requires that an adequate amount of air is to go not to one place only, but everywhere? I have always held the idea that the working miner should have a certain amount of air, and that a minimum should be fixed. I think that 150 feet is a fair amount to fix the minimum at. I do not think the English Act deals with that at all, and that is one of the principal reasons I have for objecting to it.

395. You were working for sixteen years as a miner in Scotland? Yes.

396. Were you on the coal all the time? Yes.

397. Did you occupy the position of deputy? No.

398. You were only a working miner? Yes.

399. Subject to all the inconveniences at that time? Yes.

400. The Act you worked under was the 1872 Act? Yes.

401. The clause in the 1872 Act about ventilation is the same as in the Act of 1887? Yes.

402. Did you suffer in any way in your experience? The most of my experience in the old country was in long wall work, and it is easier to ventilate in long wall work than in bord or pillar.

403. Wherever you were working did you have an adequate account of ventilation? There are any amount of occasions where men have had to stop working for the want of ventilation. Men could not get into the working places because they were full of black damp.

404. That might be, no matter what quantity of air was passing? No; that goes to show that there was not a sufficient quantity of air going through.

405. The inconvenience then was the loss of work? Yes.

406. No inconvenience in the nature of the work itself;—it did not consist in personal inconvenience during the time they were at work? Where there was a sufficient amount of ventilation it could not inconvenience them, but in many cases the miners could scarcely get their lamps to burn, and I have known men to be completely done at 40 years of age through bad ventilation.

407. Do you look upon mining in the old country as being an unhealthy occupation? Yes. 408.

408. You mean as compared with other occupations? Yes.

409. Would you be surprised to learn that it stands very high up in the occupations from the standpoint of health? I would be a little bit surprised.

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410. As regards this country, under the Act you have been working giving a minimum quantity of 100 cubic feet of air, and then in England, where only an adequate quantity is provided, has the minimum provided up to now put you in a better position than you were in the old country? I should not like to say there was very much alteration.

411. You do not think there was very much difference? I have seen in the Co-operative Mine, where they could get the amount of air required by the Act with the anemometer, but the air in the headings, through the powder smoke and other impurities, was very unhealthy.

412. Are the conditions with this 100 cubic feet minimum quantity better for you than the provisions in the old country? No; they are not. It will take the other 50 feet to bring the conditions up to as good as at home.

413. There is an old saying that "enough is as good as a feast";—if you have an adequate quantity of air, does it matter if you call it 100 feet or 150 feet? The miners may be placed at a disadvantage by the manager saying there is an adequate amount of air, and yet it might be an impossibility for the miner to work there. If there was 150 feet it would make things much more comfortable for the miners.

414. The person who decides whether the quantity is adequate is the inspector? Yes; he is supposed to be.

415. You are quite clear that the manager would have nothing to do with it? I suppose if the inspector said there was not enough air the manager would have to give it.

416. The decision with regard to the adequacy or inadequacy of the air is in the hands of the inspector? I would give the inspector the very same power.

417. Your objection to the provisions of the English Act is that you cannot confine this power to the inspector? I do not wish to say that I would not have confidence in the inspector, but I think there should be a minimum.

418. Supposing there was 150 feet of air, and the inspector said it was inadequate? Then the inspector should have the power to cause the manager to supply more ventilation.

419. Do you not think it more to the advantage of the miner that there should be no question of what the quantity of air should be? But there will be no question.

420. Generally, you are dissatisfied with the provisions of the English Act, because you do not think that the miner would be as safe in the hands of the inspector as he would be if a minimum were stated? I believe in a minimum of 150 feet.

421. Supposing the miner got his 150 feet, do you think it is necessary to make any provisions about cut-throughs or about bratticing? I think it would be just as well to express an opinion how these matters should be done.

422. Assuming that a miner has his 150 cubic feet of air, you do not want to bother about cut-throughs and bratticing? That is a matter of supreme indifference to the miner so long as he is supplied with 150 feet of pure air.

423. Supposing the proposed Bill said what the English Act says, with the addition of 150 cubic feet of air per minute, would you be willing to give way cut-throughs and bratticing altogether? I might be prepared to grant it if it can be done consistent with the safety and well being of the miners.

424. Does it matter much how you get it? No, not much, so long as each miner gets 150 feet. The system of the shorter cuts-through would be a reasonable way of getting much better ventilation.

425. In the inquiry in England, made by the foremost men in the world, they had under consideration all these matters, and they did not think it was necessary to tie the manager hand and foot as to the distance of his cut-throughs or as to bratticing; is not that a reasonable argument for following the English practice; do you set up your judgment in opposition to theirs? I am only concerned in seeing that the miner gets his 150 cubic feet of air at his working place. There is only one way of bringing it to the working face, and that is by bratticing.

[Witness withdrew.]

TUESDAY, 27 AUGUST, 1895.

[The Commission met in the Board Room, Chief Secretary's Office, at 2 o'clock p.m.]

Present:—

FRANCIS EDWARD ROGERS, Esq., Q.C. (PRESIDENT).

JAMES CURLEY, Esq.

JESSE GREGSON, Esq.

Adam Cook, President of Amalgamated Miners' Association:—

426. *Mr. Gregson.*] Mr. Curley asked you some questions regarding the size of pillars? Yes.

427. I think you are in favour of the limitations as to size that are provided for in the Bill? Yes.

428. Whether under the land or under the sea? I am most decidedly with the Bill as far as tidal waters are concerned.

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429. You gave your limitation as 6 yards under the land, and 8 yards under the sea? Yes.

430. Has it struck you that there are circumstances under which the 8-yard pillar would be quite as insufficient under the land as the 4-yard pillar? No; I have not seen any places with such a difference as that.

431. Has it occurred to you that such a thing might be; you must provide against all reasonable contingencies; if you are providing for a minimum you must provide it large enough or small enough;—you still think that the minimum size provided in the Bill meets the case? I think the 8 yards would be sufficient under ordinary circumstances, but a good deal will depend on the strata.

432. Do you know enough of the English Act to say that there is no provision of such a kind there? No.

433. You would not think it a sufficient reason, that if they did not think it necessary in England it is not necessary here? We have to take the surroundings into consideration here, and if the English Act can be improved upon we have to do it for the safety of the miners.

434. In what way do you refer to for the safety of the miners? It might have a tendency to prevent those creeps and other things that have been mentioned to-day. In the colliery I referred to the fall would not have taken place.

- A. Cook, Esq. 435. Other folks might hold a different opinion to that? Yes; but I have come here to express my opinion.
 436. Do you think any Act of Parliament will avoid accidents? No; but it might reduce them.
 27 Aug., 1895. 437. Do you think that every accident that occurs should be taken as a fresh occasion for legislation? Of course you have to take the cause of the accident, but measures ought to be adopted to reduce accidents.
 438. If you leave pillars larger than is requisite, does that not cause a loss of coal to the community? But that may be for the safety of the men who are working there.
 439. In places under the land is it not the case that there are areas where coal is worked without any intention of coming back to the pillars? There may be cases.
 440. You are aware that there are areas in which there is no intention to come back to the pillars? I cannot say that I am. I believe there may be, but I cannot say.
 441. How do you come to give your opinion about a Bill of this kind? My opinion was asked about the reasonable size to leave pillars under tidal waters and places where they were not troubled with water at all, and I am not aware of any place where coal is left without any intention of taking it out at all unless under tidal waters.
 442. Suppose I put it to you that there are such areas? I do not see that my opinion wants reconsideration at all. I think that a fair minimum is 8 yards, and that the pillars should be of greater size, if required, and under no circumstances less.
 443. Upon whom should rest the responsibility of the proper size of pillars? I suppose the Commission will have to take the responsibility, to be embodied in an Act of Parliament.
 444. With whom should rest the responsibility of deciding what is the size of pillars, supposing more than 8 yards is required? I suppose the Government inspector.
 445. Would it not be the manager? Of course, we cannot overlook the manager. If the manager took a stand and said it was not necessary to leave larger pillars and the inspector said it was, I think the larger pillars should be left, independent of the manager.
 446. Has not the inspector power to say that under the present Act? No; I do not think he has. He might point out a danger, and suggest to the manager to make an alteration, but he has no defined powers.
 447. With regard to the Stockton accident, what was it the inspector dealt with in that mine? So far as the inspectors were concerned in the Stockton accident their opinions were thrown to the winds altogether. The management has not recognised the inspector at all.
 448. Was not that for want of some further power under the present Act and now proposed in the Bill;—it was not for want of judgment on the part of the inspector? The deadlock was brought about by the inspector refusing to certify that the mine was safe.
 449. The failure of the Government was not because they had not inspectors, but because, under the Act, the inspectors had not sufficient power? Yes; and we want to give the inspectors more power.
 450. That is proposed in the Bill? Yes.
 451. Do you know enough of the English Act to say whether it is in that Act? No; I do not.
 452. Do you think that all mining managers and all owners of mining property ignore the canons of proper management, or do you think they try to do things according to the best of their lights? I think that they try to do things according to the best of their lights.
 453. They may make mistakes? Oh, yes; I think in some cases a manager may allow his scientific knowledge to be set aside to better the position of the Company in getting more coal out of a limited space, and limiting the size of pillars—that is, in his desire to increase the output in a limited area. I think ventilation and the size of pillars ought to be regulated by the Government inspectors, and that they ought to have power to deal with the matter.
 454. In the interests of the miner? In the interests of everybody concerned.
 455. Do you not think it would be worth while for the mine-owner to consider his own interest? But the mine-owners are none the worse for the assistance of the Government expert.
 456. In the interest of the miners you are anxious to avoid accidents? Yes; as far as possible.
 457. Have you seen the report of the Department of Mines for last year, Mr. Cook? I do not think I have.
 458. Will you look at the list of accidents that have taken place since 1873?

RETURN showing the number of fatal and non-fatal accidents; those caused by "falls of coal," stone "roof"; and Lithgow, Ferndale, Bulli, A. A. Co.'s Hamilton Pit, and South Burwood Sinking Pit disasters, 1873 to 1894 inclusive.

Year.	Fatal accidents.	Remarks on fatal accidents.	Non-fatal accidents.	Remarks on non-fatal accidents.	Men above and below ground.	Tons of coal raised.	Tons of coal raised per life lost.
1873...	13	9 by falls of coal	10	4 by falls of coal, 1 by stone roof	*.....	1,192,862	91,758
1874...	5	3 by falls of coal, 2 by stone roof	13	6 by falls of coal, 4 by stone roof	*.....	1,304,612	260,922
1875...	8	4 by falls of coal, 3 by stone roof	10	6 by falls of coal	3,308	1,329,729	166,216
1876...	4	2 by falls of coal, 1 by stone roof	8	4 by falls of coal	4,084	1,319,918	329,979
1877...	7	4 by falls of coal, 1 by stone roof	21	16 by falls of coal	4,657	1,444,271	206,324
1878...	8	2 by falls of coal, 1 by stone roof	15	12 by falls of coal, 1 by stone roof	4,792	1,575,497	196,937
1879...	5	2 by falls of coal, 2 by stone roof	19	10 by falls of coal	5,036	1,583,381	316,676
1880...	8	4 by falls of coal, 1 by stone roof	19	8 by falls of coal	4,676	1,466,180	183,272
1881...	2	2 by falls of coal	33	25 by falls of coal	4,098	1,769,597	884,798
1882...	12	10 by falls of coal	33	23 by falls of coal	4,487	2,109,282	175,773
1883...	15	8 by falls of coal, 1 by stone roof	34	15 by falls of coal, 4 by stone roof	5,481	2,521,457	168,096
1884...	14	6 by falls of coal, 2 by stone roof	34	14 by falls of coal, 6 by stone roof	6,227	2,749,109	196,364
1885...	11	7 by falls of coal, 2 by stone roof	40	13 by falls of coal	7,097	2,873,863	261,714
1886...	29	10 by falls of coal, 1 by stone roof, 8 by Lithgow disaster, 1 by Ferndale flooding.	43	15 by falls of coal, 2 by fall of roof	7,847	2,830,175	97,592
1887...	94	81 killed by Bulli catastrophe, 5 by falls of coal, 2 by falls of stone roof.	45	22 by falls of coal, 5 by fall of stone roof.	7,998	2,922,497	31,090
1888...	15	5 by falls of roof	43	12 by falls of coal, 4 by stone roof	9,301	3,203,443	213,562
1889...	41	11 by crush at Hamilton Pit, 11 by falls of coal, 4 by over-winding at South Burwood.	57	24 by falls of coal	10,277	3,655,632	89,161
1890...	13	4 by falls of coal, 1 by fall of roof	36	17 by falls of coal, 3 by stone roof	10,315	3,060,876	236,145
1891...	21	7 by falls of coal, 3 by fall of roof	54	27 by falls of coal, 6 by stone roof	10,820	4,037,929	192,282
1892...	8	4 by falls of coal, 3 by fall of roof	77	38 by falls of coal, 10 by stone roof	10,514	3,780,967	472,620
1893...	13	10 by falls of coal, 1 by fall of stone	45	22 by falls of coal, 5 by fall stone	9,971	3,278,327	252,179
1894...	7	2 by falls of coal, 2 by fall of stone	40	28 by falls of coal, 1 by fall stone	9,126	3,672,076	624,582

* Figures not available.

I do not think that table represents the accidents that have taken place in the mines of this Colony during that period. That table only relates to accidents of a serious nature. Hundreds of accidents take place that prevent men being able to attend to their work for a month or a couple of months.

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459. *President.*] What kind of accidents do you refer to? A man may hurt his foot, or break his finger, and that sort of accident would not be reported here.

460. That would not be through any fault in the mine? These accidents in the report are looked upon by the manager as serious, but there are several other accidents that are not serious that are not recorded because they are not reported to the inspector.

461. *Mr. Gregson.*] You observe the headings on that return—the first column gives the year, the second column fatal accidents, the third remarks on fatal accidents, and the fourth non-fatal accidents, and remarks on non-fatal accidents—so that the return does take into account non-fatal accidents? Yes; that is where men are not exactly killed. There are a number of cases, as I have said, where men are paid out of the accident fund which are not reported at all.

462. Do you propose to legislate for accidents of that kind—to alter the size of pillars, &c., to provide against a man hurting his fingers? I simply mention these things to show that accidents of this kind are not recorded at all.

463. May we not take it that all accidents that are non-fatal are reported here? No.

464. And that all the fatal accidents are reported also? Yes.

465. Look through the return, and see if it does not give a very favourable account in connection with the management of the mines in this Colony. Just consider the number of accidents that are there. I make 161 accidents from falls of roof and sides. Supposing the number of accidents recorded here are 161 from falls of roof and sides, do you look upon that as a serious matter? If the return were correct, I would say it is not; but I say it is not correct, because only the accidents that are fatal are recorded here.

466. But I am speaking of fatal accidents? I believe that all the fatal accidents are recorded.

467. Assuming that the number of fatal accidents from falls of roof and sides should be found to be 161 in number, you would not look upon that as being a very serious business—I am referring to the return for the years from 1873 to 1894? I think it is a pretty fair amount when the number of miners is taken into consideration. We have very few miners here compared to the old country.

468. Is it your experience that the fatal accidents from the falls of roof or sides very seldom happen to the experienced miners? I have had very little experience in that particular instance. It is quite reasonable for anybody to conclude that the accidents referred to have happened to men who lacked experience.

469. You must know that the majority of men who meet with these accidents are old experienced miners, who have suffered? Two or three men have been killed in my neighbourhood, and all those that came under my notice were experienced miners.

470. Probably the most experienced miners in the pit? Yes.

471. Is there any provision in the Bill that would prevent such accidents in the future;—I am including that unfortunate accident in the Hamilton pit? So far as the miners' ordinary work is concerned, that is at the face, and I do not think you could legislate to keep him safe there, because there may be faults that are not visible to the most experienced men, but so far as keeping up the roof is concerned, that might be accounted for by too small pillars, and pillars of a proper size might have prevented some of those accidents.

472. You will admit that, no matter how you legislate as to the size of pillars, accidents will occur? I suppose they will.

473. Assuming that amongst the total number of accidents spoken of in this return is included the eighty-one men killed by the Bulli catastrophe in 1887, do you think the rest form a very satisfactory record;—they are, I think 353; that is 353 accidents of a fatal character? It is serious enough, and if we think that the number can be reduced by legislation in the future it is our duty to do it. So far as the Bulli business is concerned, that might have been prevented with ordinary caution.

474. Which clause in this Bill, supposing it became law, would have prevented the Bulli accident? The clause about ventilation might have. It is supposed by many that it was a gas explosion.

475. Are you acquainted with the report upon that accident? I am not.

476. Were you in the country at the time? Yes, and I have read a lot about it.

477. What conclusion did you form about it? That it was an explosion.

478. Do you think that anyone was to blame? Yes; the management of the colliery, by not having the mine sufficiently ventilated. The manager should have seen to that, and the explosion could never have taken place. The ventilation clause in the Bill would, I think, have prevented the explosion.

479. Were there not coal-mining inspectors at the time? Yes.

480. Did they fail in their duty do you think? An inspector may make a mistake in his duty.

481. Do you think that if the Bill now proposed became law that would avoid a similar accident in future? I think it would reduce accidents of that kind taking place very materially.

482. You think that the limitation as to pillars would reduce accidents, and that the provisions of the Bill should be insisted upon? Yes.

483. With regard to payment, are you satisfied with the way the amount of wages due to the men is ascertained? At several of the collieries I should say not; that is, at any colliery where the standard weight exists. The men desire to see the standard weight abolished.

484. Is the method of standard weight the only principle in the district that you object to? There is the other system of averaging, where every skip is not weighed.

485. What is standard weight? In some collieries the standard weight is said to be 12 cwt., and if the miner puts 14 cwt. into his skip he only receives payment for the 12 cwt. We think that is a gross injustice.

486. That is, supposing he overloaded the skip? I believe in the standard bar—that is, to fill up to a certain height, instead of weight, and that would protect the skips and machinery.

487. Have you any objection to the system by which the average weight is taken where the standard bar is used? There is only one thing that strikes me—that is, that there are not a sufficient number of skips weighed. It would be better if a greater proportion of the skips were weighed.

488. Does that often happen? Yes; pretty frequently. The miner would be fairly satisfied if there were more skips weighed.

489. What you mean is, that there should be two weigh-screens instead of one? That would give more satisfaction.

- A. Cook, Esq. 490. Would the miners go to the expense of paying an additional check-weighman? They might do so if they saw it would be to their own advantage.
- 27 Aug., 1895. 491. Some of them go in for having all the skips weighed? Yes.
492. In what way could the skips be checked? I have been told that in some of the large collieries in England every skip is weighed; and if that is the case there, I do not see why we could not do it here. Of course, I do not know anything about it from personal experience.
493. There is no very great discontent in the Newcastle district in the way in which the weight is ascertained? The miners object to the standard weight, but they are fairly well satisfied as far as I can see.
494. Do you know the practice that is carried on in the Western districts? I only worked at shale mines in the Western district.
495. Do you know the practice carried on in the south? No.
496. You do not know whether it varies materially from the practice in vogue in England? No; I cannot say.
497. *Mr. Curley.*] Will you just look at section 31, now 29, on page 15 of the Bill. You see that the section there was originally drafted with the omission of the word "serious." That would take in a number of those accidents you have just now referred to, if that word "serious" were out. Do you not think that it is necessary that these accidents should be reported? I know of many accidents that compel men to cease work, but these accidents are not recognised as serious.
498. Do you consider that that word "serious" should be left out? Yes.
499. Have you known of any serious accident that has taken place, that has not been reported? I know of one where a man nearly lost his left arm, and lost two or three of his fingers, and it was not reported. It was not looked upon in the light of a serious injury. He was badly cut about the head, but it was not reported, because the manager of the colliery did not recognise it as a serious injury.
500. What colliery did that happen in? The Lambton Colliery.
501. By the word "serious" being inserted, does not the manager take up this position, that although the accident may be of a serious nature, he may consider it not serious? Most decidedly; if a man lost a couple of his legs, the manager might think it serious, but not serious if he only lost one.
502. An accident of a serious nature not having been reported, you think it should have been reported? Yes; and then you will get a correct statement of the number of accidents. It is a serious matter to a man to lose two or three weeks' work.
503. With regard to colliery rules for instance, you would think a manager ought to know his own colliery rules? Yes.
504. Have you known where quite recently a breach of these colliery rules took place at one of the collieries in the district. Do you know of such a case at the New Lambton Colliery? Yes; by report, where a young man was killed in the shaft, it appeared to be a clear breach of the rules.
505. Does not that rule stipulate that no person shall come up the shaft with a trolley? Yes.
506. On this particular occasion did a person come up with the trolley? Yes.
507. Did it come right up to the top of the bank? No; it came up level with the surface.
508. Do you know what that trolley was called? Yes; a timber trolley.
509. Was the onsetter prosecuted for allowing that to take place? I believe he was.
510. And did he not plead guilty. Are you aware of that? Yes.
511. Do you also know that when the cage got to the bottom, that in the descending cage the man was found to be dead? Yes; unfortunately for him. There was one man going up the shaft with a timber trolley, and another man going down the shaft to work. The ascending cage did not come to the top, and the young man was apparently under the impression that the cage he was in had reached the bottom. The cage went away from under him, and he broke his neck.
512. With regard to the number of accidents that have occurred, which Mr. Gregson referred you to, in the Report of the Department of Mines, I think it would be better for us to take the figures from the year 1875. Do you notice that in connection with the years 1873, on page 184 of that report, you see besides the years mentioned, thirteen fatal accidents (*see* Question 458)? Yes.
513. Do you see there any statement with regard to the number of men above and below ground? No; there is a blank there.
514. Turn now to the year 1874 as well, and what are the number of fatal accidents there? Five.
515. Is there any statement there? No; a blank.
516. Can you give us, if you please, two statements for two decennial periods, taking the year 1875, the year before the Act came into operation, down to the year 1884 inclusive, and also for the years from 1885 down to 1894 inclusive, showing the loss of life, and the number of men according to the number of tons raised, taking a general average of the accidents. Will you kindly send us those decennial statements upon the lines I have suggested (*see* Appendix K)? Yes.
517. Now we come to this Bulli explosion;—do you know whether there was any deputy engaged at that place at the time of this accident? I do not think there was, but I cannot say. I would rather not go into anything that I am not sure about.
518. Assuming that a gas explosion took place the night before the explosion—a limited gas explosion, that was never reported, and to which no attention was given—does that show anything like discipline? No; the official in charge should have been brought up for murder.
519. Will you please look at the reports by Inspector Rowan, given with the report of the Bulli Colliery Explosion Commission to be found on page 189 (*see* Appendix L);—does Mr. Rowan make reference, in his reports, to gas being given off in the mine? He says the miners in this division are working with safety-lamps, &c. From that I would conclude that there must have been fire-damp there.
520. Look at the two next reports (*see* Appendix L), and see what Mr. Rowan states there with regard to the return air-ways? That the return air-ways were in a very bad condition.
521. What is the date of that report? Twenty-fifth of February, 1886.
522. What is said there? [*Witness reads report—see* Appendix L.]
523. Will you please refer to the other report as well, a little lower down. (*See* Appendix L)? It is dated 22nd December, 1886.
524. Is there any reference there with regard to the return air-ways again? It says:—

Sir,

Wollongong, 2 March, 1887

For your information, I have the honor to inform you that I inspected Bulli Colliery on the 17th instant.

Hill End District:—Fifty men employed, four of them working in narrow headings with safety-lamps, owing to the coal giving off a small per cent. of fire-damp. I carefully examined this division of workings, and found the ventilation good

good in every bord, 12,000 cubic feet of air being brought up to within 20 yards of the furthest in working face. On *A. Cook, Esq.* examining the return air-way I found that heavy falls of roof had taken place. The falls were so heavy I could not make a passage through. I drew the manager's attention to this matter. He stated that he had three shifts of men working, making a new air-course, and the same would be kept working until a proper recognised air-way was made from the working faces to the ventilating furnace. As I have formerly reported, a number of these falls took place during the recent strike. 27 Aug., 1895.

Harris's heading, where forty men were employed previous to the strike, is so completely crushed, caused by the bottoms heaving, in this district. The boards will require to be cut out anew, with a pair of headings.

I have, &c.,

JAMES ROWAN,
Inspector of Collieries.

The Examiner of Coal-fields.

525. That is previous to the explosion? Yes.

526. It is only two or three months before the explosion occurred? Yes; that makes it much worse.

527. There has been a question or two put to you about the standard weight;—anything over the average of that standard is not weighed to the miner at all? No.

528. And if during the same day another skip was brought up and weighed that happened to be below that standard the miner would not get the standard? No; only what was in the skip in that case.

529. So that the miner would not really get the true average weight of what he had raised in the day? No, he would not.

530. Is it not your experience that a man may not overload the skip and yet his coal may vary in weight, according to the condition of the workings? Certainly. The difference in the density of the coal may sometimes account for that. The most experienced miner in the world may not get within 1 cwt. or 1½ cwt. of what he intended to put into the skip.

531. You think that this system of standard weight should be put on one side? Yes, most decidedly.

532. Does the system obtain in many collieries? No, in about four or five.

533. Some of the proprietors in a mutual way have conceded the matter? Yes.

534. Without any trouble? Yes.

535. *President.*] How do they weigh? By the standard bar. If the skip is too high the miner loses the whole skip. The skip is handed to the Miners' Accident Fund at some collieries. The miner loses it, but the whole of the miners gain.

536. How much does a skip generally hold? About 10½ cwt. is a fair average for the Wallsend Colliery. Of course the miner does not get paid for slack.

537. *Mr. Curley.*] Is there anything else, Mr. Cook, that you would like to refer to? I do not think so.

538. *President.*] Do you know a book called "Coal-pits and Pitmen"? I have heard about it.

[Witness withdrew.]

John Lionel Fegan, Esq., M.L.A. (re-examined):—

539. *Mr. Curley.*] What were the items we touched upon with you yesterday, Mr. Fegan? The ventilation, the size of the pillars, certificates of competency and service, the supplying of the air, and the com- J. L. Fegan,
Esq., M.L.A.

position of the Board to appoint examiners. 27 Aug., 1895.

540. I suppose that in that report that has been drawn up by the Committee over which you had the honor to preside, almost every phase of the question has been touched upon there by witnesses that were examined before that Select Committee? Yes, I believe every point. I was going to say with the exception of the pillar question.

541. Will you please hand that report in (*see Appendix M*)? Yes.

542. Will you look at the Report you have made in connection with the sittings of this Select Committee, and give us what you consider necessary in connection with the Bill;—do you want to alter or add to your report in any way? With reference to the pillars, I want to add to the proposed Bill Rules 42, 43, 44, 45, and 46, on page 31 of the Bill. These are not in the English Act. I would like to call attention to clause 9 of the Report of my Committee.

In conclusion, your Committee beg to recommend the adoption of the English Coal-mines Regulation Act of 1887 (50 and 51 Vic., cap. 58), with the amendments suggested in this Report, believing it to be for the better protection of the miners health and life, the owner's property, and the welfare of the community in general.

543. *Mr. Gregson.*] Does that report give your own individual views? Yes; after the evidence that was given before that Committee.

544. *Mr. Curley.*] I think we touched yesterday on the size of pillars? Yes.

545. What have you to say about persons not to be employed on the coal without experience? That is a copy of the English Act with the exception of the word ironstone. It will be found in MacSwiney's book on the English Act, page 105.

PERIODICAL INSPECTION ON BEHALF OF WORKMEN.

Rule 39. No person not now employed as a coal or ironstone getter, shall be allowed to work alone as a coal or ironstone getter in the face of the workings until he has had two years experience of such work under the supervision of skilled workmen, or unless he shall have been previously employed for two years in or about the face of the workings of a mine.

546. *President.*] Where does your report embrace this clause?

[Rule 41. No person not now employed as a coal getter shall be allowed to work alone as a coal getter in the face of the workings until he has had two years' experience of such work under the supervision of skilled workmen, or unless he shall have been previously employed for two years in or about the face of the workings of a mine.]

The Upper House have left out this rule? Yes.

547. *Mr. Curley.*] Is there anything else you think of, Mr. Fegan? Yes; the standard weight.

548. *President.*] What is the reason that the coal getter should not be employed before he has had two years' experience? It is not for himself, but because he may endanger the lives of all the men in the pit. Where it is a gaseous seam, like the Seaham colliery, and we have had gas at Anvil Creek, Greta, and Bulli, an inexperienced man playing with a safety-lamp may endanger the lives of his fellows. That is the reason.

549. That is the reason? Yes, and in the propping of the roof an inexperienced man may cause the death of a boy through the bad propping of timber. A boy is not responsible for the propping of timber. There is also the necessary warning in case of firing a shot.

550. Are there any other reasons besides gas, the setting of timber, and the warning about shot-firing? Yes; there are scores of reasons, but I am giving you the principal reasons. I have seen a man myself, who was not careful, get hold of an iron-bar and ignite a spark which blew his head off, at all events it killed

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killed him. A man before he calls himself a miner should serve some time for the benefit of the property and the miner's lives. The employers stand to lose as much as the men. As a rule, two men work together in a colliery, and a new hand is not allowed to work alone.

551. I can understand about the gas and the timbering? Yes, it is in timbering, and that means a big loss to all concerned. Mr. Curley can point out a case in one of the collieries in the Northern District, where in firing a shot a man was nearly killed through not giving the necessary warning.

552. *Mr. Curley.*] Is there anything else you would like to refer to? Yes; the standard weight is a question that affects the interests of the men very materially. Every other section of the community can get paid at the rate of 20 cwt. to the ton, and can demand the weighing of the material they produce. In the Northern District some of the employers have not the standard weight, and some men take advantage in every respect of that. Mr. Edden, M.L.A., produced a paper that went to prove that in three years one colliery got 1,700 tons of coal for which they did not pay a farthing. This was for all-round coal produced by the men.

553. What is the standard weight;—will you please explain what is meant by this? A skip is supposed to hold, say, 12 cwt. of coal, and if you send 13 cwt., or 1 cwt. over, you lose that 1 cwt. If a miner sends three or four skips, one weighing 16 cwt. and another 11 cwt., instead of averaging those two skips, 4 cwt. is taken off the 16-cwt. skip, and the miner gets 11½ cwt., although he has sent up 27 cwt. of coal. The specific gravity of coal varies materially, and this accounts for the difference in weight of the two skips.

554. *Mr. Gregson.*] Your figures are supposititious, are they not? Yes.

555. Have you ever known such a thing as 16 cwt. of coal being sent up in a 12-cwt. skip? Yes; more than that.

556. You have known such a case as that? Yes; I have been told about it by men who have had it done.

557. Perhaps you can produce an instance? I have a paper here from Mr. Edden where the men have lost £5 17s. 7d. from this cause in one pay. It was produced before the Select Committee, and the House was adjourned to bring the matter under their notice. The case also came before Judge Backhouse, and he could not take any steps in the matter.

558. What case was that? I believe it was in connection with the Hetton Colliery.

559. Was it an action brought by the miners? Yes.

560. *President.*] And they could not recover? No, not according to the reading of the Act.

561. *Mr. Curley.*] Has this matter been the subject of reference at any of the proprietors' conferences? The very fact of a conference meeting and refusing to accept other than the provisions of the Bill was sufficient.

562. Do you recollect the conference of 1888, when we were negotiating with the proprietors about this standard weight? I do.

563. Do you know that the proprietors would not then agree with it? I do.

564. *President.*] Will you look at sub-section 3, of clause [41], 38, on page 19 of the Bill, the latter part of the clause starting with "But nothing herein contained"

(iii) [That] Nothing in this Act shall be held to authorise or give any power to any owner or manager of a mine to pay miners by the method known as the standard weight system, and from and after the [passing] commencement of this Act that system shall be and is hereby abolished. *But nothing herein contained shall be held to affect the power of any owner or manager of a mine to pay miners by the method known as the standard bar system?*

Yes; they are getting rid of one thing and putting another in.

565. *Mr. Gregson.*] Is not the standard bar the prevailing custom in the district? It may be.

566. What system are some of the owners paying over? Every pound of coal is paid for.

567. Is there no limit to the height to which the skip was to be filled? In the Wickham and Bullock Island Colliery there was no standard bar. They can put 20 cwt. on if they wish, and it is not taken away from them.

568. Do you object to the standard bar? I prefer the wording of the English Act.

569. What does the English Act say? That the miners shall get paid for what they send up. The reference may be found in clause 12, on pages 12 and 13 of M'Swinney's book on the English Act.

PAYMENT OF PERSONS EMPLOYED IN MINES BY WEIGHT.

(By R. F. M'Swinney, M.A.)

PAGES 12-13. 12. (1.) Where the amount of wages paid to any of the persons employed in a mine depends on the amount of mineral gotten by them, those persons shall be paid according to the actual weight gotten by them of the mineral contracted to be gotten, and the mineral gotten by them shall be truly weighed at a place as near to the pit mouth as is reasonably practicable.

Provided that nothing in this section shall preclude the owner, agent, or manager of the mine from agreeing with the persons employed in the mine that deductions shall be made in respect of stones or substances other than the mineral contracted to be gotten which shall be sent out of the mine with the mineral contracted to be gotten, or in respect of any tubs, baskets, or hutches being improperly filled in those cases where they are filled by the getter of the mineral or his drawer, or by the person immediately employed by him, such deductions being determined in such special mode as may be agreed upon between the owner, agent, or manager of the mine on the one hand, and the persons employed in the mine on the other, or by some person appointed in that behalf by the owner, agent, or manager, or (if any check-weigher is stationed for this purpose as hereinafter mentioned), by such person and such check-weigher, or in case of difference by a third person to be mutually agreed on by the owner, agent, or manager of the mine on the one hand, and the persons employed in the mine on the other, or in default of agreement appointed by a Chairman of a Court of Quarter Sessions within the jurisdiction of which any shaft of the mine is situate.

570. *Mr. Curley.*] Do you know whether this standard bar is in operation at any other than one colliery in the district? I do not know.

571. Do you know this, that the prevailing custom in the district as a whole is principally to pay the men by weight? Yes.

572. Without a standard weight? Yes.

573. Or without a standard bar? Yes.

574. *President.*] The standard weight appears to be agreed to by both Houses? Yes; that is agreed to.

575. What you object to is the latter part of clause 3 on page 19 of the Bill, "but nothing herein contained shall be held to affect the power of any owner or manager of a mine to pay miners by the method known as the standard bar system"? Yes; when the English Act did not serve their purposes, the Council went away from it.

576. Surely the Council do not care anything about coal-mining? That is the unfortunate position.

577. They have no interest? There are several coal-owners there.

578. The sole interest of the whole House would not lead them to do anything wrong? My opinion is that they have expressly done wrong. This measure was before the country in 1887, and we are now in 1895.

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579. *Mr. Curley.*] You object to this standard bar *in toto*? I do.

580. Is there anything else you would like to refer to? Yes; the appointment of check-weighmen.

581. Will you look at page 19 of the Bill, section 40 [43].

[43.] 40. (1) The persons who are employed in a mine, and are paid according to the weight of the [mineral] *large coal or shale* gotten by them, may, at their own cost, station a person *who shall be an employee of the colliery* (in this Act referred to as a "check-weigher") at each place appointed for weighing the *large coal or shale*, and at each place appointed for determining the deductions, in order that he may, on behalf of the persons by whom he is so stationed, take a correct account of the weight of the [mineral] *large coal or shale*, or determine correctly the deductions, as the case may be.

? I want this clause left according to clause 13 of the English Act. The words "who shall be an employec of the colliery" ought to be anybody that is chosen. At the present time if a man does his duty he runs the risk of being discharged—that is, if he stands by the interests of those he is paid to look after.

582. You mean the men? Yes. All that a manager has to do if he cannot get hold of him, is to stop his pit for a day, and discharge all hands, and, according to the 1876 Act, he can start with other men, and the man whom he objects to, not then being an employec, he can prevent him taking his place again. I have a letter in my hand about Treharne Evans.

583. You had better tell us who he is? He is a man who was living in Lambton.

584. What position did he occupy? He was a miner, and was appointed by the men to be check-weighman at the Lambton Colliery.

585. What has taken place in connection with his position? A manager closed his mine for a short time recently, and on reopening his mine, he would not allow this man to come back to work, giving as his reason that he was not an employec of the colliery. I saw the manager personally myself, and he said he was a very good man—Mr. Evans, as he called him—a good honest man, but he said the wording of the Act precluded him from employing Mr. Evans; that is the 1876 Act.

586. Evidently he was sorry? No; it does not preclude any man.

587. *President.*] The manager is right. If you look at the 20th section of the Act of 1876 on page 7:—

20. The persons who are employed in a mine to which this Act applies, and are paid according to the weight of the mineral gotten by them, may, at their own cost, station a person (in this Act referred to as "a check-weigher"), being a person employed at the said mine, or any mine belonging to the same company or proprietor, at the place appointed for the weighing of such mineral, in order to take an account of the weight thereof, and if in any mine reasonable facilities are not afforded to him for taking such account, the owner and agent of such mine shall each be guilty of an offence against this Act. The check-weigher shall not be authorised in any way to impede or interrupt the working of the mine, or to interfere with the weighing, but shall be authorised only to take such account as aforesaid, and his absence shall not be a reason for interrupting or delaying such weighing. If a check-weigher shall impede or interrupt the working of the mine, or interfere with the weighing, or otherwise misconduct himself, such owner or agent may complain to the nearest Court of Petty Sessions, which, if it shall think fit, may call upon the check-weigher to show cause against his removal. Such Court shall hear the parties, and if it think that sufficient ground is shown to justify the removal of the check-weigher, make a summary order for his removal, and he shall thereupon be removed. The Court may in every case make such order as to the cost of the proceedings as it thinks just.

—? Yes; but how he could have got over it was by allowing the man to cavil with the other men, to give him the opportunity of a place with the rest of the men.

588. *Mr. Curley.*] Could he not have recognised him as an employec at once? Mr. Gregson has never taken umbrage at a check-weighman.

589. *President.*] You do not think the proprietors, as a general rule, take advantage of these things? I should be sorry to think so, but it has been done in this instance. I remember an agitation in England on this very clause. As a rule the check-weighmen are secretaries of their lodges, and at the first strike or dispute that takes place, these men are men who are put off, and prior to the passing of the 1887 Act, they were walking about and could not get a livelihood, and it was pointed out to the Home Secretary that whilst the workmen paid these men they ought to have the same privileges as employers in getting the best men they could. The employers do not contribute one cent to the wages of a check-weighman.

590. *Mr. Curley.*] We want to hear what you have to say about anything else? At a colliery up north the manager, to get rid of a man who had done his best to represent the men, thought the easiest way to go about it would be to stop his colliery for a short time. This man is walking about, with seven children to feed, and not a penny coming in from anywhere, through the action of a certain colliery manager in the northern district not permitting him to go to work on a unanimous vote of the men to be their check-weighman. On account of the provisions contained in the Coal Mines Act of 1876, the 20th section of that Act, the manager would not permit him to return to his work, though he was appointed by the men, on account of him not being an employec of the colliery, although admitted by the manager to be the most competent man for the position of check-weighman.

591. Is there anything else? Yes; I would like to refer to clause 41 [38] on page 18, of the proposed Bill:—

[41.] 38. (1) Where the amount of wages paid to any of the persons employed in a mine depends on the amount of [mineral] *large coal or shale* gotten by them, those persons shall be paid according to the actual weight of such *large coal or shale* gotten by them, [of the mineral contracted to be gotten, and unless otherwise mutually agreed upon all the mineral gotten by them] *such weight being ascertained in such manner as may be agreed upon by the owner, agent, or manager of the mine on the one part, and the persons so employed on the other part, and in the absence of such agreement such coal or shale shall be truly weighed either at the bottom of the screen or at a place as near to the pit mouth as is reasonably practicable: Provided that nothing in this section shall preclude the owner, agent, or manager of the mine from agreeing with the persons employed in the mine that deductions shall be made in respect of small coal, stones, or substances [other than the mineral contracted to be gotten,] which shall be sent out of the mine with [the mineral contracted to be gotten,] such *large coal or shale*, or in respect of any tubs being improperly filled in those cases where they are filled by the getter of the *large coal or shale*, or his drawer, or by the person immediately employed by him, such deductions being determined in such special mode as may be agreed upon between the owner, agent, or manager of the mine on the one hand, and the persons employed in the mine on the other; or by some person appointed in that behalf by the owner, agent, or manager, or (if any check-weigher is stationed for this purpose as hereinafter mentioned) by such person and such check-weigher, or in case of difference by a third person to be mutually agreed on by the owner, agent, or manager of the mine on the one hand, and the persons employed in the mine on the other, or in default of agreement appointed by a Chairman of a Court of Quarter Sessions within the jurisdiction of which any shaft of the mine is situate.*

And clause 12 of the English Act, the weighing clause. There are some words struck out; I would like to refer to the striking out of these words. There is a colliery in the northern district, and because of the

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the wording of the present Act the manager or owner refused the men the right to appoint a check-weighman. Four of the men requested the manager to put in a weighbridge so that their coal might be weighed, and for this they got their ticket of leave from the colliery, or they were discharged. I saw the Minister for Mines, and asked him what was the reason he could not see that a weighbridge was placed there, and I received the following letter:—

Sir,

Department of Mines and Agriculture, Sydney, 20 August, 1895.
Adverting to my letter of the 3rd ultimo, in reference to the mode of payment at the Gartlee Colliery, I have the honor, by direction of the Secretary for Mines and Agriculture, to inform you that, in view of the opinion of the Attorney-General, there appears to be no power to compel the owners of this colliery to pay by weight, unless they choose to agree with the miners to pay them according to the weight of the mineral gotten.

I have, &c.,

HARRIE WOOD,

Under Secretary.

J. L. Fegan, Esq.

There is no stipulation in the English Act, I think. They recognise that the English law should extend to miners just as well as to other classes of tradesmen.

592. *Mr. Gregson.*] What do you want? I want men, when their coal has to be weighed, to have it weighed, and that the manager or owner shall not have power to say it must not be weighed. In other words, I want the wording of the English Act.

593. I do not know what your objection is;—what is the complaint at the colliery you mentioned? That the men made a request to be paid by weight, because they were being paid by skip, and this could not be granted.

594. What were the terms between the employers and the men at that colliery? At so much per skip.

595. Then what happened? The majority of the men wished to be paid by weight.

596. And the proprietors said "No?" Yes.

597. The case was brought before the Minister, and he took the opinion of the Attorney-General, and he said it could not be altered? Yes.

598. *Mr. Curley.*] Has not some compromise been made on this matter;—was it not suggested that the Bill should be applicable to a mine employing so many persons? Yes.

599. What was the number of persons? I think the Bill stated ten, the Council amended it to thirty, and the Assembly to twenty.

600. Will you turn to the clause in the Bill, to be found on page 19, subsection 4, of rule [41] 38? Yes.

(iv) Where it is proved to the satisfaction of the Minister, in the case [of any mine or class of mines employing not more than [twenty] *thirty* persons under ground, to be expedient that the persons employed therein should, upon the joint representation of the owner or owners of any such mine or class of mines and the said persons, be paid by any method other than that provided by this Act, such Minister may, if he think fit, by order allow the same, either without conditions or during the time and on the conditions specified in the order.

601. In certain mines are not men paid for large and small coal together? Yes; but that proviso is knocked out.

602. In what way? If the employees of any colliery wish to continue the system we have now.

603. Where are the words knocked out? In section [41] 38 on page 1E. "All the mineral gotten by them" is struck out.

604. Would it not meet your objection if these words were put in? At the present time the men are only paid for large coal. I think that a proviso might be inserted for sending the whole of the coal away together. Say, they shall be paid for round and small coal.

605. You think the clause as amended by the Council requires such a proviso were we able to agree to work in that way? Yes.

606. What have you to say upon the eight-hour question? Up to recently the collieries in the north have been working eight hours. There has been a general agreement for some years, but the position is materially altered to-day. Some of the managers are demanding longer hours from the men, and not very long since it nearly caused a strike in one colliery where the manager wished the men to work till 5 o'clock in the evenings. The men said they were willing to work eight hours, and that it was rather hard for the principle to be taken from them. A notice was put up at a pit-head only on Saturday last, to the effect that the men must work another half-hour longer. I had a letter from the Secretary before coming here, stating that the manager demanded that the men should stay in the face until 4 o'clock. It has been the custom for a score of years that the men should be ready to go up at 4 o'clock. The manager has taken the position of forcing the men to work at the face till 4 o'clock, which in some cases will mean half-an-hour to these men. It has been agitated for some years to make eight hours a legal day's work, and as long as the organisations were intact they worked comfortably on. Hard times have come, and they are forcing the men to work longer hours. Then the position of boys, whilst the Council in its speeches recognised that eight hours was long enough for anyone to be down in a coal-mine, they ignored the right of legislation for eight hours, but inserted a clause that boys can be allowed to work for ten hours in the mine.

607. *President.*] How long does the English Act allow? Ten hours, I think, for five days in the week.

608. How long do boys work now? Nine hours and forty-five minutes in some places.

609. They are not working all that time? They are in the mine all that time. In Russia, where their form of government is not so liberal as ours, boys of 15 years of age are not permitted to work more than eight hours in a factory, much less than in a coal-mine. It goes to show that we have to go to Russia to teach us what should be done for the protection of boys. The Board of Trade returns from England point out that boys of 15 in Russia are not allowed to work longer than eight hours in a factory. The Council want to legalise ten hours for children of tender years. Perhaps I may be asked, how do I know that the miners up there want eight hours? I may say, being a member of the Miners' Organisation, that every lodge in the district sends representatives to the Eight-hours Demonstration Committee, and that one of their objects is to legalise eight hours.

WEDNESDAY, 28 AUGUST, 1895.

[The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.]

Present:—

FRANCIS EDWARD ROGERS, Esq., Q.C. (PRESIDENT).

JAMES CURLEY, Esq.

JESSE GREGSON, Esq.

John Lionel Fegan, Esq., M.L.A., re-examined:—

610. *Mr. Curley.*] Have you ever looked up any statistics in connection with the number of accidents that have taken place in this Colony? I have.

611. Have you compared them with the number of accidents that have taken place in Great Britain? Yes; and I have made a statement in the Legislative Assembly upon the subject.

612. Have you drawn out any statistics that you can place before the Commission? No; but you can get them from Mr. Coghlan's book, "The Wealth and Progress of New South Wales." I have some of the statistics here. (*See Appendix N.*)

613. Where do they go down to? To the year 1891.

614. What are they? Up to the year 1891 there were 648,450 people employed in and about mines in Great Britain, and the lives lost during the year 1891 were 979.

615. Will you please refer to the latest years—give us the figures for ten years if you can? I can give you the figures for ten years if you wish.

616. Will you kindly prepare a statement, to be handed in to the Secretary later on? With pleasure. (*See Appendix N.*)

617. Are the decennial periods taken in the book you are referring to? They are taken from 1873 to 1891 *seriatim*—for nearly twenty years. Before the passing of the English Act of 1887 in one year alone 1,413 deaths took place—that is, fatal accidents; and in the year 1880 1,380 deaths took place. The number of deaths has gradually decreased since then, with the exception of one year. From the year 1887 up to the present time there has been a general decrease of fatal accidents.

618. *President.*] That is since the passing of the Act? Yes.

619. *Mr. Curley.*] Will you look at this book of Mr. Nelson Boyd's and tell us what he says;—you will find the reference on page 225, of his work "Coal Pits and Pitmen"?

"According to the Parliamentary summaries, the death-rate per 1,000 persons employed have been as follows:—

1851 death-rate per 1,000 persons employed	4.56
1861 " " "	3.38
1871 " " "	2.89
1881 " " "	1.92
1889 " " "	1.85

620. Will you turn now to the Bill and look at sub-section 4 of rule 10, on page 26;—do you see the clause there that reads:—

(iv) A person shall not have in his possession any lucifer match or apparatus of any kind for striking a light except within a completely closed chamber attached to the fuse of the shot.

Do you agree with that provision? I would like to know what it means. It is past my comprehension, and I had an opportunity of hearing the debate on the clause. There were several coal-owners prompting the Council, and the only reason the Council gave was because it was in the English Act. Any further explanation I did not hear.

621. *Mr. Gregson.*] What is your difficulty? The words, "except within a completely closed chamber attached to the fuse of the shot."

622. There is no difficulty, I think? To me there is. I cannot understand it. These words have been placed in by the Legislative Council.

623. Following the English Act? Yes; but there are many English Acts and legislation they do not believe in.

624. How does the miner fire his shot? By a wire. He takes the top off his lamp and puts a snuffing wire into the lamp gauze, and when it is red hot it ignites the powder attached to the fuse. There is no match used where gas exists in any shape or form. There is no flame; the pin touches a speck of powder and ignites the fuse. I never could understand this clause, and I have asked several people about it.

625. Is it not a provision for greater safety? I cannot see it.

626. Perhaps if you will read the report of the Royal Commission in England on accidents in mines, you may glean something? I have done so.

627. Are there no cartridges that may be fired without a red-hot pin? Yes; there are some that are fired by electricity with a small battery. That being the case, this clause compels that every shot shall be fired by a small battery.

628. What they are prohibiting is that no person shall have any lucifer match, or apparatus of any kind for striking a light, in his possession? The wording of this clause, as it stands, would prohibit a man carrying a pick. There is also the old flint box.

629. You are prohibited by this clause from having that? You can be dealt with for having a lucifer match without the part I have mentioned being attached to the clause. Where powder is used there must be a certain amount of flame.

630. *President.*] Can you point out how this clause does the miners any harm? I cannot give an opinion upon what I know nothing about.

631. *Mr. Gregson.*] The gentlemen who constituted the Royal Commission in England came to the conclusion that this was a very proper thing to make provision for;—is there any reason for cavilling about what they have done? I am not cavilling. I am just giving my knowledge as far as it goes. Am I forced to say I believe in a thing unless I understand it?

632. *President.*] No. Is there anything in this clause that can do anybody any harm? The representatives of the miners have been charged with putting too much detail in this Bill, and I hold that this rule is a matter of detail.

633.

J. L. Fegan,
Esq., M.L.A.
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633. You might say that other things are detail as well, but these things connected with fire are looked upon as matters of importance that need legislation? If the wording of this clause was, "that no shot shall be fired without a battery," that might get over the objection.

634. *Mr. Gregson.*] The Commissioners in England perhaps did not care to specify a battery—something else might come up—science might be able to invent something better? But it may not be in an enclosed chamber.

635. The Bill prohibits anything else? May I ask what does it really mean?

636. I understand you are not to have in your possession any lucifer match, or anything for striking a light, except it be attached to the fuse of the shot that you are going to use? But what is the meaning of it.

637. You have an apparatus attached to the fuse of your shot; say you fire by electricity, and that it is in a cylinder; there may be some other means for doing the same thing, but it must be in a completely closed cylinder to secure the safety of firing the shot? I want to point out that by an interference of this kind you are going to make a law that it is unnecessary to use candles.

638. Here is a provision that applies to the industry all through England, and we are told that it has worked successfully? To a certain extent perhaps successfully. To-day we have a large number of collieries which work altogether with naked lights. If this law were in force you would be made a laughing-stock of. You would be firing within a completely closed chamber apparatus when you have a candle in your hand.

639. Would you kindly read the first section of rule 10—

(i) A competent person appointed by the owner, agent, or manager for the purpose shall, either at the surface or at the appointed lamp station, examine every safety lamp immediately before it is taken into the workings for use, and ascertain it to be in safe working order and securely locked; and such lamps shall not be used until they have been so examined and found in safe working order and securely locked.

?—Yes.

640. You have no candle there? No.

641. You are quite satisfied on that point? Yes, certainly.

642. *Mr. Curley.*] Are you satisfied that this clause applies exclusively to where safety lamps are used? Perfectly.

643. Is the clause free from any ambiguity? No; if this clause were so constructed as to read that no shot shall be fired without a battery, or some other apparatus, it might be.

644. Without the amendment how would this clause read? "A person shall not have in his possession any lucifer match or apparatus of any kind for striking a light."

645. *President.*] Will you look at McSwiney's book on the English Act, page 83—"Use of safety lamps in certain places?" Yes.

Rule 8. No lamp or light other than a locked safety lamp should be allowed or used—

(a) In any place in a mine in which there is likely to be any such quantity of inflammable gas as to render the use of naked lights dangerous; or,

(b) In any working approaching near a place in which there is likely to be an accumulation of inflammable gas.

And when it is necessary to work the coal in any part of a ventilating district with safety lamps it shall not be allowable to work the coal with naked lights in another part of the same ventilating district situated between the place where such lamps are being used and the return air-way.

646. *Mr. Curley.*] Look at sub-section 2 of rule 10 of the Bill.

(ii) A safety lamp shall not be unlocked except either at the appointed lamp station or for the purpose of firing a shot, in conformity with the provisions hereinafter contained.

This clause gives the miner permission to fire a shot with his lamp if necessary, but it does not speak of any other apparatus? I hold that if it is not safe to fire with an open light it is not safe at all.

647. *President.*] Look at the English Act (McSwiney's work), pages 85 and 87;—do you see that the miner cannot unlock his safety-lamp except in the presence of a competent person? Yes; there are men appointed in the mines to fire shots.

648. This is a greater safeguard for the miners? Yes.

649. Will you look at the English Act again on page 88?

(i) Unless a competent person, appointed as aforesaid, has examined the place where gas has been so reported to be present, and has found that such gas has been cleared away, and that there is not at or near such place sufficient gas issuing or accumulated to render it unsafe to fire the shot.

All these things are for the safety of the miner? I am admitting that.

650. The thing you are objecting to? Is something I do not understand.

651. Still it is something for greater safety; they must not have any apparatus for striking a light "except within a completely closed chamber";—it is quite plain that is put in for greater safety? If it were a battery I could understand it.

652. The igniting thing must be within a closed chamber;—that cannot do the men any harm, can it? Perhaps not. The clause may have been inserted for stopping men from smoking.

653. *Mr. Gregson.*] A good thing too? Yes.

654. If that is what the clause is for, you can have no objection? I have not, but I cannot understand the section.

655. *Mr. Curley.*] You confess you cannot understand the section? I confess I do not. I can understand the former part of the section up to the word "light." I had the privilege of listening to the debate, and although prompted by some of the prominent colliery managers in the Colony the Council were only guided by the English Act.

656. *Mr. Gregson.*] May we not trust the gentlemen who formed the English Royal Commission so far, that whatever they have done has been done for good reasons? I hardly agree with that. To me this clause does not seem complete.

657. *Mr. Curley.*] How would you make it complete? By the addition of the words "that such apparatus shall be used for firing shots only."

658. *Mr. Gregson.*] I will read you an extract from the Final Report of Her Majesty's Commissioners in England (page 62):—

Your Commissioners are of opinion that the provision of some simple combination of chemical and mechanical devices, by which the fuse may be ignited without external application of flame or a red hot body, at any desired time within narrow

narrow limits, after it is set into action, should not be attended with any great practical difficulties; the employment of such an arrangement, which may also be made the means for preventing any lateral escape of fire from the short projecting end of fuse, and of delaying the explosion of the charge for a definite period after ignition has been effected, would greatly reduce the risk of accident attending the use of the ordinary mining fuze.*

* They may add that this point is now receiving the active attention of one of them.

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You will see from this that they anticipate something which they think they ought to make provision for. May not that be so? Yes.

659. *Mr. Curley.*] Do you consider that the clause as it stands meets the case it is assumed to meet? The clause is to me very ambiguous. The first part of the clause speaks of a lucifer match, or apparatus of any kind for striking a light, but with the latter part reads as if you are allowed to carry a lucifer match in a completely closed chamber. That is how I read the wording of the clause.

660. *President.*] That is to say that some means of striking a light in a completely closed chamber is anticipated?

661. *Mr. Gregson.*] Would you not rule Mr. President, that the words, after the word "except" in the clause under consideration do not apply to a lucifer match?

662. *President.*] Yes; I think so. It must be in a completely closed chamber attached to the fuse of the shot. It would seem that they are anticipating some means of firing a shot, and that the thing to ignite the shot must be within a completely closed chamber.

663. *Mr. Curley.*] Your opinion is Mr. Fegan that this sub-clause might be simplified by putting it in another form? Yes; that is what I think.

664. With regard to rule 12, sub-section (D) on page 26, and the latter part of the section "nor shall coal or coal-dust be used for tamping." Have you anything to say with regard to that matter? At the present time, a very great majority of the holes which are bored for shooting coal, are charged with coal-dust, and the coal-dust is damped. For safety I would go a great way, but something else must be found if you debar the miner from using coal-dust. In the Northern collieries now, the dust is slaked with water to make it as near clay as possible.

665. *Mr. Gregson.*] Is there not a risk of firing gas if it was present? I know from the last Royal Commission that sat on coal-dust it was proved that many of our explosions have been made more fearful through coal-dust being used.

666. *Mr. Curley.*] They have been aggravated? Yes; considerably aggravated. Do you think in connection with a clause of that character that if the coal-dust for tamping was made damp it could be used without any danger? I do.

667. *President.*] What is tamping? Ramming. It is similar to using a rod in a gun. If the mine is very fiery it would be better for the miners to have something else to tamp with.

668. *Mr. Gregson.*] How will this meet your objection: "Nor in mines where safety lamps are used shall coal or coal-dust be used for tamping"? I think that will meet my objection.

669. *Mr. Curley.*] With regard to the words in this section, "Nor shall coal or coal-dust be used for tamping," your suggestion is that dry coal-dust shall not be used—you think that if the tamping was made damp that would meet the case? Yes; but where there are gaseous mines I would have no objection to let the clause go as it is.

670. *President.*] Your opinion is that the clause should read, "Nor shall coal or coal-dust be used for tamping in mines where safety lamps are required by this Act"? Yes; I agree to that.

671. *Mr. Curley.*] That is, where safety lamps are used? Yes.

672. *President.*] I would like to understand why coal-dust is dangerous? Because it increases or conveys the flame from the explosion, and may inflame itself. It will flare up at once if not properly tamped.

673. *Mr. Curley.*] Will you now turn your attention to sub-section E of the same rule, the latter part of the sub-section:—

Provided that no person shall return to a place where such charge has missed fire until a period of eight hours has elapsed from the lighting of the fuse attached to such charge.

That has been erased? Yes.

674. Do you think that portion of the sub-section should remain in the Bill? That would entirely depend on sub-clause 4 of rule 10. If a shot has missed fire and a battery has been used, there is no danger in going back to the shot. The latter portion of sub-clause 4 of rule 10 was placed there by the Legislative Council while this sub-clause E of rule 12 was placed by the Legislative Assembly. It has altered the clause altogether.

675. *President.*] You agree with the latter portion of sub-clause E of rule 12 being struck out, if the provision we have just considered is left in? Yes.

676. How long have you known shots to hold fire? For as long as twelve hours, caused sometimes through knots being in the fuse.

677. Is this fuse you speak of out of sight? Say a hole is bored about 4 ft. 6 in. in length, only 4 in. of the fuse will be seen. It may light up to a given point and then, through the tamping being so tight, may take a long time to go through, and a knot or two would make it much longer. The cavity in the fuse may also be defective. If the provision that no shot shall be fired except within a completely closed chamber is to remain it would get rid of the need for the latter provision of this sub-clause E, because when a battery is used, if the shot misses fire, you can go to your shot immediately.

678. *Mr. Gregson.*] It simply applies to the use of fuse? Yes.

679-80. *President.*] Will you look at Dr. Robertson's evidence, given on the 6th June, 1893, before Mr. Pigott's Select Committee, question 500, on page 30:—

What do you wish to refer to next? To the provision with regard to explosives, page 32, sub-section (l) says, referring to a shot that has missed fire:—

Provided that no person shall return to a place where such charge has missed fire until a period of eight hours has elapsed from the lighting of the fuse attached to such charge.

That is making a farce of mining. Half-an-hour would be quite sufficient. That provision would simply ruin the miners. I suggest that it be made half-an-hour instead of eight hours. If a miner does return to the place within half-an-hour he ought to be liable to a fine for infringing the Act. What I complain of is that our present Act is worked in an invidious way. Managers are punished very severely often for the acts of men, and the men escape. What is said there as to ruining the miners?

I do not think that has consideration with me. The miners will not go to the shot.

J. L. Fegan, Esq., M.L.A. 681. You object to the limitation of the eight-hours in clause E of rule 12? Yes, I think that should be there.

28 Aug., 1895. 682. *Mr. Curley.*] You think that should stand? Yes, without doubt.

683. *President.*] They can go and work somewhere else if they like? Yes, if the Manager will permit them.

684. *Mr. Curley.*] Will you turn to rule 15, on page 28 of the Bill.

Rule 15. Every road on which persons travel underground where the load is drawn by a horse or other animal shall be provided, at intervals of not more than fifty yards, with sufficient man-holes, or places of refuge, and every such place of refuge shall be [six feet high, three feet wide, and four feet deep] of sufficient length, and at least three feet in width between the waggons running on the road and the side of such road. There shall be at least two proper travelling ways into every steam-engine room and boiler gallery.

Do you think that stipulation there, with regard to the size of man-holes in travelling roads, should remain as originally drafted? Yes, for these reasons. In England I know very well that there are some collieries working where the coal is in some cases less than three feet. There are places where they work what is called the yard-seam, but in this Colony, as a rule, we have high seams, and it pays the managers or owners to make the man-holes of sufficient size where they have seven or eight feet of coal. At the same time I have seen men trying to escape from the hauling-engine's load, and in doing so, nearly meeting with an accident through the man-holes not being of sufficient depth for them to get in.

685. You have often seen a number of men travelling along these roads at one time? Yes, as many as twenty. Perhaps there are fifteen or sixteen skips which the hauling-engine is pulling at a high rate of speed, and these men have to use these man-holes to get out of danger. If they are made small there is not the same opportunity for them to get out of danger.

686. *President.*] How many men should a man-hole hold? It is limited to 6 feet high, 3 feet wide, and 4 feet deep.

687. You say that the size of these man-holes ought to be specified, while the English Act says that they are to be of sufficient length? Yes; in the English Act, the expense was the consideration on account of the height of the seam, but here we have high seams that will pay by the coal got from them.

688. *Mr. Curley.*] From your experience have you noticed that these man-holes have been made of nothing like huge capacity? They have not, but quite the reverse. As long as there is a hole of any kind, they are perfectly satisfied, and sometimes they have been found to be filled with debris. In one place in the north, a man was nearly killed through a man-hole being filled with debris.

689. *Mr. Gregson.*] Have not managers in England been summoned for not keeping these man-holes clear? So they have been here.

690. *Mr. Curley.*] Don't you think these man-holes ought to be a stipulated size? I do.

691. Will you now look at rule 19, on page 28, "Trolley over pit mouth."

Rule 19. [Every shaft in course of sinking shall be provided with a trolley to run over the pit's mouth and receive the load when brought to the surface. Such trolley to be large enough to cover the opening at the pit top.]

Do you think that a provision of this character is necessary? Yes; very necessary indeed. I know of a case where in the course of sinking one of these shafts, a bucket came down on account of no top being over the shaft.

692. Where did this happen? In the northern district. I know of another case where two or three men were overwound, where if there had been a trolley their lives would have been saved.

693. You think this rule as drafted ought to be part of the Bill? Yes, I think it ought to stand. It would be very little expense, and the means of great safety.

694. With regard to safety-hooks, have you seen anything of that kind? I have seen several experiments.

695. Do you think any provision of that kind is necessary in a Coal Mines Bill? I do.

696. Is it provided for in this Bill? Yes.

697. *President.*] Look at rule 20, 19. Is there any objection to that rule? There is no objection to that rule whatever, we want that retained.

698. *Mr. Curley.*] We will now go to rule 21, 20:—

Rule [21.] 20. Where the natural strata are not safe, every working or pumping shaft shall be securely cased, lined or otherwise made secure. [Every shaft in course of sinking shall be kept clear of all noxious gases by a fan or some other appliance.]

should the words that are struck out in that rule be retained? I think that clause should be retained as originally drafted.

699. *President.*] Is that clause in the English Act? The rule dealing with shafts in that act is No. 20. The latter portion of the clause, "every shaft in course of sinking shall be kept clear of all noxious gases, by a fan or some other appliance," is not in the English Act.

700. Why would they not have it in England. If it is necessary here, why is it not necessary there? There is a little expense at first.

701. Is it a serious expense? No, because a fan would be useful at any other time.

702. *Mr. Curley.*] With regard to rule 25, on page 29 of the Bill:—

Rule 25. [The coal shall not be wrought under any proclaimed or made road without the sanction, in writing, of the Minister, but headings may be driven under any such road for the purpose of connecting the workings, or of working the coal on either side thereof, but all such headings shall be in such positions, of such dimensions, and so supported as the Inspector shall, by writing under his hand, direct.]

Do you think that is a necessary provision in the Bill? I do.

703. *President.*] What has that got to do with the miners? It has got to do with the country, and the miners, as part of the taxpayers of the country, have to pay when these roads come down. The gentlemen who knocked this out in the Council wished this matter to be left in the hands of the coal-owners instead of the Minister.

704. *Mr. Curley.*] Is this not a matter that has sometimes a very serious effect upon the cost of a Municipality? Certainly; look at Waratah, and see the properties that are spoiled out there. At Wickham, roads and everything else have been let down through getting this coal out. It has been argued that there is no such stipulation in the English Act. That is because landowners have been representatives there, and the people have had to pay.

705. And may not another reason be that numbers of the mines in England are much deeper? Yes; some of the mines there are 2,400 feet deep. Here we only work top-seams. I have been down a mine in England that was 800 yards deep. 706.

J. L. Fegan,
Esq., M.L.A.

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706. *President.*] What is the deepest mine we have in this Colony? I think about 600 feet.

707. *Mr. Curley.*] With regard to the provisions in rule 24 on page 29 of the Bill:—

Rule 24. In any mine which is usually entered by means of machinery a competent male person not less than twenty-two years of age shall be appointed for the purpose of working the machinery which is employed in lowering and raising persons therein, and shall attend for that purpose during the whole time that any person is below ground in the mine. Where any shaft, plane, or level is used for the purpose of communication from one part to another part of a mine, and persons are taken up or down or along such shaft, plane, or level by means of any engine, windlass, or gin driven or worked by steam or any mechanical power, or by an animal, or by manual labour, the person in charge of such engine, windlass, or gin, or of any part of the machinery, ropes, chairs, or tackle connected therewith, must be a competent male person not less than eighteen years of age. When the machinery is worked by an animal, the person under whose direction the driver of the animal acts shall for the purpose of this rule be deemed to be the person in charge of the machinery.

? This rule is exactly the same as the English rule.

708. Do you approve of that rule? There may be an objection to the age of the engine-man. The Bill states 22 years, when a person is supposed to be a man at 21. I do not think I object to 22 being there.

709. Have you any objection to the next subsection in connection with that rule? No, I do not think so; it is just the one rule. I have no objection whatever to that.

710. Have you any objection to the remaining portion? No.

711. Will you now look at rule [27] 26 on the same page, "overwinding";—have you any objection to that? No.

712. Now look at rule 34 on page 30 of the Bill:—

[Rule 34. At any mine where a boiler is used for generating steam, the owner or manager shall at least once in every six months cause every such boiler to be thoroughly examined and tested by a competent person, who shall, immediately after the completion of such examination and test, enter in a book to be kept at the mine for that purpose a full and true report of the result of such examination and test, and of the state of every boiler so examined and tested, and every such report shall be signed by the person making it, and shall bear date of the day of entry, and a copy of such report shall be forthwith sent to the Inspector.]

Do you consider that is a necessary provision in the Bill? I think that the boilers ought to be examined where there are so many lives in jeopardy of an explosion. We have had an explosion at the Lambton Colliery. In England there is a Steam-owners Association, and they take out a policy of insurance on their boilers; and the insurance office sends an inspector to examine the boilers for their own safety.

713. *Mr. Gregson.*] Was not the objection raised in the Council that if boilers in a colliery should be examined so should boilers in any other industry be examined, too? But they are continually knocking out the examination of land boilers. This question has been before the country for five years. They have objected three successive times to the Land Boilers Bill, and we have been supported by Mr. See, who represents a firm that has interests where the Bill would be operative. They would not pass the first clause of the Bill, but threw it out. I believe marine boilers are examined periodically, and whilst they have that privilege for the safety of workmen and passengers, I think that where in some of the collieries there are sixty or seventy men working about the colliery they should have the same consideration. Perhaps a boiler might go when a cage full of men is coming up, with the result that these men might be killed, as well as the engine-driver. It is for the benefit of the owners, as well as for the men, that boilers should be periodically examined.

714. *Mr. Curley.*] Will you turn to rule [39] 37 on page 30 of the Bill:—

Rule [39] 37. The books mentioned in these rules shall be provided by the owner, agent, or manager, and the books, or a correct copy thereof, shall be kept at the office at the mine, and any inspector under this Act, and any person employed in the mine [or any one having the written authority of any inspector or person so employed] may at all reasonable times inspect and take copies of and extracts from any such books; but nothing in these rules shall be construed to impose the obligation of keeping any such book or a copy thereof for more than twelve months after the book has ceased to be used for entries therein under this Act. Any report by this Act required to be recorded in a book may be partly in print (including lithograph) and partly in writing.

Have you anything to say about this rule? This is an exact copy of rule 37 of section 49 of the English Act, with the exception of the words erased by the Council.

715. *President.*] You think the rule ought to be retained as it left the Assembly? Yes; I think the part struck out ought to be retained.

716. Why? There are some men who dare not speak of danger in a mine, or if they do so there is no more work for them. Mr. Curley, as representative of the miners, if forty men were killed, would not be allowed to go down and see the place where the accident occurred. Mr. Burt was not allowed that privilege in England. He would not be permitted to go into a colliery office to look at any reports to support any case he might have before a coroner. There might be bad ventilation, but men dare not give a report. There are some collieries where they have no check inspectors, knowing the consequence if they gave a report. There are no check inspectors, because if they gave a report to the inspector about the manager they would run the risk of being discharged. Being intimate with a number of men, I might ask for information as to whether a certain mine was safe, but at the present time I could not use that information through not knowing whether it was reliable. Under the wording of this rule they might give me a note to see what I require to enable me to point out an injustice. I think the wording of this rule would make managers look more carefully after the men.

717. *Mr. Curley.*] You appear to think that the inclusion of these words would lead to a more effective supervision of the mine? Certainly.

718. With regard to rule [40] 38:—

Rule [40] 38. The persons employed in a mine may from time to time appoint two of their number or any two persons not being mining engineers who are practical working miners to inspect the mine at their own cost, and the persons so appointed shall be allowed once at least in every month, accompanied, if the owner, agent, or manager of the mine thinks fit, by himself or one or more officers of the mine, to go to every part of the mine, and to inspect the shafts, levels, planes, working-places, return air-ways, ventilating apparatus, old workings, and machinery. Every facility shall be afforded by the owner, agent, and manager, and all persons in the mine for the purpose of the inspection, and the persons appointed shall forthwith make a true report of the result of the inspection, and that report shall be recorded in a book to be kept at the mine for the purpose, and shall be signed by the persons who made the inspection, and if the report states the existence or apprehended existence of any danger, the owner, agent, or manager shall forthwith cause a true copy of the report to be sent to the Inspector of the district.

Here you will see that there are some words inserted by the Council, "not being mining engineers who are practical working miners"? That is monstrous. Here are facilities given by our technical education classes, and a proposition in this Bill to give certificates to men who pass certain examinations, yet as

soon

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soon as they get a certificate of competency to manage a colliery they are debarred from using that intelligence on behalf of the men whom they are working with. The same wording is to be found in the English Act. The reason, to my mind, is simply that they might know too much.

719. The very words you wish inserted are in the English Act? No.

720. This is a copy of the English Act, but you object to the additional words? Yes, undoubtedly I do. Some miners give their time to study to go up for examination, and by that examination a certificate is conferred upon them. Why should they be debarred from using their intelligence on behalf of the men who send them to the mine?

721. I think you have dealt with most of the general rules on pages 31 and 32 of the Bill, from rule 41 to rule 51 inclusive;—do you see anything you have not touched upon? No; I think I have referred to the whole of those rules.

722. Did you refer to rule [52] 48 on the same page, to the latter part of the rule starting with "provided that nothing contained in the general rules in regard to barriers of coal," &c.? No; I do not think so.

723. *President.*] That remains provided the rules preceding it, from rule 41 to 51, remain also; it is a necessary corollary to those rules? Yes.

724. *Mr. Curley.*] Will you please turn your attention now to rule [54] 50, on page 33, the words in brackets, "where no special rules are in force," are struck out? I agree to that rule.

725. Turn next to rule 59, on page 34 of the Bill:—

[59. The Governor, with the advice of the Executive Council, may make and publish in the *Gazette* a set or sets of special rules, and thereafter the rules so made and published shall be deemed the special rules of every mine to which this Act applies and in respect of which no special rules shall be in force: Provided that upon special rules being established for any mine, the special rules made by the Governor as aforesaid shall cease to apply to such mine.]?

I think there is another clause forcing special rules,

726. Do you see that that rule is struck out by the Council;—what are your views on this matter? It is necessary to have special rules, but in clause [56] 52 there is a reference to framing and submitting rules for the approval of the Minister. I cannot see that the rule under consideration does much harm or good in being in.

727. *President.*] You will see that in the discussions in the Assembly on the amendments of the Council in rule 59, that the Assembly disagrees to the amendment omitting this clause, and gives as a reason "because in the interest of both the owners and the miners it would be wise not to strike out this clause, as there may occur a period during which no special rules made by the owner can be in force when the special rules made by the Governor would supply the deficiency;"—do you think that that rule ought to remain in? Yes, I do.

728. *Mr. Curley.*] Now with regard to rule [62] 57, on page 35, you will see that the word "wilfully" is erased? I think that ought to be left in.

729. Don't you see that the word "wilfully" is absolutely useless there;—if a person defaces a thing he must do it wilfully? But he may not intend to do it wilfully.

730. Is the word "wilfully" in the English Act? No; it is not in the English Act.

President.] You may take it from me that it will do no harm there. I do not see the necessity of it. We will, however, consider that.

731. *Mr. Curley.*] Will you turn to rule [63] 58, on the same page, subsection 2. The wording is altered from £5 to £1? I think £1 is useless there. A colliery manager was lately taken before a magistrate and fined £20, and afterwards £1 per day, and it will in the majority of instances pay to work a colliery at £1 per day.

732. *President.*] What was the nature of the offence? At a certain colliery in the north, a colliery manager thinking the colliery dangerous pulled his men out. The Act points out that, after the men have been drawn out of a colliery, the men must not go back again until the inspector has certified that the mine is safe. In the face of the Act, and without an inspector's certificate of safety, the manager permitted the men to return to work. The Inspector of Collieries summoned the colliery manager, and he was fined £20. The week following he was fined £1, and has since continued to work on without anything having been done. The department evidently thought that they would be persecuting the man by further prosecuting him.

733. *Mr. Gregson.*] It would have been a good deal better to have given him three months' imprisonment—that is what is provided in the English Act? If it had been the miner they would have given him gaol.

734. *President.*] Will you look at section [64] 59, on the same page:—

[64] 59. Where a person who is an owner, agent, manager, or under manager of, or a person employed in or about a mine is guilty of any offence against this Act which, in the opinion of the court that tries the case, is one which was reasonably calculated to endanger the safety of the persons employed in or about the mine, or to cause serious personal injury to any of such persons, or to cause a dangerous accident, and was committed wilfully by the personal act, personal default, or personal negligence of the person accused, such person shall be liable, if the court is of opinion that a fine will not meet the circumstances of the case, to imprisonment with or without hard labour for a period not exceeding three months.

Would not that section meet the case? What I have referred to was wilfully done.

735-6. Was this clause in the old Act? No.

737. *Mr. Gregson.*] There was no power under the old Act? The clause in the 1876 Act, dealing with this matter, is number 31, on page 10, which does not provide for a matter of this kind.

738-9. *President.*] The proposed Bill gives the necessary power? I think three months will meet the case.

740. Will you look at section [69] 64, on page 36, "no prosecution, &c."? They want this to read as near as possible to the English Act. I think the same law should apply to the miner as to a certificated manager.

741. Do you understand the English Act to be directed against the miner? I only know that a certain Earl in England has turned 2,000 people out of their homes because the men would not accept his terms.

742. *Mr. Gregson.*] Perhaps he wanted the houses for something else? I do not know what he wanted the houses for, I am only pointing out his humanity.

743. *President.*] We will look into this matter. We now go to rule [72] 67:—

[72.] 67. A person who is the owner, agent, or manager of any mine, or a miner or miner's agent, or the father, son, or brother, or father-in-law, son-in-law, or brother-in-law, of such owner, agent, or manager, or of a miner or miner's agent, or who is a director of a company being the owner of a mine, shall not, *except with the consent in writing of both parties, to the case, sit in Petty Sessions or adjudicate in respect of any offence under this Act.*

The words added there are "except with the consent in writing of both parties to the case"? I do not think out of delicacy an owner, agent, or manager, would sit on a case.

744. This clause gives the option to do so;—is there any objection to the words “except with the consent in writing of both parties to the case”? It would depend how the consent is got at times. Out of decency I think none of the parties mentioned should sit on a case. J. L. Fegan,
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745. *Mr. Curley.*] What do you think of the additional words in this section? I think they would be better out of it. It would not then give the opportunity of casting a slur on the administration of justice which we should be very careful to shield from anything like that. 28 Aug, 1896.

746. We will now go to section [78] 72, on page 38 of the Bill: “Large coal means all coal passing over a three quarter inch screen;”—what have you to say to this? I have given my evidence on this matter. I am against that entirely. The miners should have the right of their coal being weighed both for round and small.

747. *President.*] Is there not more paid to the miner for large coal? Yes, but they are taking it off. Large and small coal are nearly the same price.

748. Do you think that this clause ought to come out? Yes, I do.

749. *Mr. Curley.*] With regard to line forty of the same rule, “inspector,” you will see that the words “section 4 hereof” are erased;—do you approve of that? The Council have taken a greater portion of the powers proposed from an inspector, and necessarily have altered the duties relating to inspectors. In part 2 the Council have erased a number of clauses.

750. Will you give us your opinions on the powers of inspectors to be found on page 8, rule 21? The important part is rule [19] 17 on page 7 of the Bill with its sub-sections. My reason for amending this clause would be that whilst making provision for persons holding positions as managers, inspectors should come under the same heading by giving them a certificate for service, but for the future they should hold a certificate of competency by passing an examination.

751. *President.*] I think the Council are right in having amended the clause in that way? Yes if the provision is made elsewhere. I do not think provision is made to give inspectors a certificate of service. Having made provision for inspectors I do not think it is fair to those men as inspectors to be put out in the cold to please one or two gentlemen.

752. *Mr. Gregson.*] I think it is to save the possibility of that rather than to enable it to be done?—

753. *Mr. Curley.*] You say that there is no provision in the Bill? I cannot see any provision. There is no provision in the Bill to acknowledge inspectors who have been inspectors in the Colony for years.

754. *President.*] Will you look at rule [18] 16 on page 7 of the Bill:—

[18.] 16. The persons who at the commencement of this Act are acting as inspectors under the Act hereby repealed shall continue to act in the same manner, and generally to be in the same position, as if they had been respectively appointed under this Act.

That rule does not give an inspector a certificate, but it lets him be an inspector? Yes.

755. Would it not be better to insert in the Bill that a certificate of service would be a certificate of competency to those men? Men do not make friends at all times for doing their duty, and these men should be put in the same position as colliery managers or under-managers. I have in my mind at present a gentleman who has not a certificate, but who is quite as good as those who have certificates. I think all the evidence taken before Select Committees was in favour of dealing fairly with the inspectors as well as others.

756. *Mr. Gregson.*] Does not rule 8, on page 4 of the Bill meet your case? It provides that they shall “exercise such powers as may be necessary for carrying this Act into effect.” I think that in fairness to the position an inspector holds he ought to have a certificate. He is, as a rule, doing work which it takes a practical and experienced man to perform.

757. *President.*] Look at sub-section 3, of rule [19] 17, on page 7, of the Bill:—

Every Inspector appointed under this Act shall, after the [passing] commencement of this Act hold a *first-class* certificate of competency [or service] as [hereinbefore provided in regard to] Managers, [but for the purposes of this Act service as an inspector of collieries will be equivalent to service as manager of a mine].

?—An Inspector in England can have no higher certificate than that given by the Secretary of State as a manager's certificate. It is the highest certificate that is given to colliery experts. A colliery manager who gets his certificate of service may be put off from one colliery, and with his certificate can go to another, but if an inspector was put away from the Government Service he would have to pass an examination before he could qualify himself as a manager.

758. Look at rule [18] 16 of the Bill, on page 7:—

The persons who at the commencement of this Act are acting as inspectors under the Act hereby repealed shall continue to act in the same manner, and generally to be in the same position, as if they had been respectively appointed under this Act.

?—Yes; but it does not give them any certificate. A question may at any time be brought before Parliament, and affect the position of these gentlemen.

759. What is an inspector;—does he go indiscriminately to different mines, or does he visit only one mine? There are districts to be allotted to inspectors, and an inspector goes wherever he is told, but generally districts are allotted to them. Inspectors ought to be dealt with justly. Say that some case came up against an inspector and that he is discharged, he may have been acting as an inspector for twenty years, but when he leaves he is without any certificate to qualify him for another position. While we are giving certificates to colliery managers, I think we ought to give them to inspectors to qualify them for the position of manager.

760. *Mr. Gregson.*] I think that is only fair? It is just.

761. If an inspector is discharged by the Government I should think it would be for some very grave offence? He might resign without a certificate of any description. He ought to hold a first-class certificate of service, which would be equal to a certificate of competency after the passing of this Bill.

762. You want the whole of the words in the latter part of rule [19] 17, sub-section 3, left in the Bill—“but for the purposes of this Act, service as an inspector of collieries will be equivalent to service as manager of a mine”? Yes, I think that is only fair and just to those gentlemen.

763. *Mr. Curley.*] Have you anything else that you wish to bring under the notice of the Commission? There is one point, and I think an important point. I refer to the section in the Bill dealing with accidents.

764. What section is that? You will find it on page 15 of the Bill, section [31] 29. I want the word “serious” struck out. My reason is that it is unnecessary in the English Act, because in the majority of the mining centres they have a permanent relief fund, and according to the law governing Friendly Societies they have to keep a register of accidents, slight or otherwise. The employers contribute 25 per cent.

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cent. to that fund and the men 75 per cent. Every accident at the various collieries must be reported, and a register kept to come within the scope of the Friendly Societies Act. In the New Zealand Act they have made a provision to meet all cases of accidents, by the employers contributing so much towards a permanent relief fund for the support of widows and orphans of miners who have been killed, or to those who have been disabled in the mines. The provision I refer to will be found in the 59th section of the New Zealand Coal-mines Bill (*see Appendix O.*) The date of the Coal-mines Act in New Zealand is 1891. They are working eight hours in many mines there. They have also a provision for a minimum quantity of air. The ventilation clause in that Act reads as follows:—

An adequate amount of ventilation shall be constantly produced in every mine, to such an extent that the shafts, winzes, sumps, levels, underground stables, and working-places of such mine, and the travelling roads to and from such working-places, shall be in a fit state for working and passing therein.

An adequate amount of ventilation shall mean not less than 100 cubic feet of pure air per minute for each man and youth, and horse, pony, donkey, or mule, which shall sweep undiminished along the airway through each working-place.

I may say, further, that according to the latest return, Mr. Coghlan in his statistics on coal mines only gives seven persons killed and seventy-six persons injured in New South Wales in 1892. Last year no less than 520 persons were injured in six months in the Newcastle district, and these persons had to be kept out of the scanty earnings of the employees. I do not think the mine owners contributed more than £5 altogether. These persons had to be kept by men who, in the condition of trade then, were working only two or three days a week, and several accidents not considered serious have never been mentioned.

765. *President.*] To my mind there is a difficulty in stating what constitutes a personal injury; the term is very broad; a case came under my notice only a short time ago, in which a person was injured by the firing of a shot without due notice being given to him; his arm was injured so that he could not use it for some time; the doctor said it was a simple injury, and considered that the person was making too much of it—putting on side about it; it is a personal injury if I knock the skin off my hand, or if something drops on my feet;—who decides whether the accident is sufficient to put a man on the fund? The committee of the lodge. He must have a certificate pointing out the nature of the accident and how it was caused, then the lodge deals with it. It does not seem much to a person just reading about it, but those who understand the many accidents that happen, and know of the little sympathy that is expressed towards them, will, I think, agree with me in what I am stating. If these accidents had only come to the front, we would have had legislation twenty years ago.

766. In what way could you legislate to prevent these accidents? By having them reported.

767. Will you give an instance of what you mean? Under the English Coal Mines Act the roads are seen to be secure before men enter the pit. An examiner sees that the roof is all right. He comes out and tells the men that everything is all right; but, under our Act, there is nobody to see that these things are secure, and the consequence is that when men are going along the road many of them are hurt by falls of roof, through want of proper supervision.

768. If some provision of this kind was made, you think there would not be these dangers? No; but like the sea captain, the manager prides himself when speaking about his term of service by saying that since he has been on the bridge no lives have been lost. If this word "serious" was taken out of the clause in question it would make colliery managers more careful—that is, if every accident was reported.

769. *Mr. Gregson.*] You are anxious that such cases as you have mentioned should be reported? Yes.

770. We say that under this Bill this will be corrected? Yes.

771. Let us deal with something that is not provided for? I understand that this Bill is not piecemeal, but whole.

772. I am speaking of the Bill as it came from the Legislative Council; you say that there are these large number of accidents that are not reported, and point out the necessity for legislation, and produce one instance which is provided for in the Bill; can you tell us of something else? As it has been seen necessary, in New Zealand, to legislate for the support of men who have met with these accidents to prevent their being thrown upon public charity, or upon their fellow men, I think that it should also be provided for by legislation here, and that the owners should take part of the responsibility of accidents in mines.

773. *President.*] That is outside the scope of this Commission (*scope of Commission read*)? My evidence is given with a view to future legislation. We may be able to ask the Government to do something to mitigate the poverty that ensues from these accidents under our present system. Seventy-six accidents amongst 12,000 men is small; but where it comes to 520 in six months of a year, or 1,040 for the year, it becomes appalling, and the Government might be asked for some measure to provide for the coal owners taking some share in these accidents.

774. Here is legislation to prevent a lot of these accidents? But omitting this word "serious" in my opinion would prevent more accidents.

775. *Mr. Curley.*] Do not you think that the word "forthwith" should be left in this clause? Yes; forthwith means at once, giving the limit not later than twenty-four hours.

776. Did you give us the whole of the statistics with regard to the accidents you have mentioned? They are to be found in Mr. Coghlan's book the "Wealth and Progress of New South Wales" on page 77. He says:—

There were seven persons killed and seventy-six persons injured in New South Wales coal mines during 1892, making a total of eighty-three accidents—the number of fatal accidents being smaller, and that of non-fatal accidents larger than in any of the previous ten years. For the ten years ending with 1892, the average annual loss of life in the British coal mines was 1·8 per thousand, or at the rate of 179,696 tons of coal raised for every fatal accident. In the New South Wales collieries, for the same period, the rate was 3·0 fatal accidents per thousand miners employed, and only 121,657 tons of coal were raised for every life lost.

777. *Mr. Gregson.*] I can give you very different figures to those (*see Appendix J*)? I am quoting from Coghlan. I am not making them.

778. I saw the same statement made by Mr Sydney Smith, but I did not know where he got the figures? They are here in Coghlan.

Witness: I made a mistake yesterday when speaking about the working day in Russia. I said children of thirteen years must not be employed more than eight hours; it should be fifteen years, and not more than six hours per day without a break.

779. *President.*] You have made no objection to the employment of boys? I object to them working for ten hours. J. L. Fegan,
Esq., M.L.A.
780. *Mr. Gregson.*] You have been engaged in coal-mining from the time you were 16 years old? Part of the time, but I have not been coal-mining all the time. Part
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781. How long have you been in this country? For eight years.
782. How long were you coal-mining before you came to this country? For something like five years.
783. Did you begin as a lad? Yes, when I was 16 years of age.
784. What were you doing? Working with skips.
785. Driving? No; I was drawing by hand, without a pony.
786. From that you went to other things? Yes; through all up to getting coal, timber, setting, &c.
787. How long were you on the coal? For about two and a half years; but there were intervals between the time I was 16 and the time I left for this Colony.
788. You were not the whole of your time employed in the mine? No, I was not.
789. You were living more or less in a coal-mining district? Yes, amongst coal-miners.
790. Since you have been in this country what has been your occupation? Mining.
791. In what capacity? I was underground manager at Anvil Creek. I was employed first as a coal-miner, and after that as underground manager.
792. From Anvil Creek where did you go to? I was working at Bullock Island.
793. What were you doing at Bullock Island? I was getting coal all the time until I got a seat in Parliament.
794. Were you not check inspector at the Wickham and Bullock Island Colliery? Yes.
795. During the time you were check inspector at the Wickham and Bullock Island Colliery you got paid by the men? Yes.
796. Do you think from your experience of mining in Lancashire you are able to form an opinion of the conditions of the industry there? I think so.
797. What was the height of the seams there? Seven feet and 22 feet.
798. Is that the ordinary run of the seams there? There are some seams only a yard and some only 4 feet.
799. Did you work in these seams? No; I knew men who were working there.
800. Would you think that men working on those seams worked under as favourable conditions as men in the 7-ft. seams? That would depend upon the ventilation. In the latter seams they had a volume of ventilation enough to blow your cap off. The seam was called the Little Delph seam.
801. A man who works in a small seam has not the same advantages as the man who works in a larger seam? A 6-ft. man cannot feel as much at home in a 3-ft. seam as he can in a large seam. He is more comfortable in a high seam than in a low seam.
802. Are not some of the seams in this country high seams? Yes.
803. Do you think from your experience that a miner is working under more favourable circumstances here? No, not by a long way. The ventilation here is a disgrace to the Colony.
804. You mean to say that the ventilation is less here? The ventilation in some parts of England is worse than here, and in one sense better. There is so much gas to dilute and push before the air that even where there is a large volume of air the ventilation is not as good as it might be.
805. These gases are all deleterious to health? Yes.
806. In New South Wales where there is less of this gas to contend with, is the miner under less or more favourable circumstances than in Great Britain? In some instances he is under worse conditions.
807. Will you kindly tell us how he is under worse conditions? Because there is such a small volume of air. Indeed on account of the absence of these gases the real quantity of air is not given, whilst in England, the air sweeps the face of the workings according to the Act. Here it is only allowed to sweep along the air ways of the workings, and not into the workings.
808. This is as regards some of the cases? Yes.
809. In other cases men are working under more favourable circumstances in this Colony than in Great Britain? Yes, when men are starting their bords away.
810. You do not limit it to collieries, but to different parts of the workings? Yes.
811. You mean to say that there are good and bad places in each pit? Yes.
812. Speaking of the average, a man here takes his chance as to what place he gets. Do you think that mining is conducted in this Colony under more or less favourable circumstances than in Lancashire, averaging the case as between the bad places and the good places in the pit. Does a man here work under more or less favourable circumstances than in England? He works under more favourable circumstances in England.
813. You think then that mining is conducted here under less favourable circumstances than in Great Britain? I do certainly. The statistics I have given will prove that.
814. As regards the climatic conditions of the country, do you think that there are any drawbacks here? I think this is a far superior country.
815. Is a man able to do as much work in this Colony as in Lancashire? In the summer time he cannot be. Although he gets as much coal he is an old man sooner.
816. You think he does get as much coal? Yes, because he has to work like a horse here on account of employment not being so regular here as in England.
817. What is the average quantity of coal a man can get in a day here? I can hardly give you that. It depends very much upon the place he is working in. Two men in one place cannot make as much as two men in another place.
818. How many skips of coal can they get? In bottoms, from six to eight skips.
819. What is the average weight? 12 cwt.—5 tons for two men or 2½ tons per man.
820. Is that a good rate? That was a fair rate at one time, but it is a starvation rate at present. You of course know that tops and bottoms vary considerably.
821. You put it that there are different places in the mine, some good and some bad? Yes.
822. That is provided for by a system of cavilling? Yes; cavilling is the best system.
823. Amongst a body of men, each one has an equal chance of getting a good place or a bad place? Yes.
824. In the bad place some men can get 2½ tons per day? Yes.
825. What would two men in a good place get—how many skips would two men get in tops? Sixteen.

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826. Sixteen times twelve will give 9 tons 12 cwt. ? Yes ; but cases like this are in the minority.
827. What do the miners get paid per ton ? There are two men to get this quantity of coal, and I think the rate per ton is 2s. 8d., while in some collieries they are reducing the rate to 2s. 6d. per ton.
828. These men get five tons between them ? Yes ; in the top coal they get threepence or fourpence less, and in some instances as much as eightpence less than in bottoms.
829. Do you think there is anything in the conditions of mining here that would make the English Act inapplicable in its general features or policy ? It has been admitted that the English Coal Mines Act can be amended upon. A bill was only introduced on the 16th of April this year to amend certain parts of the English Act.
830. Have you seen a copy of that Bill ? No ; but I have seen a notice of it.
831. Do you know in what respect that Bill amends the Act of 1887 ? I have not got the particulars.
832. Is there anything in the conditions of mining in New South Wales that in your opinion would make the English Act inapplicable to this Colony in its general features or policy ? Yes ; with reference to the ventilation clause.
833. I am not dealing so much with that clause ;—I mean with regard to the working of the coal ? Yes.
834. The policy of allowing the inspector to go into the pit ? I think we have a right to get this amended.
835. Do you think these things are inapplicable to New South Wales ? I do ; the English Act is not sufficient to protect life and limb.
836. Do you disapprove of giving an inspector power to come in and say that this or that is not correct, and you must make it right ? I entirely disapprove of that, because the roof is coming down while the arbitration is going on.
837. In respect of the powers it gives to the manager, apart from the inspector's control—that is, for the manager to carry on the mine in his way—is that a good system ? As an inspector represents the Government, and the Government represents the people, I think the people's lives ought to be secure, and that power ought to be given to the inspector to order the men out in case of danger.
838. That is a special provision ? Yes.
839. Assuming that the English Act was altered as you would like to see it altered would you be quite willing to have it here ? Yes ; if it is altered in the way of giving the inspector greater powers.
840. And in other respects ? I do not know what you mean.
841. Does the report of your Select Committee convey your own impression as to what you would like ? I said before, "Yes," with the exception that I wanted to make an addition.
842. With the addition you made yesterday, altering the Act to suit your views, and in your opinion the views of the miners generally ? Yes.
843. With regard to ventilation, the English Act provides, as you are aware, an adequate quantity of air in all parts of the mine ? Yes.
844. Don't you think that that is sufficient provision to make ? No, I do not.
845. Why not ? If you will bring the same circumstances here as in England, I am prepared to accept the wording of the English Act.
846. What is the meaning of the word "adequate" ? Sufficient.
847. If you have sufficient air in all parts of the pit, what more do you want ? Who is to say what sufficiency is ?—I am not going to leave it to a manager.
848. Under the Bill, do you not know that it is not a manager, but an inspector ? No, I do not.
849. Well, that is so ? If that is so, you have read the Act differently to what I have read it.
850. Will you kindly read the 19th section of the Bill on page 8, "Powers of inspectors" :—

19. An inspector under this Act shall have power to do all or any of the following things, namely :—

- (i) To make such examination and inquiry as may be necessary to ascertain whether the provisions of this Act relating to matters above ground or below ground are complied with in the case of any mine.
- (ii) To enter, inspect, and examine any mine, and every part thereof, at all reasonable times by day and night, but so as not to impede or obstruct the working of the mine.
- (iii) To examine into and make inquiry respecting the state and condition of any mine or any part thereof, and the ventilation of the mine, and the sufficiency of the special rules for the time being in force in the mine, and all matters and things connected with or relating to the safety of the persons employed in or about the mine or any mine contiguous thereto, or the care and treatment of the horses and other animals used in the mine.
- (iv) To exercise such other powers as may be necessary for carrying this Act into effect ?

You cannot have an inspector down the mine every day, unless you are going to have one inspector for every mine, which is entirely impracticable ; you have an inspector now for a certain number of collieries, and it is impossible for him to give the supervision necessary to have proper ventilation in the mine. My answer is, that it ought not to be left to the inspector, but that a minimum quantity of air should be inserted in the Bill, and that the anemometer should prove the sufficiency of air was there. I may point out that I have a report of a certain colliery in the Northern district where leaving it to the manager he has only given 35 cubic feet of air to man, boy, and horse in that district. (*See Appendix P.*)

851. Referring to that case, and supposing it to be true, what does a man do who is prejudiced by that sort of thing—what remedy has he ? The remedy of appealing to the inspector at once.
852. And what does the inspector do ? If time permits him, he has to go and see the place ; but the man who writes to the inspector is a marked man, and has to be shifted by some means or other.
853. When the inspector goes to see this place, what is to hinder the man pointing out any irregularity ;—do not people know when the inspector comes ? No, not always.
854. I am speaking of the remedy the man has ; does he not complain to the inspector ? He may, if he chooses.
855. Is that not his remedy ? Yes, but every man cannot take it.
856. Is it his only remedy ? No ; he can pack up his tools, and go and starve. I mean leave the pit.
857. He complains to the inspector and the inspector comes ;—the mine manager would not know when the inspector was coming ? At times he would not. He might give the manager certain notice.
858. Is that so ? In some cases he does.
859. Is it his duty to give notice to the manager ? No ; it is not his duty to do so.
860. He may make a surprise visit ? Certainly.
861. If in this surprise visit he finds the man's story to be true, he can proceed against the manager ? Yes.
862. Cannot the inspector make a surprise visit without any complaint at all ? Yes.

863. These difficulties are not peculiar to New South Wales;—do they not obtain in Great Britain? In Great Britain, almost as a rule, there is gas to force the manager to give good ventilation. J. L. Fegan,
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864. Are there not other respects in which the miner can complain to the inspector;—if an inspector can make surprise visits, is he not likely to find out if anything wrong is going on? Yes, by observation.

865. Is the inspector not as likely to do his duty here as in Great Britain? Yes, but in the matter of ventilation gas is there to prove that the place is not ventilated, here you must have your instrument or a complaint from some of the men.

866. Will you look again at sub-clause 2 of that part of the Bill dealing with the powers of inspectors;—you will see that the inspector has power to enter, inspect, and examine any mine, and every part thereof, at all reasonable times by day and night, but so as not to impede or obstruct the working of the mine? May I ask your attention to rule 20 of the Bill, sub-clause 2:—

(11) If the owner, agent, or manager of the mine objects to remedy the matter complained of in the notice he may, within ten days after receipt of the notice, send his objection in writing, stating the grounds thereof to the Minister, and thereupon the matter shall be determined by arbitration in manner provided by this Act, and the date of the receipt of the objection shall be deemed to be the date of the reference.

The manager may, within ten days, state his objection to the Minister, and thereupon the matter shall be determined by arbitration. While this arbitration is going on the men are being slowly poisoned.

867. In some mines you say that the minimum quantity of air would not be enough? No, it would not be.

868. In the Metropolitan mine for instance? Yes.

869. In that case what would be done? The manager will not work without a proper quantity of air, because if he did he would be minus the colliery and the men's lives.

870. You attach great weight to the minimum quantity of air? I do.

871. Will you try and explain to me in what better position the inspector or the miner would be if you have that minimum quantity of air in the Bill and it is not provided in the mine? When check-inspectors go round they have an anemometer, which is an instrument to register the air with, and they are satisfied when they come to a certain point that a certain number of cubic feet of air is provided in accordance with the Act, and the consequence is that it satisfies the men and all concerned. In the other way, when no minimum is provided, if the inspectors happen to be a little pig-headed they may say that the quantity of air is not sufficient and a report is given to the men, and they say that they will have a sufficient quantity there. This may cause a dispute, and the result will be a strike because the ventilation is bad. To protect ourselves, therefore, against a manager who does not care for the lives under him we ask that a minimum quantity of air shall be put there for the welfare of all.

872. In what better position would the inspector or the miner be with regard to the sufficiency of air by having a minimum recorded;—say there is not the quantity of air, what remedy is there, supposing that there is not 100 feet of air in the place? The miners can report to the inspector, and the inspector can report to the Minister.

873. In what respect is the miner or the inspector in a better position by having the minimum quantity of air provided for in the Act? If the inspector finds that there is not a sufficient quantity of air it is his duty to report the matter to the Minister.

874. I think you will find it is his duty to communicate it to the manager? But if the manager will not provide the necessary quantity of air, what happens. The inspector draws the attention of the manager to the fact that there is not the minimum quantity of air fixed by the Act. Then it is the manager's word against the inspector's word.

875. No, surely not that. The inspector has simply to say that there is an insufficient quantity of air and then the matter goes to arbitration? No; I do not think so. If the manager will not supply the requisite quantity of air he writes to the Minister, and ultimately the matter goes to arbitration.

876. But arbitration does not come on the word of the inspector or the manager? No; if the manager objects to remedy the matter he can write to the Minister, and the question is to be settled by arbitration.

877. You will notice that although the minimum is fixed at 150 cubic feet there is more air given? Yes, but not for the workmen. It is passing down the shaft, but never gets to the workmen.

878. Suppose an inspector acting under the English Act comes into a working-place and says that there is not a sufficient quantity of air there, is not that better for the miner? No, it is not; inasmuch as there is a war of words between the inspector and the manager.

879. *President.*] If the inspector says that there is not sufficient air, would not the manager have to provide sufficient? A manager may say that he would do his best, and his best, in some instances, is very little.

880. Cannot the inspector compel the manager to do what he wishes to be done? It has to go through the avenues of red-tapeism before he can get it.

881. If, when the inspector finds something wrong, he communicates it to the manager, should not the manager try and put it right? Certainly he should.

882. It is only where this red-tape arbitration business is called in that you see some difficulty? Yes; and rightly so.

883. If the inspector is a man clothed with authority, this is sufficient to put it right, and the manager will put it right? Yes; that is so.

884. Notwithstanding that, you think that it is still necessary to have a minimum provided in the Bill? Yes, for the reasons I have given.

885. Supposing there is a minimum provided in the Bill and that minimum is not supplied, and the inspector says to the manager,—You are not supplying the minimum amount of air. How does that make the miner a marked man? If a man complains to the inspector you say that he is a marked man, then supposing that the Act provides a minimum and that that minimum is not given is he still a marked man? Certainly.

886. Cannot the inspector decide whether there is an adequate amount of air, and if he so decides, is his word not absolute? No the inspectors word is not absolute.

887. I thought we just agreed that it was? Oh no.

888. In ordinary cases the manager is told by the inspector that something is wrong, and when told so he puts it right? Yes, in some cases.

889. Is not the inspector, then, practically the boss of the whole situation? No.

890. What is the loop-hole, then? This arbitration business.

891. *Mr. Gregson.*] Are there not plenty of places in a mine so high and so large that the current of air may be there without the anemometer measuring it? Not in the sections of a mine. Where there is a district of sixty men I could not find a place.

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892. Does not the Bill provide that there shall be an adequate amount of air in all parts? The Bill says that the mine shall be divided into districts or splits.

893. I do not think so—Will you look at section [49] 46 of the Bill, on page 23, and read the first clause?

G. Division of Mine into [Splits] Parts.

[49.] 46. (i) Where two or more parts of a mine are worked separately, the owner, agent, or manager of the mine shall give notice in writing to that effect to the inspector of the district, and thereupon each such part shall, for all purposes of this Act, be deemed to be a separate mine.

(ii) If the Minister is of opinion that the division of a mine in pursuance of this section tends to lead to evasion of the provisions of this Act, or otherwise to prevent the carrying of this Act into effect, he may object to the division by notice served on the owner, agent, or manager of the mine; and the owner, agent, or manager, if he declines to acquiesce in such objection, may, within twenty days after receipt of the notice, send a notice to the inspector of the district, stating that he declines so to acquiesce, and thereupon the matter shall be determined by arbitration in manner provided by this Act; and the date of the receipt of the last-mentioned notice shall be deemed to be the date of the reference.

Yes, I acknowledge I have mis-read the Bill, if you read it like that, but that is as the Legislative Council amended it; it was objected to by the Legislative Assembly.

894. Can you conceive of any part of a mine that the words in the ventilation clause of the Bill, section [50] 47, on pages 23 and 24, will not cover? Without a minimum quantity of air a mine without gas would not be properly ventilated.

895. We have heard something about the necessity for providing a minimum also with regard to the sizes of pillars under the land and under the sea. Do I understand you to say that the report of the Commission on Collieries adjacent to Ferndale made some suggestions with reference to this matter? Some suggestions were made with reference to collieries working under tidal waters. (*See Appendix Q.*)

896. But not with reference to collieries working under land? No, under land it would depend on the strata.

897. You approve of a certain width of pillar? Yes, nothing less than 8 yards.

898. Does that cover all conditions for the future? If you have broken strata you must have larger pillars. If you have a good thickness of rock your pillars do not need to be so thick.

899. Can you conceive of any circumstances where an 8-yard pillar would be insufficient? Yes I can.

900. Then why don't you provide for it in the Bill? There was a Bill brought before the House which made stricter provisions than those embodied in this Bill.

901. Is it not the case that the minimum now proposed may be insufficient in some cases? Yes. If I was working a mine myself I would work larger pillars. It depends on the strata as to what thickness of pillars should be left behind.

902. I have asked you whether you can conceive of any circumstances under which the minimum provided in this Bill is insufficient? Yes, I should say so.

903. Has such a case happened in which the minimum is insufficient? Yes; where a crush has come on, and about the shaft, or on the hauling road, I think that there ought to be more than 8-yard pillars.

904. I am not talking about main travelling roads, but of ordinary working pillars in the ordinary sense? I do not see that it is necessary to have more than 8-yards pillars in such places. I have not seen places where 8-yard pillars would not have been sufficient.

905. Suppose such a circumstance happened, as you have spoken about, where would your minimum be? If it happened it has an effect we cannot dispute.

906. Then what is the good of your minimum? We should have to draw on our imagination.

907. Would it not be better to leave out any specified size and trust to the inspector, and take the responsibility off the managers shoulders? Oh, no.

908. Would it not be better to leave it to the inspector to say that the pillars left by the manager are insufficient, and if anything should happen the manager should be free? No; the responsibility would rest with the manager. If you put an inspector in that position he could be harsh to some managers and not harsh to others.

909. Will not the inspector do his duty? We have always had those men. I think I asked some questions bearing upon this subject to Dr. Robertson, which will be found in his evidence with the progress report of my select committee of the 19th April, 1894. I will read them with your permission—

1229. Are you not aware that the inspectors get word at times as to the condition of the mine? I do not know anything about it. Any word that they get in that way ought to be communicated to the manager, to give him an opportunity to defend himself. If you make suggestions to a man in the way that that inspector did, you can get some men to say anything you please. The inspector is not there to raise dissension and strife between miners and over-men. The effect of the proceedings was that that over-man knew, without a word being said, that that man had been writing anonymous letters to the inspector, and he had his eyes upon him. I spoke to the man, and I said, "If you have any fault to find with anything, I am always accessible to you; but I do not want to put you in such an invidious position. The chances are that you will be discharged if you do not have care. If you are short of props why not tell the manager; why go to the trouble to write to the inspector?" The man said he did not do it; but I said, "The inference was that he did." I said, "You are putting yourself in a very invidious position. I will protect you so far, but do not do it again."

1230. Then it appears that the inspector was written to? I only inferred that he was, but I object to the way in which the inspection was carried out. The inspector ought to have been perfectly frank about it, or he ought not to have let the over-man go into the place with him.

1231. Did the inspector ever find in one of the mines a pillar a foot less than was stipulated? Yes; it was with very great difficulty that the manager was saved from prosecution over that.

1232. Who was the inspector? The inspector was Mr. Rowan. It was in the south. I suppose he was acting up to the letter of the law, but inspection is a farce if administered in this way, you must act according to the spirit. But I have no fault to find with the inspector for doing that.

1233. You think that he was overstepping the bounds? I do; and I explained it to the Minister. The over-man was a particularly careful man, and he went into a place where they were driving and marked it off, and put a stamp on with a pick and said, "When you have driven other 2 feet you turn off to make the cut through." The coal was working well and there were a pair of good men in the place; but when they got through the other 2 feet they came to a stone rising out of the floor. They went on, being still within the 35 yards, and the manager being away they took it upon themselves to go beyond the 35 yards, and they cut their end where the coal was high. The inspector came through on the following Tuesday, and the first words of the over-man were, "Did you hear my orders about going 2 feet beyond that stamp?" The answer was, "Yes; but we saw the stone was about to run out, and we broke away to the end." Although the men admitted they were in fault, and although the stamp and check were on the wall the inspector was bound to report it, and there was a great deal of trouble to prevent the manager from being prosecuted. This is acting according to the letter of the law. They will never get things done right if they do not show a more becoming spirit in the exercise of their duty.

1234. You think that the managers and inspectors should show a conciliatory spirit? Certainly. Here was a case in which the men admitted that they were in fault, and there was proof of it on the wall, yet the inspector was obliged to report that they had gone 18 inches over the 35 yards. That is one of the unfortunate provisions of the existing Act. I hold that these provisions should not be in the Act at all. If you take the English Act, there is no such provision out of which a prosecution could arise.

MONDAY, 2 SEPTEMBER, 1895.

[The Commission met in the Board Room, Chief Secretary's Office, at 2:30 p.m.]

Present:—

FRANCIS EDWARD ROGERS, Esq., Q.C. (PRESIDENT).

JAMES CURLEY, Esq.

JESSE GREGSON, Esq.

John Lionel Fegan, Esq., M.L.A., re-examined:—

910. *Mr. Gregson.*] I think when you were last examined we were on the subject of pillars? Yes, Mr. *J. L. Fegan, Esq., M.L.A.*
 911. Can you give me any idea of the district custom in Newcastle with regard to pillars? I think it is 6-yard pillars and 6-yard bords. *2 Sept., 1895.*
 912. Where are they working in that way? In the Wickham and Bullock Island and Hetton collieries, and they work the same way at Stockton.
 913. Do they work by the mark? I do not know how they mark.
 914. Do they drive the bords by the line, or is any precaution taken as to the miner widening his bord? I have known them to cut through the pillar before they have gone the distance.
 915. Do they run their bords by marks in any of the collieries you have mentioned? In Hetton, yes.
 916. Do they do so at Wickham? During the last five years they have been more careful there.
 917. What is the custom with regard to other collieries further inland? I believe it is 8-yard pillars and 8-yard bords. I believe some of them commence on the long-wall system, or what we term narrow work.
 918. How long has it been the fashion to leave 8-yard pillars and 8-yard bords in the more inland collieries about Newcastle? I think it has been the general custom.
 919. Is that what you understand by the district custom? Yes. There are exceptions, of course, where men have gone through the pillar without the manager or anyone else knowing anything about it.
 920. Do you know whether they have 8-yard pillars at Waratah? I do not know.
 921. Do you know whether they have 8-yard pillars at the Co-operative Colliery? No; I have never worked there.
 922. Have you ever made any inquiries? No; only in the matter of talk, and I would not give that as evidence.
 923. Are you aware of the cover over some of these collieries—the different thicknesses of strata? Well, no—not by heart.
 924. What would you say, generally speaking? Do you mean the distance of the shaft?
 925. No, the overlying strata? There is in some instances red sandstone.
 926. I am speaking of the thickness of the strata? There are some 300 feet, some less, and some more. There are some as much as 500 feet.
 927. *President.*] Is that in the inland collieries or in collieries working under tidal waters? In the inland collieries.
 928. *Mr. Gregson.*] Have you any knowledge of the thickness of cover at other collieries—say, at Singleton? Up at Singleton I think they are less. Some of the collieries there have a tunnel.
 929. Have you any idea of the thickness of the cover? I cannot say from memory.
 930. Have you any idea of the width of the pillar they leave there? No, I have not.
 931. I suppose you will say that there is not an improbability of coal-mines being worked from 50 to 100 or 150 feet? I know they have been worked.
 932. And may be again? Yes.
 933. Would you not think it a waste of coal to leave pillars of that size with that cover? No; I should be afraid of working it less.
 934. You would not think that anything less would support the strata? I would not work it less. The width of the pillar depends on the strata.
 935. Is it your opinion that the thickness of the strata has nothing to do with the thickness of the pillar? Oh yes, it has.
 936. Would a cover of 50 feet require as much strength as a cover of 500 feet? That depends on whether the ground is broken or not.
 937. I want you to put that on one side and consider the thickness of the cover? I have tried to answer as plainly as I can.
 938. Can you not say whether the thickness of cover has anything at all to do with the thickness of pillar? That will depend on the thickness of the strata.
 939. A pillar that is sufficient for 50 feet would not be sufficient for 500 feet? It will depend on the thickness of the strata as to what pillars should be left in for support.
 940. You cannot answer that plain question? I have answered the question as I think in a proper way.
 941. *President.*] It varies under different circumstances;—it must be a certain thickness in one place, and the same thickness may not be required in another place? It varies according to the depth you go, and the ground that is gone through.
 942. You decline to say that thickness of cover should of itself be a consideration? It all depends on the ground that is gone through, and upon the depth that is gone through.
 943. This is surely a thing not difficult to comprehend;—we will all admit that there are circumstances that have to be taken into account, but they do not affect the consideration of the thickness or weight? I differ from that. If you are going through sand for a certain distance much stronger pillars will be needed than if you are going through rock. There is a certain holding capacity in rock, while under sand it would need a greater thickness of pillar than with what we call a place with a sound top over it.
 944. *Mr. Gregson.*] Suppose you had 50 feet of sand for a cover, would you require as strong a pillar under that as you would with 500 feet of sand? It just depends whether you could work it. You could not work it.
 945. *President.*] What Mr. Gregson wishes to know is whether, supposing all the conditions to be the same, if you are working at a depth of 50 feet, you will require the same size of pillar as if you were working at a depth of 500 feet? If all the conditions were equal, certainly not.
 946. *Mr. Gregson.*] If you provide pillars that are sufficient for working at a depth of 500 feet, would it not be a waste of coal to have these pillars under circumstances where the cover is less? Not necessarily.

- J. L. Fegan, Esq., M.L.A.
2 Sept., 1896.
947. Will you tell me why? Because where you have large pillars behind there is a better opportunity of getting them out than small pillars. With small pillars, as soon as you commence to work into them, the top comes over you. Where there is a solid pillar there is no crush. There is no crush until the coal is got out, or very little, where there is a strong pillar; but with a weak pillar there is a great deal of crushing.
948. Are you aware that in some places people have to work coal under the necessity of keeping up the roof to avoid all subsidence—in such a way as to avoid any chance of disturbing the surface? They do in the collieries under tidal waters.
949. Are there any other places that you know of? Yes; there is Sneddon's Colliery, at Wallsend.
950. I am asking you in general terms? Yes.
951. Such as what? In Sneddon's Colliery they are taking out some of the old pillars left by the Co-operative Colliery.
952. Are you aware that in some places the coal-owner has to work his coal so as to avoid any chance of disturbing the surface? I know of the Linwood Colliery and the Maryville Colliery.
953. At the Linwood Colliery did they start on the policy that they were not to disturb the pillars? I do not know what assumption they started on.
954. Do you know of any cases in which the surface value is greater than the underlying coal value? That would largely depend on the amount of money the person has got to sue with for damage done.
955. *President.*] Supposing no damage is done at all? In city sites I suppose the surface would be more valuable.
956. *Mr. Gregson.*] In city sites the coal-owner has to work without any intention of drawing pillars;—if the surface value is greater than the underlying coal value, is it not reasonable to suppose that he would work it without any intention of drawing pillars? That is his look out. It largely depends on the amount of money a person has got to sue a company with.
957. Am I to assume that you are above all these considerations, that they are only idle talk, that these matters should be settled without any regard to surface value or underground value? Whilst you may think that the answers I give are evasive, it is on account of the experience I have had. I still say that it depends on those who are living there as to whether they are in a position to sue a company or not whether pillars are left or taken out; upon whether they have the money to sue.
958. *President.*] Do you mean to say that the surface is let down without any regard for the men? The unfortunate position is that some of these men are working for the company. I know of some places that have been almost dragged in two, and the company has simply placed some cinders about them. I know of a case that was being taken to the Court where the difference was settled by the payment of £100 without further proceedings.
959. *Mr. Gregson.*] The object I have in asking you these questions is to get your idea of the circumstances; you are advocating certain conditions in the Bill, and I want to have your reasons for advocating them; I am asking you to explain the position you are taking up with regard to the Bill;—do you think that these provisions should be made without regard to the matters I have brought under your notice? Certainly not. There ought to be no consideration of that description. The greatest consideration should be the men's lives.
960. You think the provision in the Bill with reference to pillars should stand without regard to surface value or anything else? Yes, I do, for the protection of life. I provide a thickness on the side of caution. I prefer to have the size of pillars stated for the protection of life rather than any consideration of values.
961. Now with regard to the floor;—is the floor not stronger in some places than in others? I do not think there is much difference in the northern district.
962. Do you know of some cases where the floor has been proved to be rotten? There is just a thin sheet of rock in some mines that is not to be found in others.
963. I asked you if you knew of any instances where the floor is proved to be rotten? No.
964. You do not know of any instances? No; not where the bottoms are rotten.
965. Would you be surprised to find that there are some such instances? I should.
966. You would? I should.
967. It is not an impossibility? Oh, no; I am not going to say that.
968. Where you have got a rotten floor; would you still think it necessary to provide the same thickness of pillar as where the floor is strong, other circumstances of course being equal? If there is no foundation one must be got from somewhere. If the bottom is rotten some precaution must be taken for the roof.
969. Then the minimum pillar would not be safe for the men? I think the minimum provided in the Bill is sufficient to cover all these disabilities.
970. *President.*] Would there not be creeps with a bad floor like that? I do not think any harm would come under the stipulation in the Bill.
971. *Mr. Gregson.*] That is with regard to so many feet of cover, you mean? Yes; if it was sand it would not be as safe as in other cases, but that could be found out with a borehole.
972. Would it not be well to make some provision for that in the Bill? As a miner, I am perfectly satisfied with the wording as it is in the Bill.
973. You think the Bill makes sufficient provision for all circumstances? I am satisfied with the wording of the Bill.
974. I ask you whether you are content with the provisions of the Bill under all circumstances with regard to pillar-working? I am satisfied with the provisions of the Bill.
975. You are satisfied with the provisions of the Bill under all circumstances? Yes, certainly.
976. I ask you to turn to clause 51 on page 32 of the proposed Bill:—

51. If any owner or manager object to any of the following general rules, namely, general rule numbers forty-two, forty-three, forty-four, forty-five, and forty-six, being enforced or applied to a coal mine or colliery, he may give notice thereof to the Minister setting out his objections and the reasons therefor, and upon receipt of such notice the Minister may allow or disallow such objections or any of them. If the Minister allow such objections or any of them, he may order that the coal mine or colliery be exempt from the operation of any such rule or rules, or he may order that, so far as such coal mine or colliery is concerned, the provisions of any such general rule may be modified or varied. If the Minister disallow the objections, and the owner or manager do not withdraw such objections, the matter shall be referred to arbitration, and the arbitrators may make any order which under this section the Minister could make.

You will see that if the coal-owner objects to any of the rules referred to he may give notice to the Minister; you are providing hard and fast rules, and leave the power of enforcing those rules to the Minister.

Minister. Do you think it is a wise thing for the Minister to have the power of allowing or disallowing objections? I do; because circumstances may arise which would warrant his interference.

977. *President.*] You substitute the judgment of the Minister for that of the manager? The inspector would have to do with a matter like this as well as the Minister. When such an objection is made the inspector would have to report.

977½. *Mr. Gregson* thinks this is detailed legislation, and the English Act says leave these things to the manager, with an inspector, who may come in at any moment on a sort of surprise visit. You say let us have the hard and fast rules, but if any of them are objected to by the manager he may ask the Minister to do away with these rules? The inspectors would be the Minister's advisers in such a case, and they are practical men, and of as high qualification as the manager. Whilst the manager has the interests of the owners the inspector has the interests of the Government, and, of course, the Government represents the people.

978. *Mr. Gregson.*] You would not be afraid that politics would enter into that question? No, I would not.

979. You do not see any disadvantage in allowing the Minister to interfere with the precise rules provided in the Bill? I believe this is a matter which could go to arbitration, and I believe it would. I believe this would come under the heading of where a mine is not supposed to be safe, where the inspector ordered something to be done which the manager refused to do, and it would be dealt with by the arbitrators appointed under the Bill.

980. I only ask you what your opinion is with regard to the working of the clause—whether there is any disadvantage in leaving it to the Minister to annul or disannul the workings of the Bill? I do not see any disadvantage whatever.

981. Notwithstanding the fact that the Minister may know nothing of mining, and that the inspector is under the control of the Minister, subject to dismissal at any moment? I have not the slightest fear, and I believe that any inspector would do his duty.

982. Will you now turn to the "Powers of inspectors," on page 8 of the Bill;—do you understand that clause 21, with its sub-clauses (i) to (v), as it left the Assembly, puts the control of the manager wholly in the hands of the inspector in the first instance? No.

983. What do you understand as regards the powers of inspection? There is not much difference in this Bill and the Act we are working under now.

984. It is this Bill we are considering;—this Bill gives the inspector large powers? Yes.

984½. Do you object to his having those powers? I do not.

985. Do you think the miners, as a rule, would object? No; I do not.

986. Do you generally approve of the principle of leaving these matters in the hands of the inspectors? Yes.

987. You look upon the inspector as being the safeguard for the miners' safety? I look upon him as the representative of the Government, whose functions are to protect life. I may point out that when this clause was under consideration Mr. McMillan spoke strongly on the subject of increasing the powers of inspectors, and he had the Bill in hand for the coal-owners.

988. *President.*] What further power did Mr. McMillan want to give the inspectors? He said that too much power could not be given to inspectors to provide against serious loss of life.

989. I think they have very large powers under this clause? Yes; under the twenty-first section.

990. *Mr. Gregson.*] I suppose we may judge that in Great Britain it is only the inspector that the men have to depend upon? Yes; with the check inspectors. If you notice the report of the English Royal Commission you will find that they laid great stress on the powers of the men's inspectors. Mr. Nelson Boyd, in his work "Coal-pits and Pitmen," on page 211, says, "In concluding the report, they reiterate the opinion of many, or indeed, most practical men, for they 'attach much importance to systematic inspection by workmen under rule 30 of the Coal-mines Act of 1872.'"

Rule 30 of the English Coal-mines Act of 10th August, 1872—Inspection of mine on behalf of Workmen:—

The persons employed in a mine may from time to time appoint two of their number to inspect the mine at their own cost, and the persons so appointed shall be allowed, once at least in every month, accompanied, if the owner, agent, or manager of the mine thinks fit, by himself or one or more officers of the mine, to go to every part of the mine, and to inspect the shafts, levels, planes, working places, return airways, ventilating apparatus, old workings, and machinery, and shall be afforded by the owner, agent, or manager, and all persons in the mine every facility for the purpose of such inspection, and shall make a true report of the result of such inspection, and such report shall be recorded in a book to be kept at the mine for the purpose, and shall be signed by the persons who made the same.

990½. *President.*] Is that rule in the English Coal-mines Act of 1887? Yes. Rule 38 of English Coal-mines Act of 16th September, 1887, says:—

PERIODICAL INSPECTION ON BEHALF OF WORKMEN.

The persons employed in a mine may from time to time appoint two of their number, or any two persons, not being mining engineers, who are practical working miners, to inspect the mine at their own cost, and the persons so appointed shall be allowed once at least in every month, accompanied, if the owner, agent, or manager of the mine thinks fit, by himself, or one or more officers of the mine, to go to every part of the mine, and to inspect the shafts, levels, planes, working places, return airways, ventilating apparatus, old workings, and machinery. *Every facility shall be afforded by the owner, agent, or manager, and all the persons in the mine for the purpose of the inspection, and the persons appointed, shall forthwith make a true report of the result of the inspection, and that report shall be recorded in a book to be kept at the mine for the purpose, and shall be signed by the persons who made the inspection; and if the report state the existence or apprehended existence of any danger, the owner, agent, or manager, shall forthwith cause a true copy of the report to be sent to the inspector of the district.*

(NOTE.—Larger type denotes additions; italics, alterations in wording between 1872 and 1887 English Coal mines Acts.)

991. Have the powers of inspectors been altered since the passing of the English Coal-mines Act of 1872, that is, comparing the Acts of 1872 and 1887? I do not think there is very much difference. A greater number of inspectors have been appointed.

ENGLISH COAL-MINES ACT, 10TH AUGUST, 1872.

Powers of Inspectors.

(45.) An inspector under this Act shall have power to do all or any of the following things, namely:—

- (1.) To make such examination and inquiry as may be necessary to ascertain whether the provisions of this Act relating to matters above ground or below ground, are complied with in the case of any mine to which this Act applies.
- (2.) To enter, inspect, and examine any mine to which this Act applies, and every part thereof, at all reasonable times by day and night, but so as not to impede or obstruct the working of the said mine.
- (3.)

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- (3.) To examine into and make inquiry respecting the state and condition of any mine to which this Act applies, or any part thereof, and the ventilation of the mine, and the sufficiency of the special rules for the time being in force in the mine, and all matters or things connected with or relating to the safety of the persons employed in or about the mine, or any mine contiguous thereto.
- (4.) To exercise such other powers as may be necessary for carrying this Act into effect.

Every person who wilfully obstructs any inspector in the execution of his duty under this Act, and every owner, agent, and manager of a mine who refuses or neglects to furnish to the inspector the means necessary for making any entry, inspection, examination, or inquiry under this Act, in relation to such mine, shall be guilty of an offence against this Act.

ENGLISH COAL-MINES ACT, 16TH SEPTEMBER, 1887.

Powers of Inspectors.

41. An inspector under this Act shall have power to do all or any of the following things, namely:—

- (1.) To make such examination and inquiry as may be necessary to ascertain whether the provisions of this Act relating to matter above ground or below ground are complied with in the case of any man.
- (2.) To enter, inspect, and examine any mine, and every part thereof, at all reasonable times by day and night, but so as not to impede or obstruct the working of the mine.
- (3.) To examine into and make inquiry respecting the state and condition of any mine, or any part thereof, and the ventilation of the mine, and the sufficiency of the special rules, for the time being, in force in the mine, and all matters and things connected with or relating to the safety of the persons employed in or about the mine or any mine contiguous thereto, or the care and treatment of the horses and other animals used in the mine.
- (4.) To exercise such other powers as may be necessary for carrying this Act into effect.

Every person who wilfully obstructs any inspector in the execution of his duty under this Act, and every owner, agent, and manager of a mine who refuses or neglects to furnish to the inspector the means necessary for making any entry, inspection, examination, or inquiry under this Act, in relation to the mine, shall be guilty of an offence against this Act.

992. *Mr. Gregson.*] In spite of the favourable report of the English Royal Commission? Yes.

993. What reason would you give for the insertion of sub-clause v in the proposed Bill? That mining has made great progress since then. We are now in 1895. A Bill was introduced into the British Parliament last April, providing that the roads must be inspected, and that is left out in the principal Act. The Bill I refer to provides that greater provision should be made for examining roads.

994. I am speaking of the powers of the inspector. Can you give me any reasons why sub-clause (v) should be provided in the New South Wales Bill.

[v] To require the manager to withdraw the men from the mine if at any time he finds that, by reason of inflammable gases prevailing in any mine or any part thereof, or of any cause whatever, the mine or the said part is dangerous; and no person shall, except so far as is necessary for exploration or inquiry into the cause of danger or the removal thereof, be readmitted into the mine or such part thereof as was found dangerous, until the same is stated by the Inspector to be safe.

Every person who wilfully obstructs any inspector in the execution of his duty under this Act, and every owner, agent, and manager of a mine who refuses or neglects to furnish to the inspector the means necessary for making any entry, inspection, examination, or inquiry under this Act, in relation to the mine, shall be guilty of an offence against this Act.]

?—Because we have seen cases where the inspector has not had power to withdraw men, and the consequence has been loss of life, or, if not, that men have not worked with the same confidence as they should have done.

994½. Are there not similar dangers in Great Britain? Yes, and with great loss of life, and if the inspectors had more power there would be less loss of life.

995. *Mr. Asquith*, in his Bill to amend the English Coal-mines Act of 1887, ordered to be printed by the House of Commons, on 4th April, 1895, does not make any provision in this direction (*see Appendix D*)? No.

996. In Great Britain where there is more risk of human lives, it is not found necessary to legislate in this particular? At the same time they have not got all in the English Act they ought to have. Very few Governments ride for a fall. It is rather a risky thing to interfere with legislation where so many interests are at stake.

997. You think the reason is not that it is not wanted, but because it is not expedient? Yes; the Ministry you have mentioned had only a majority of twelve.

998. You base your reason for the necessity of this clause upon the fact that there has been loss of life, or the chance of loss of life for the want of this power? Yes; for the want of greater powers for inspectors.

999. We will go now to the clause dealing with payment by weight, section 41, 38, on page 18 of the Bill. I have been looking at your evidence given before *Mr. Pigott's* Select Committee on 11th May, 1893, and I see that you were in favour of paying for every skip. Is that the general wish of the miners? I do not know of the general wish of the miners. It is a question of what ought to be.

1000. What are the feelings of the miners with regard to this matter? The time has come when they consider that they ought to be paid for what they send.

1001. What do you think the opinions of the men are generally? I believe they want every skip to be weighed. In weighing the skips, the skip to be weighed is let down as gently as possible. The screen is at the top, and the contents of the skip go down a screen with a three quarter of an inch mesh, and the coal is shaken up and down to take all the small coal out, but when the skips are tipped for putting into waggons, the skip is thrust down as quickly as possible. For the men it is well sifted before going into the weighbridge, but when going into their own waggons it is thrust down at lightning speed. When weighing for the miners, a scraper is run down the screen, and a large portion goes through the screen, but when not weighing coal, this is not done. A great deal of coal is taken from the men in this way.

1002. From whom? From the men. The owners have a great deal of the better end of the bargain.

1003. What does it matter to the miners as to what is done with the coal that is not weighed? If the miner's coal was treated in the same manner as the other coal, a greater amount of coal would go to their scale and get weighed.

1004. Might not that be an argument for having every skip weighed? Perhaps so.

1005. Is the method adopted agreeable to the bulk of the men? I believe the provision in the Bill before it was amended by the Legislative Council is. The Bill provides that "they shall be paid on the amount of mineral gotten by them, and according to the actual weight gotten by them."

1006. Are the miners content with the present system of weighing, or do they want every skip to be weighed? They want every skip to be weighed. They believe that the same law should apply to them as to any other class of men.

1007. The miners would not be contented, then, with any arrangement at all, but they must have every skip weighed; I want to get at the views of the miners generally? They believe that the fairest way is to weigh every skip. J. L. Fegan,
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1008. Are they discontented with the present method of getting at the weights? A large number are.
1009. Are they discontented with the standard weight or with the standard bar? Both.
1010. Do you consider the two terms synonymous? No.
1011. Do you draw a distinction between the standard weight and the standard bar? Personally, I draw very little distinction.
1012. What is your opinion with regard to the views of the men generally? That they are discontented with both systems, but the greatest objection is to the standard weight.
1013. At the Wickham and Bullock Island Colliery are the miners not paid for all that they fill? They are paid for all that is weighed.
1014. Do they not weigh every skip at that colliery? No; it is an average.
1015. Can you say how the average is taken at that colliery? It is very seldom that they weigh twice in one day there. Say a miner sends two skips up, one 13 cwt. and one 15 cwt., the average there is 14 cwt.
- 1016-17. How do you arrive at the average? If one skip is 13 cwt. and another is 15 cwt., the average of the two is 14 cwt. If only one skip is weighed, and it goes 14 cwt., that is the average the miner gets that day. If he has a high weight he may get weighed sooner than with a lighter weight.
1018. In what way? The miners have what they call tokens, and they are known by their numbers, better than by their names. There are first, second, third, and fourth left-hand flats, and the weighman knows perfectly well the miners in those flats. As a rule, the men keep their turns, and the wheeler goes to No. 1 first, and so on according to their turn. We will say that Nos. 1, 2, and 3 are working ordinarily, but No. 4 is getting very high, the weighman will watch that No. 4 is weighed oftener, in order that he may pull him down. If he gets No. 4 at a low weight he will not ask for him to be weighed for some time.
1019. Surely it will not be to his advantage to get the light skip weighed? Yes; if he can get No. 4 on a light weight he will take good care not to get him again for some time.
1020. How many weigh-screens have you at the Wickham and Bullock Island Colliery? One weigh-screen.
1021. How many screens have you altogether? I think four or five, but I am not sure.
1022. What I want to know is where the unfairness of this system lies;—is the weigh-screen at Bullock Island kept going all day? I do not know.
1023. Is it not reasonable to suppose that it is kept going all day;—the weighman and check weighman are there all day, are they not? If the average of the colliery is low it does not pay them to weigh many skips. It is the master's weighman that calls for these skips, and he says, "I will have the second skip," if the cage holds two skips, knowing the side shift these skips come from.
1024. *Mr. Curley.*] Is there not an understanding at the colliery that the first skip that comes out of the cage is weighed one day and the last skip next day? To my knowledge there is not. I have heard the men talk of how long they can be kept on short weight. In some of the southern collieries they have only weighed eight skips a day.
1025. What for? Because of the low average. They run the risk of a bigger weight if they weigh more.
1026. *Mr. Gregson.*] Does that apply to collieries generally? It applies to some, but I would not say generally. I do not believe the owners and managers are all rogues.
1027. Do you not think if what you are pointing out obtained we should hear about it from the men—that the colliery manager would hear something about it? Objections have been made to colliery managers about it. There was a matter in connection with the Glebe Colliery at one time.
1028. *Mr. Curley.*] Was not that in reference to standard weight? Yes, and weighing altogether; and I know there has been a deputation from the men there.
1029. About the weigh-screens not being kept going? Yes; and in the southern districts there have been more complaints than one.
1030. *Mr. Gregson.*] You think the miners want every skip to be weighed? A large number of the miners want every skip to be weighed, and I believe it to be the fairest way.
1031. You also object to this standard bar? I object to anything that will take weight off men who send their coal up, with the exception of the agreement that is made with regard to stones or any refuse.
1032. Did you say during your examination that at the Wickham and Bullock Island Colliery the miners are allowed to fill to any weight? Yes; some of them send as much as 18 cwt., and some 10, 11, and 12 cwt.
1033. In the same skips? Yes; in the same skips.
1034. What height would a skip with 18 cwt. be? About 18 inches over.
1035. Suppose the miners were to fill 2 feet higher, and put 20 cwt. into a skip instead of 18 cwt., what would be the result? I believe 20 cwt. has gone in.
1036. Is there no limitation as to height? At that colliery there is no limitation as to height.
1037. With regard to the height, do you think it is unfair that there should be any limitation as to height? I think a reasonable height ought to be allowed to men, if they are so foolish as to fill skips like that.
1038. What is a reasonable height? The height of the roadways.
1039. What about other circumstances? The manager knows what his machinery will pull.
1040. Is it unfair for the manager to say what the height shall be? I think if every skip was weighed it would get over that difficulty very much.
1041. I am asking you with regard to the standard bar? Under the present system every skip is filled, believing it to be the one to be weighed, but if every skip was weighed it would take a great deal of this piling up away.
1042. You think it is unfair for the manager to limit the height that a skip should be filled to, or that the miners should fill the skip? No; I do not think it is unfair as long as the manager knows what his skips will carry, and here is a proof that there is no limitation at the Wickham and Bullock Island Colliery.
1043. Is all the coal there lifted through the shaft? Yes.
1044. And run into the cage? Yes; the cage is the limitation, but that is not reckoned upon. There is no bar at the top.

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1045. How is the cage built;—is there no horizontal bar at the top? It is so long since I have been there that I do not remember.
1046. Where are the cage fastenings? They are on the side, I think, but I am not sure.
1047. Are you aware that in some cages they have these fastenings from a horizontal bar at the top? Yes.
1048. You do not think it is necessary that there should be a horizontal bar? It may be necessary.
1049. What would a miner do if the manager told him not to fill the skips so full again;—would he lose the skip if he continued to fill high? No.
1050. Not if it happened frequently? No; he would not.
1051. At some of the collieries I think it is the fashion to take that skip from the miner? Yes; where the standard weight is.
1052. But where the standard bar is? Yes.
1053. And the miner loses that skip? Yes.
1054. Does the mine-owner get the benefit of that skip? In some cases yes, and in some cases no.
1055. What is done at Wallsend in that respect? It is put into an Accident Fund, to pay for any accidents that may take place at the colliery.
1056. That fund is under the control of the miners, is it not? Yes; it is under the control of the miners.
1057. Do you know any colliery where the skip of coal is in such a case as that not given to the accident fund nor to the lodge? Yes; at Lambton.
1058. Do you know of any other colliery? No; I do not, from my own personal knowledge.
1059. At Lambton, you say the colliery only gets the benefit of that skip of coal? In some instances.
1060. But not generally? No; not generally.
1061. Is there any rule at that colliery? There is standard weight there.
1062. What I want to know is, is there any objection to the system of having a standard bar? There is an objection to anything that is wrong.
1063. Is this wrong? I believe it is wrong. It is not fair that coal should be taken from the miner.
1064. You think that the miner should be allowed to fill coal to any height he likes;—is that fair? The question then would come as to what height he should fill. I think every skip should be weighed.
1065. Should it be for the miner to say what is reasonable or unreasonable? He should have some say in it.
1066. The discretion of the manager applies more to the weight of the skip, and the strength of his hauling gear, or do you think the miner should have a voice in that? The manager knows what his skips will carry, and what his ropes and chains will bear. The miner knows nothing about it.
1067. The discretion of the mine-owner should only apply to the weight to be drawn, not to the height of the skip? Height is weight. A certain height with a certain specific gravity is a certain weight.
1068. You apparently want the miner to have some say in these matters? If you are fixing a bar, the miners should have some say in it.
1069. Is it unfair to the miner for the manager to say I am putting a bar there, which is to be the limit of the height of the coal in the skip. I want to know whether you think that the discretion should be with the manager, or with the miner in regard to both these matters? I think the miner should have a say in both these matters.
1070. Will you turn to your evidence given before Mr. Pigott's Select Committee on the 16th May, 1893, and see what you say there at page 16 on this subject (*see Appendix R*)? Since the passing of the English Coal Mines Act of 1887, there has been another Act passed, making the Act much stricter with regard to the weighing question. It is called the Coal Mines Check Weigher's Act. It was passed in 1894. (*See Appendix E.*)
1071. Can you say what the provisions of that Act are? Provision is made to stop the manager from making a threat or a bribe, and for giving the check-weighman every facility to weigh coal, and for holding meetings for the appointment of a check-weighman.
1072. With regard to the coal-weighing, have you any recollection whether it applies to a mine where the weigh-screen is standing idle;—would it enable the check-weighman to say we must have another skip of coal? I believe it would.
1073. Will you turn again to your evidence given before Mr. Pigott's Select Committee, and look at question 195; in reply to Mr. Combes' question, your answer is: "What we know by the standard weight is this bar. We want to have that knocked off, and a man to get paid for what he sends up on the average. What is called the bar is the standard weight." In reply to Mr. Vickery you also say that the bar is the standard; your answer is ambiguous, and I should like to know your real opinion;—you did not understand the standard weight to be the standard bar? In my answer to question 209 I said: "Whilst the men are paid by the ton every skip should be weighed."
1074. You say that what is called the bar is the standard weight;—did you intend to say that? There is what is called the standard bar and the standard weight, and I tried to point out the difference.
1075. But that is not given in your evidence;—it reads as if these things were one and the same? Question 208 is ambiguous also.
1076. What we want to get at is, what is justice? Yes; justice is weighing every skip that comes out of the mine.
1077. You think there is an objection to the standard bar? Yes; unless the men have some say. Unless there is some agreement between the owners and the men.
1078. *President.*] Why do you object to this section [41] 38 of the Bill as the Council have sent it down; there are two things that are provided for;—they can have their coal weighed or make an agreement? The unfortunate position is that the agreement is all on one side.
1079. *Mr. Gregson.*] And which side is that? The owners side.
1080. I thought it was the other way? Unfortunately not. I wish it was.
1081. Will you look at subsection 3 of Rule [41] 38, on page 19:—"But nothing herein contained shall be held to affect the power of any owner or manager of a mine to pay miners by the method known as the standard bar system;"—you have a standard bar to prevent the skip being over filled? Yes; some of the collieries have a bar upon their weigh-screen, and when the skip goes on the kick-up, all the coal that will not pass under this bar is knocked off, although it has passed all the running gear, chains, and everything else in connection with the colliery. All the coal that will not go under the bar, is the owner's coal.

coal. Though the skip has passed all the tests I have mentioned, the pulley, the cage, the horse, the incline plane, and everything else, yet, when it comes to the bar, all the coal that goes under the bar is the miners', and the rest the owners'.

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1082. That is the standard height, and the miner knows it is of no use to fill coal above that standard height? That is the regulation height of the colliery.

1083. In some cases the miners lose the whole skip? In some instances, yes, and in some instances, no.

1084. *President.*] You will agree that the terms in the Bill are wrong, that there is no such thing as paying by the standard bar? You are only paid for whatever will go under that bar.

1085. That is what is meant to be expressed in the Bill in the words, "By the method known as the standard bar system"? Perhaps so.

1086. *Mr. Gregson.*] As long as there is a height that the men know they can fill up to, and this bar is fixed as the height to which they should fill, do you think there is anything unfair about that;—do you object to it? That would depend upon the height the bar is put at.

1087. Suppose the men have agreed to a height? If the men have agreed, there is nothing unfair about it.

1088. In that case it does not matter whether the standard bar is on the kick-up or elsewhere;—do you see any difficulty in a mine filling to a certain height? I do not see any very great difficulty.

1089. Does the coal shake down very much? Considerably at times.

1090. It depends more or less on experience? Yes.

1091. Is there any difficulty in filling to a certain height? No; there is not very much difficulty.

1092. You are aware that in some cases there is a good deal of over-filling? Yes; in a good many cases.

1093. *President.*] Is not this standard bar a fair thing to prevent over-loading? As long as the men know of it.

1094. Surely they would not have a standard bar without the men knowing it? Sometimes they might, Mr. *President.*

1095. Would they not know of it after their first day's work? Oh, yes.

1096. *Mr. Gregson.*] But they are for filling over it? Yes; they are filling to keep their weight up.

1097. *President.*] Why do they lose the coal that will not go under the bar? Because there is a rule to that effect.

1098. What would be their object in filling the skips high? It is only a game of chance as to whether they get weighed or not, and every skip increases the probability. The miner thinks that the high skip might be the very one to get weighed.

1099. *Mr. Gregson.*] I think you expressed an opinion about the provision in rule 25 on page 29 of the Bill for preventing mine-owners from working under roads;—you said, I think, there had been cases in which roads had tumbled down to the peril of passengers? Yes.

1100. Do you know anything of the circumstances as to the ownership of the coal;—do you know whether the workings had been driven before the road was formed? The road was formed first.

1101. In such cases would the road be dedicated? It was in a municipality.

1102. With, of course, the right to support? Yes.

1103. In that case, who is responsible for affording that necessary support? In what way do you mean?

1104. In the case of any subsidence occurring? I should think myself the owners.

1105. The mine-owner first of all, is he not? Yes.

1106. And next to him the owner of the coal, supposing he is working under a royalty? Yes.

1107. It is in view only of exceptional cases then that this rule is inserted in the Bill? Yes; but it may become general.

1108. You have always the parties to come upon in case of damage? Yes; but when you have won your case you get very little out of it.

1109. A passenger would get very good compensation if he can show a good claim? In the case of tumbling through and breaking his neck.

1110. Has that happened? Yes, the road has gone in.

1111. Is the case you speak of a public road—a publicly proclaimed road? Yes.

1112. You understand the distinction? Yes; it is one of the main streets.

1113. Have you looked into this matter very closely? No.

1114. You think the public should be protected? Yes.

1115. In that I think everybody will agree with you? I hope so.

1116. *President.*] Assuming that opinions may vary upon whether eight hours should be a matter for legislation, do you not think that it would be more proper for the eight hours legislation to be embodied in a general Bill than to be embodied in a Bill like this. Here you are legislating for a certain class? No; I am not in favour of having this in a general Bill. I believe that the miners occupation is more dangerous than any other occupation, and where I would support it in coal-mining I would not support it in some other kinds of mining. Coal-mining is more unhealthy than other kinds of mining, perhaps with the exception of silver mining.

1117. *Mr. Gregson.*] Is coal-mining more unhealthy than gold-mining? Yes; you will never find gold-miners in a coal-mine if they can get anything else to do.

1118. *President.*] There would be no gas to contend with in a gold-mine? No.

1119. *Mr. Curley.*] With regard to cavilling, do you know of any collieries where no cavilling takes place? There is no cavilling at Greta.

1120. Do you know of any other colliery? No; I do not know of any other.

1121. Do you know of any place where the system is adopted that the miners cavil for a place, and that place is to be worked out until it is finished? No; I must say I do not.

1122. Assuming that you did know of a case of that kind;—there was some reference made during your examination with regard to tops and bottoms;—if a miner had to work out a middle section the whole length of his bord, and that was worse than the other two sections, the tops or the bottoms, is it just possible he might never obtain either tops or bottoms? Yes.

1123. He might fall sick, die, or have to remove? Yes.

1124. Would not tops and bottoms in such a case be like the payment of a promissory note? Yes, never to be paid.

1125. Is it the practice for miners to set their own timber? Yes.

1126. And to lay their own rails? Yes.

1127.

- J. L. Fegar, Esq., M.L.A. 1127. Does the Company provide them with anything like free houses? Not to my knowledge.
- 2 Sept., 1895. 1128. Does the Company erect houses for them? The Company sells them some land at ten times its value, and they have to go to the building societies, and get fastened.
1129. Have you seen some Companies declare high dividends? Yes.
1130. For an extended number of years? Yes.
1131. I understood Mr. Gregson to put a question to you with reference to working coal under a proclaimed road where you said that you would make the person working in the mine responsible, and the owner of the coal afterwards? No; the mine-owner and the owner of the coal.
1132. There may be a person that might have the coal leased? He would come under the heading of mine-owner.
1133. Had not the Linwood colliery a lease from the Wickham and Bullock Island colliery? Yes; but Wickham and Bullock Island were responsible, and had to pay the compensation.
1134. Were they held responsible in the last case that came before the Quarter Sessions some time ago;—it was a case where a persons house was injured? Yes.
1135. Do you recollect anything about that last case that came on? The case I know of was Goodchild's case.
1136. Do you think, with regard to the undermining of roads, streets, or property, or anything of this kind, that the owners of the coal should be made responsible for any damage that may be done—that the owner of the coal should be the individual that should be held responsible for any irregular working? In justice I cannot say that. If I take a lease of coal, and there are conditions attached to that lease, it is not the coal-owner's fault if I go outside those conditions.
1137. Should the coal-owner have an inspector to see that the mine is worked in such a way that no injury shall take place? I believe that provision should be made for the security of public property, but how to get at it I do not know.
1138. Would you hold both parties responsible? Yes.
1139. With regard to pillars, something has been said during your examination about a waste of coal;—is it not your experience that the larger the pillar the less waste of coal? Certainly.
1140. Even where you had left coal for the protection of property, with a view to keeping the surface up, could you not later on, if you wished to extract a portion of that pillar, do it with much more safety? Yes, and economy.
1141. And less injury? Yes; to the men hewing it.
1142. What has been the system of working in the northern district? Eight-yard bords and 8-yard pillars, apart from tidal waters.
1143. Has not the system been an 8-yard bord and 4-yard pillar? I have not seen them.
1144. Have you worked at any place to see them? No.
1145. You are not speaking from your own personal knowledge? No; I might have been mistaken.
1146. With regard to the question of weighing, is it not the rule at most of the collieries to call one skip one particular day and another the day following? Not to my particular knowledge.
1147. Can you let the Commission have a copy of the Check-weighers' Act you referred to? The Act is the Coal Mines (Check-weigher) Act, 25th August, 1894, chapter 52. (*See Appendix E.*)
1148. With regard to inspectors, do you think that any chief inspector, or any inspector, should hold any interest in the coal-mines of the Colony? Certainly not.
1149. Is there anything in our present Act (the Act of 1876) about inspectors holding any interest in coal-mines? Yes; in the twenty-seventh section, and there is something in the English Act too. (*See Appendix C.*)

[Witness withdrew.]

TUESDAY, 3 SEPTEMBER, 1895.

[The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.]

Present:—

FRANCIS EDWARD ROGERS, Esq., Q.C. (PRESIDENT).

JAMES CURLEY, Esq. | JESSE GREGSON, Esq.

Mr. George Henderson, Secretary for Illawarra Miners, sworn and examined:—

- Mr. G. Henderson, 1150. *Mr. Curley.* What are you by occupation, Mr. Henderson? I am at the present time Secretary for the Illawarra miners.
- 3 Sept., 1895. 1151. Previous to your becoming Secretary for the Illawarra miners, what were you? Previous to that I was a coal-miner.
1152. How long have you been out in the Colony? For about ten years.
1153. Did you work in any coal-mines previous to coming to this Colony? Yes.
1154. Where did you work? In the North of England.
1155. In what county? In the counties of Durham and Northumberland, but in Durham more particularly.
1156. Can you give us the names of the mines you have worked in? In the county of Northumberland I was employed in the Wallbottle and Scotswood Mines, and in the county of Durham I was employed in the Urpeth, Ouston, Springwell, and Addison Collieries. I came from the Addison colliery to this country.
1157. At what age did you go into the mine? I was nearly 10 years of age when I went into a mine first.
1158. Have you been mostly coal-mining, or have you had other occupations in connection with mining? I have been in other occupations.
1159. How long were you coal-mining in England? I suppose something like about seven years getting coal.

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1160. And what was the other work in connection with the mines you were engaged at? I have done everything that a boy would do in the North of England, such as keeping doors, preparing timber, and wheeling up, to getting coal.

1161. You have never been a deputy? Yes, I have in this country.

1162. You have never been a deputy in England? No.

1163. Was there any gas in any of the mines that you have worked in in England? Oh, yes; in nearly all of them.

1164. What was the general method of working in the collieries there? The general methods in the collieries I worked in were bord and heading, or bord and stall, and pillar working—extracting pillars.

1165. Do you know the width of the bords they worked there? I do.

1166. What colliery are you speaking about? I can give you the whole four. In the case of Urpeth, the bords were worked 6 yards wide.

1167. Can you tell us the width of the pillar in Urpeth? Yes; 20 yards.

1168. Do you know the depth of the Urpeth mine? I cannot say for a fact, but it is something over 100 fathoms (600 feet).

1169. Now, the next mine? The next colliery is Ouston.

1170. What is the system worked there? The system there is 4-yard bords, with a 20-yard pillar. The reason is that in these collieries they extract the pillars. They work their bords 4 yards wide, consequently the headways are each 20 yards apart, and so are the bords. Then, in bringing back the pillars, they leave 10 yards to the right and 10 yards to the left of each heading, with the consequence that they are able to take the whole of the coal out. It is a very safe system of working, and I presume that is why it is adopted.

1171. *President.*] That system is adopted by the management? Yes, adopted by the management.

1172. Do you know the depth of the Ouston mine? Somewhere about 240 feet.

1173. Feet or fathoms? Feet; it is a very shallow mine.

1174. *Mr. Curley.*] About what date would that be? About 1880.

1175. Now, about these other collieries? The Springwell Colliery is worked on the principle of 4-yard bords, but the pillars are not so thick. I think 16 yards was about the thickness of the pillars in Springwell. Up to the time I left I could not really say that they had really commenced extracting pillars to any extent.

1176. Do you know the depth of the Springwell mine? It is 175 fathoms deep (1,050 feet).

1177. Now about the Addison Colliery;—what was the width of the bords there? They worked there 4-yard bords, with 20-yard pillars, and the pillars were extracted in the same manner as I have previously mentioned—10 yards to the right and left of each heading.

1178. Do you know the length these bords were driven? Yes; they were 20 yards in length. There was 20 yards from bord to bord, and 20 yards from head to head.

1179. Was the 20-yard system the system there? Yes; that was pretty well the system in the North of England.

1180. That was in the county of Durham? Yes. In the county of Northumberland I did not get any coal. I was simply doing boy's work. I cannot speak about the mines there, because I was a boy at the time.

1181. How is the air conducted into these places;—take the first colliery? In every instance that I have mentioned the air is conducted by brattice into the face of each working place.

1182. What kind of brattice was used—cloth, or any other kind? In the case of Urpeth and Ouston, it was cloth brattice, and in the case of Springwell, it was tube brattice.

1183. *President.*] What is tube brattice? It is some sort of light iron composition. It is simply a plain iron tube, and one tube fits into the other like a water or gas pipe.

1184. *Mr. Gregson.*] What was the diameter? Two feet, or 2 ft. 6 in.

1185. *Mr. Curley.*] This tubing is put up to the roof? Yes; standing up upon any kind of trestles or trees placed horizontally close up to the roof, but in many cases they actually filled the seam from bottom to roof, owing to the seam being very thin. In the case of the Addison Colliery, we had there a system of cloth brattice, and to this $\frac{1}{2}$ -inch tongued and grooved lining boards, and these were made pretty well the full depth of the seam, and then attached to the inside props.

1186. Fastening up against the props? Yes; and in the case of course of (say) the bratticing being back, owing to the length of this wide brattice—I cannot say for certain what that length was, but it was from 8 to 10 feet—and in order to provide against deficiency of air, each man who did use this wide brattice, had the piece of cloth brattice hanging always to the end of the wide brattice that had been erected. The deputy would tuck up this cloth brattice until there was sufficient room to erect another length of wide brattice.

1187. Was this brattice conducted from the end of the bord right up to the face? Yes.

1188. To what distance? When the front-shift man went to work at 4 o'clock in the morning, he found it within 9 feet of the face. It did not matter, whether in bords or in headings, the same thing obtained.

1189. What kind of system had you with regard to your work there in the morning;—what sort of system of inspection was there? We had to see the deputy at his station. The deputy went down the shaft to each section of the pit. There were a number of deputies—one deputy for each section—who went down the pit at 2 o'clock in the morning, and examined the places, and left their initials in the face of each place. Then the miners coming down at 4 o'clock had to wait at these particular stations until the deputy returned to give them sanction to enter the working-places.

1190. Did you work with safety-lamps there? In some cases we did.

1191. But whether you worked with safety-lamps or not, you had to see the deputy before you went to your place? Yes; no matter what you worked with you had to remain at the station till the deputy gave his consent to enter the working place.

1192. When the men entered the mine did they all go down uniformly? Yes; the front shift went down at 4 o'clock, and then the back shift at 10 o'clock.

1193. When did the front shift come out? As soon as the back shift men liberated them in the face.

1194. At what hour did the back shift men relieve them? The back shift men went down at 10 o'clock, and places in closer proximity to the shaft would be relieved more speedily than others. I should say that the farthest off of the men would be relieved, at the latest, by 10:30 o'clock.

1195. Were all these seams thin seams? Some of them rose to about 5 feet, but that was the greatest height in any of those mines I have mentioned, and many of them were as thin as 20 inches. 1196.

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1196. What did these deputies do—what was their work apart from inspecting the colliery in the morning? Of course they had to meet every shift, after inspecting the colliery in the morning. The front shift deputy, after meeting his shift, may be erecting brattice or setting timber. That was really the make-up of their duties, except when the pillar had been extracted sufficiently for to admit of the timber being drawn, then the deputy, in company with the men who were working in this particular place would repair to the drawing of this timber. These were really the main duties of the deputy—seeing to the ventilation and the timber.
1197. With regard to the setting of that timber you have referred to. In the drawing out of those trees later on, the men would be paid some compensation for taking them out? Decidedly; the men were paid over and above their tonnage rates; they were paid really according to time. On some occasions the deputy and a man might be able to take the timber out of a pillar in (say) half an hour, but in other cases I have known it to be an hour and a half, and, of course, we were paid according to the time it took us to extract the timber.
1198. *Mr. Gregson.*] You set the timber? Oh no—the deputy.
1199. *Mr. Curley.*] Also the brattice? Yes, the deputy set the brattice. We set timber in this respect. Suppose the deputy was away, we had timber there left by the deputy, cut into exact lengths, and lids or slabs ready, as the case might be, and in the event of coming into contact with a little piece of dangerous roof the miner would, simply for the sake of protecting himself, erect the timber.
1200. *Mr. Gregson.*] Were you paid for doing that? Oh, no; that was a chance matter. Some days, you might set a number, some days only two, and some days none at all.
1201. *Mr. Curley.*] The deputy was supposed to set all timber? Yes.
1202. Did the deputy put the roadway down? Yes; the deputy put the roadway down.
1203. In what mines have you worked in out here? I have worked more particularly in Mount Keira, and I have been working in Mount Pleasant, but I cannot say that I really worked at Mount Pleasant, because I was not sufficiently long there.
1204. Have you worked in any other colliery out here? Those are the only two collieries that I have worked in, in the Colony of New South Wales.
1205. That is at Mount Keira and at Mount Pleasant? Yes.
1206. What was the system of working at Mount Keira—the width of the bords? I have known them to be from 8 yards to 16 yards wide. They were any width and every width.
1207. There was no regularity in the widths? No; they were all turned away on the principle of 6 feet. You turned them away off the heading 6 feet wide. They were driven narrow for 6 feet, and then you commenced cutting your bord out, and in the case of some bords, they might go 8 or 10 yards wide, while others might be 12 yards, and up to 16 yards wide.
1208. What was the width of the pillar? I think some of them were very thin indeed. The same logic applies to the pillar that I have expressed with regard to the bord. In some cases the pillar might be fairly thick, whilst in other cases, it was so thin that several bords holed into each other, that is met each other on the rib side.
1209. Does the same thing apply to Mount Pleasant? I was not there very long.
1210. How long were you at Mount Keira? I was at Mount Keira from February, 1886, until July, 1891—five years.
1211. *President.*] With reference to what you say about these bords working into each other, is that a dangerous thing? I certainly consider it to be a dangerous thing.
1212. You consider it to be a very bad mining—not good management? That is about the only thing we can attribute it to.
1213. *Mr. Curley.*] In a case of that character, where a bord is cut too wide or too narrow, is it usual for the manager or the deputy to give instructions to leave some on, or take some off? That is the usual practice in all well regulated mines, and strictly adhered to.
1214. What would be the depth of Mount Keira—the depth of the cover? I should not like to commit myself to that answer; simply because I have never really heard the exact depth.
1215. You go in by a tunnel at Mount Keira, do you not? Yes, the cover there is all right.
1216. You cannot tell what the covering would be? No; I cannot say.
1217. You are a good way up the mountain when you go into the mine? Yes; but the mountain is very high.
1218. From what you have seen of mining in England, were the pillars in England kept to a uniform width? Oh, yes.
1219. And the bords were similarly kept? Yes; everything was operated upon as methodically as a piece of machinery.
1220. They were driven by line? Yes.
1221. From what you have seen out here at Mount Keira, would you consider that rather a loose system of mining? Certainly I would. I believe the mine is better now than it was in early times. I am speaking of my experience from 1886 to 1891.
1222. *President.*] Did things go on as badly there up to 1891? A change took place there with a change of management.
1223. Was the manager there a man who had passed any examination? I cannot say.
1224. *Mr. Curley.*] Were you in the Illawarra district when the Bulli explosion took place? Yes; that was in March, I think.
1225. Can you say anything about it? I was never in the Bulli mine.
1226. Have you read over the report? Do you refer to the report of the Royal Commission?
1227. Yes; has anything struck you in connection with the report of that Commission? Yes; several things have struck me very forcibly with regard to that report.
1228. What are they? I was very forcibly struck, from the report itself, with the very loose management that obtained at that colliery, also with the indifference displayed by the managerial staff in particular, in the presence of what they knew to be an explosive gas. I think that matter must strike any one who reads that report.
1229. *Mr. Gregson.*] I think everybody will agree with you, Mr. Henderson? I think so.
1230. *Mr. Curley.*] With regard to the ventilation of a mine, is not one of the principal conditions to have a good return? Yes; one of the principal conditions is to have a good return, and a very capacious one, too.
- 1231.

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1231. Have you seen Inspector Rowan's reports with regard to the state of the return there (*see Appendix R*)? I have.

1232. About the end of the year 1886? Yes; you refer to where he reported the return to be literally blocked, and that he was unable to traverse the return on account of falls, and so forth.

1233. With a return in that condition, and knowing there was gas in the mine, what in your opinion should have been done under those circumstances;—was it wise to allow the men to continue to work on? Certainly it was not wise to allow the men to work on, knowing that this return was practically inaccessible, and knowing that there was fire-damp there.

1234. *President.*] Is the Bulli Colliery managed differently now? The Bulli Colliery has been managed vastly different since the explosion occurred. For about two years more or less, the colliery was not worked at all. It has been practically closed up till now. They are just now commencing operations with a view to re-opening the same mine again.

1235. It closed up for some commercial reason did it not? Yes; I suppose so.

1236. *Mr. Curley.*] In the case of the Bulli mine, do you think an inspector should be clothed with powers of definite authority? I certainly do. In that case, or in a case similar, an inspector who was clothed with the authority to stop that mine, would at least have saved the human lives from being lost, and have saved destruction of property likewise.

1237. Will you look at this work of Mr. W. Hopton's "Conversation on Mines," and see the reference there to the powers of an inspector—

In the year 1886 I took charge of the St. Helens Colliery, belonging to Messrs. Pilkington Brothers. The ventilation of the colliery was very bad. Only 19,000 feet of air per minute passed through the workings, and the mine gave off much explosive gas. The lamps in several parts were unsafe to work with, and the inspector found it necessary to stop some part of the mine. Gas came out of the workings now and then, and filled the safety-lamps hundreds of yards along the main pony roads. As soon as possible, however, I changed the up-cast shaft, and split the ventilating current into parts; this increased the air from 19,000 to 40,000 feet per minute. The men then found themselves more safe, and when I left the colliery over 500 miners presented me with a gold watch, chain, &c.

Do you agree with what is said there? Yes.

1238. That was in the year 1866? Yes.

1239. Before the passing of the English Coal Mines Act of 1872? Yes.

1240. Do you think, that in connection with the working of collieries, that for the safety of workmen, and for the safety of the mine itself, apart from any consideration of the workmen, that it is necessary that an inspector should have some definite powers or authority? I do certainly think so. I think that an inspector ought to have such power as will enable him in the presence of what he sees to be danger, to say we will stop it at once. It seems to me rather a ridiculous thing to imagine that a man in the position of an inspector should first of all discover the danger, and then have to report the same to the colliery manager, and possibly to the Mines Department also, and during the whole of this course of procedure that lives and property may be in danger. I certainly think that it is altogether rather an erroneous position.

1241. Do you know that there are other gases spoken of as being injurious to the men in mines? Yes, other than explosive gas.

1242. Such as carbonic oxide? Yes.

1243. And sulphurated hydrogen? Yes.

1244. And also carbonic acid gas? Yes.

1245. Do you think it requires a vigorous current of ventilation to keep a mine clear of these gases? Yes; apart altogether from the explosive element. Those gases are very deadly, and it requires good ventilation to keep up the sanitary conditions of a mine.

1246. Is it not a fact that lights will burn in the presence of some of these gases? Yes. I suppose lights will burn in all of them except black-damp—that is carbonic acid.

1247. *President.*] How is the presence of these gases found out;—do they have a noticeable effect at once? Some of these gases are found out by their smell.

1248. *Mr. Curley.*] Do you know whether this sulphurated hydrogen that is described by Mr. Atkinson has an odour of rotten eggs;—have you noticed that at all? Not particularly. Whilst not noticing it myself, I have known it perfectly well from the expressions of those who have come into contact with it. It was actually there, although it was not in the same portion of the mine that I was working in.

1249. Have you noticed heavy bodies of moisture in a mine that would wet your pick-handle? Oh yes; spots on your shirt like dewdrops.

1250. Wherever you had experience of that kind, did you consider the ventilation bad? Certainly.

1251. And very injurious to health? Yes, injurious to health also.

1252. We will now go to the Bill;—will you look at sub-clause III, on page 2, in the first part of the Bill—you will see there that the words "ten pounds" have been altered to "five pounds," as the amount of fine the owner or agent of a mine is liable to pay for every day during which the mine is worked without a manager? Yes.

1253. You will see what the intention of that clause is? I do.

1254. Do you consider that £5 meets the case? I certainly do not.

1255. *President.*] Would you leave it at £10? Yes.

1256. It is £10 in the English Act? Yes; I think £10 is quite a small enough fine. I do not think myself that such a violation ought to be tolerated in any shape or form.

1257. Murder ought not to be tolerated, but you can only punish the man who commits it? Yes; certainly.

1258. *Mr. Curley.*] With regard to the latter portion of that clause, in sub-clause C:—"A mine in which not more than ten persons are employed below ground shall be exempt from the provisions of this section, unless the inspector of the district, by notice in writing, served on the owner or agent of the mine, requires that it be under the control of a manager;" you will notice that the word "ten" has been struck out and the word "thirty" substituted for the number of persons;—what are your views on that matter? My views are that where ten men are working, they are as valuable proportionately as the thirty, and those ten men ought to be equally cared for as any larger number.

1259. *President.*] Is not the reason this, that where it was thirty persons, it would be a very small undertaking, and that there would not be the same danger as if there were more men employed? I do not know whether that is the reason or not; but I presume there is something of that kind about it.

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1260. In the English Act they say thirty persons? Yes; but still English Acts, as well as other Acts, sometimes are inadequate to meet certain cases, and we have the experience, of course, of English Acts and English doings, and we may take it for granted that we are becoming more enlightened over it, and on those grounds, when we think there is an inadequacy in any provision, we ought to supply it with an adequate provision.
1261. The reason is that thirty persons employed would be a very small number, and represent only the commencement of the mine, and if the mine is to be any good, more men would be put on under the control of a proper manager? I grant you that; but here is the matter of fact of it. A mine may be kept working for a considerable length of time with only twenty-nine persons.
1262. Exactly; then if that was so, would not the inspector require the mine to be under the control of a manager;—does not the whole of this provision simply refer to pioneering work? It is one of the most remote things to see a mine prospected with thirty men. In sinking a shaft there might be thirty men, but as soon as the ground is opened up you can depend upon it they can see what they are going to do. In the case of ten men, a man might start a little mine of his own, and work it with twelve, fourteen, or sixteen men, and possibly be a dairy farmer, and know more about milking a cow than keeping a coal mine right. Consequently, omitting the provision of ten, and inserting that of thirty, gives the man, no matter what his experience may be, an opportunity to go on drawing coal with this quantity of men. It may be all that he requires.
- 1263-4. If he was found to be regularly working the mine, the inspector would give notice and require a proper manager? Providing that the number thirty was left out, and the number ten left in, I think that would meet the provision, and prevent the possibility of that occurring.
1265. *Mr. Curley*] It would limit the danger to which you have referred? Yes.
1266. You think that the words "ten persons" should remain in the Bill for the reasons you have stated? I do.
1267. We will now go to sub-clause II, of section 5, of the Bill, on page 2 (*see Appendix A*);—there is an addition made to this clause, or at least recommended to be made, that makes the clause read altogether different to when it was originally drafted. You will notice that the words "three persons being owners or agents of mines in the Colony of New South Wales" have been put in, and you see the other persons mentioned in the sub-section to act as a board of examiners? I see no real necessity for the three persons who are to be owners or agents of mines in the Colony remaining in the Bill. I think the necessity lies in that portion being removed. I do not see why there should be any grounds to depart from the original composition of that board, but I see many reasons why the clause should not be altered.
1268. *President*.] You want a board of seven, instead of a board of ten? Quite so.
1269. *Mr. Curley*.] Do you think the interests of the owners would be as sufficiently looked after with a board composed of seven, as it would be with a board composed of ten? I certainly do.
1270. With regard to section 8, on page 3, of the Bill—"Qualification, and attendance of engine-man" (*see Appendix A*);—do you consider that that section is requisite? I certainly do. Of course, I do not profess to be in any shape or form an engineer; yet at the same time, as a practical man, my common sense leads me to conclude that this is an essential in a Coal-mines Bill.
1271. You know that an engineman holds a very responsible position? Yes; a very responsible position.
1272. There should be no doubt about his qualification? No; the lives of others are entrusted to him, and the property of the owners also.
1273. Have you known of many accidents in your district from overwinding? No; in our district there are only two mines where such an accident could occur, owing to the fact that all the other mines are entered by a tunnel on the mountain side. Only in the case of the Metropolitan and South Clifton mines have we winding engines and shafts, and only in the case of the Metropolitan Colliery could an accident against which this is a provision occur, simply because at South Clifton the men do not descend or ascend the shaft where coal is drawn, but go down to a travelling road which is entered by the side of the cliff to the coal-seam. That is the travelling road there for men and horses. In the case of the Metropolitan mine it is quite different. In other collieries I have known accidents caused by the cages being drawn up too far.
1274. *President*.] Would not the same dangers apply to England, as far as the engineman is concerned? They do exist, and have actually taken place.
1275. You refer to injuries through the engineman not being competent? The fact of accidents having happened in the hands of a competent man is sufficient to prove, conclusively, that no man other than a competent man should take hold of the handles, because I certainly contend that an accident happening in the case of a man who is thoroughly proficient, becomes more liable in the hands of a man who is incompetent. Winding a cage in a coal-shaft is a responsible thing, because every soul in a colliery is twice a day more or less under the sole control and in the hands of that individual.
1276. *Mr. Curley*.] You are aware that some of those engines are very sensitive;—that the most of the machinery about a colliery is sensitive? I have heard those men—who know what engines are—speak, themselves, of the difference of the machinery in that respect.
1277. You know also that the tendency at the present time is not simply to put the machinery that will answer the purpose altogether, but to put even more powerful machinery so as to make it effective and active? Yes, that is the tendency.
1278. *President*.] How many people in England go up and down these colliery shafts per day? In one of the collieries I worked in there were 900.
1279. Was that colliery worked by an engine? Yes.
1280. Was it a competent person who was in charge of that engine? Yes.
1281. Will not the mine-owners for the safety of the men and for their own safety have competent enginemen, but to make the engineman have a certificate of competency or service limits their choice. Are there not plenty of competent men that do not hold certificates? I do not know that, but I am inclined to think it is a sort of playing fast and loose to admit of men being competent that have no certificates. They may be competent, but I know that there are a vast number of men without certificates that are incompetent.
1282. Do you think that anybody would dream of putting a man in charge of a steam engine who was not competent? Here is a matter of fact staring us in the face. We know that the thing is tangible, and that it is essential to have a competent man there; then why not have a provision that will warrant his competency.
- 1283.

1283. At present it seems to me that the mine-owners would certainly see that the man was actually competent, although he has not a certificate. If their choice is limited they may have to get a man who is less competent than the men who have been in their mine. Mr. Gregson draws my attention to the part of the report of the English Royal Commission dealing with shaft accidents, which says :—

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There is no one of the dangers incidental to mining operations which has been so successfully dealt with of late years as that connected with the shafts. Collisions, breakage of ropes and chains, and falling of materials and of men from the surface, or from part way down, combine to make the list of casualties thirty years ago a very serious one. In the British collieries and ironstone mines the average of the ten years from 1851 to 1860 shows that one death resulted from these causes among 1,161 persons occupied. Between 1861 and 1870 the number of persons employed for one death was increased to 2,121. The years from 1871 to 1880 gave an average of one life lost for 3,557 persons, and the average of the last three years shows the notable improvement of only one death to 4,718 people employed.

There being no provision in the English Act, where they would have much more range of choice, it seems to me that it is a somewhat dangerous thing to put that provision in this Bill. If the mine-owners have to get a man with a certificate of competency and service, their chance would be limited? Practically, then, there is very little necessity for a man serving his time as an engineer, unless there is some provision made in order that that man can display his competency.

1284. After all, he is only an engine-driver? Yes. The report of the English Commission you have just quoted from is good, and we can all appreciate the fact it gives birth to. At the same time, I cannot for the life of me see that it destroys the contention that we put forward in this provision of the Bill.

1285. Will you look at Rule 24, on page 29 of the Bill?—

ATTENDANCE OF ENGINEMAN.

Rule 24. In any mine which is usually entered by means of machinery a competent male person, not less than twenty-two years of age, shall be appointed for the purpose of working the machinery which is employed in lowering and raising persons therein, and shall attend for that purpose during the whole time that any person is below ground in the mine.

By what possible standard is a man's competency to be judged? Are we to go by what his uncle Harry says?

1286. The mine-owners would, I suppose, advertise for a man with a certificate of competency or service, and know nothing about him, while they, for their own sakes, would not employ anyone but a competent person to lower and bring the men up—that is, for their own safety? I do not see how that would injure the case in the least. If a man is competent to drive an engine, he is competent to hold a certificate.

1287. As a matter of fact, he may not be;—he may have to pass some examinations, and there may be practical men in a mine who could not pass an examination;—I should not like to pass an examination now, but I have done so, and yet I may be competent;—surely the mine-owners would not put an incompetent person on to drive an engine? It does not do the man any harm to pass an examination.

1288. Suppose he cannot—that he is one of the old employees in a mine? That is one position above all others where, having the lives of men under his control, or, rather, in his hand, he ought to, at least, hold a certificate of competency; he ought to make himself acquainted with all the facts before him.

1289. *Mr. Curley.*] He can hold a certificate of service under this clause? Quite so. You see how it would operate against a man, who may be a thoroughly competent man, and a man who deserves a certificate of service; but, as the thing is not in operation, he does not happen to hold one, and goes along to a mine where an engine-man is required, and sets forth his application, but they do not know the man, and there is nothing to know him by. He is a good engine-man, but he has nothing to show that he is.

1290. *Mr. Gregson.*] You mean to say where a man has been employed, and left a mine. Does he not get a kind of certificate in the same way that a certificate is given now? He may do so, or he may not.

1291. Would they not always give him a certificate? If they chose they would, but if they did not choose, they would not.

1292. Do you know of any case where a man who is a competent man has been refused? I have known several strange things in my lifetime, but I would not say in the particular case of an engine-driver that I do know.

1293. You think that this clause 8, and also the original clause 9 on page 4 of the Bill should be retained? Yes; certainly.

1294. *Mr. Curley.*] Will you now look at sub-sections 2 and 3 of clauses 9 of the Bill on page 5 (*see Appendix A*). Do you consider that the whole of those sub-sections should go in the Bill? Yes.

1295. *Mr. Gregson.*] If now clause 8 on page 4 of the Bill will do you, you do not want old clause 9 with its sub-sections? I do not think that they both refer to the same parties.

1296. *Mr. Curley.*] One has reference to the certificate of a manager, and the other has reference to the certificate of an under-manager? Yes; clause 8 has reference to the certificate of an engine-driver, whilst the other clauses have reference to the certificates of a colliery manager and under-manager.

1297. *Mr. Gregson.*] Clauses 8 and 9 of the Bill, as originally drafted, are contingent on one another? Yes.

1298. *Mr. Curley.*] There is some reference to registration in sub-section 2 of clause 15.14 on page 6 of the Bill (*see Appendix A*);—as there is no provision in the schedule for registration fees, what is the use for inserting these words?—

1299. *Mr. Gregson.*] We need not, I think, keep the witness for this; we can consider this matter ourselves again.

1300. *Mr. Curley.*] Will you now turn to clause 17 on page 17 of the Bill, "Directions as to mode of conducting works to be entered in a book" (*see Appendix A*)? Yes.

1301. Do you consider that is a section of any utility in the Bill? I consider it is of very great utility. Certainly it takes a most comprehensive view of matters, but at the same time I do not know that we can show any stronger argument for its retention than by simply referring to the evidence of the manager and his officials given in connection with the Bulli Colliery Explosion Commission. It is quite evident from the report of that Commission, after taking their evidence, that the manager and his officials give conflicting evidence as to shot-firing and so forth; and on those grounds such a clause as this being carried into effect would afterwards leave reliable evidence in such a case as the one I have referred to.

1302. Where any important instructions have been given with regard to any mine, this would be a substantial regulation to be referred to? Quite so.

1303. Is the provision not necessary for two reasons—first, in consequence of the action of the consulting engineer in the position he occupies? Certainly it is.

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1304. And also for the reason, secondly, that it would be some kind of distinct order to the manager under him? Quite so. That certainly is a very strong reason why the provision ought to be retained in the Bill. That reason is embodied in the reason that I have just given in connection with the Bulli explosion case. One man, being in a position higher than another, says, "I said so and so," and the other says something else; but if the matter was kept in a book they would not be able to get away from what has been said.

1305. *President.*] The Council say, in insisting upon the omission of this clause, that—

Apart from its impossibilities, some of the company's consulting engineers are not resident in the Colony, and whilst possessing an exceedingly competent manager at a high salary, here questions connected with the general character of operations at the mine are submitted for the consulting engineer's judgment, though he is resident in England, and it would be impossible for such a person to conform to this section. The same contention may be raised regarding a managing director or the Board governing a company; besides, no good object could possibly be obtained by such a record. If orders were given to the manager, his proper business—provided he did not agree with the instructions given him—would be to at once record in writing for conveyance to the authorities above him his objections.

If a consulting engineer is out of the Colony, how can he comply with that section of the Bill? If a consulting engineer was out of the Colony he would not be in a position to give orders for the *modus operandi* of the mine. He might from the plan say what sections ought to be worked, but other than that he would not be able to give definite instructions.

1306. *Mr. Curley.*] I suppose you can pretty well conceive that a manager under a consulting engineer has frequently very important work to carry out in connection with the working of a mine? I can readily conceive that it is an undesirable fact that such is the case, and upon those grounds there are strong reasons for the retention of the clause under consideration.

1307. *President.*] I would like to understand what the practical good of this provision in the Bill is;—how would it operate? Supposing I was the manager of a mine, and the consulting engineer told me to do certain things that I disapproved of; I suppose he would give those directions in writing, but whether or not, I should be always able to say that I all along differed from the consulting engineer in this, that he ordered me to do it and I carried it out.

1307½. I do not see the strong reasons for putting these instructions into a book; it is a bothersome thing to note all these things in a book, which is only to be open to inspection by an inspector or a Court;—how can this section be of any good to the men? There might be a difference of opinion, and the consulting engineer might say he said nothing of the kind. I do not think it will benefit the men, but it simply seems to be a thorough mine regulation.

1308. What is the use of legislation relieving the manager from responsibility? That clause would not relieve the manager from responsibility. The mere fact of putting a thing into a book would not relieve a manager from his responsibility between the employers and workmen. The mere inserting it in a book would never relieve him, provided that the accident was caused through negligence, but in the case of the accident being caused through orders from some party outside of the manager, then the effect of this order being inserted would certainly save the manager from having to bear the brunt of other people's mismanagement. In the case of a consulting engineer giving definite orders to carry out some regulation in that mine, and the manager not being of the same opinion as the consulting engineer, refusing to do so, but carrying the matter out solely upon his own responsibility, then the effect of the consulting engineer's writing would remove the responsibility of the accident from the engineer and on to the shoulders of the proper party.

1309. If the manager carried out the work wrongly, or badly,—although according to his judgment,—in opposition to the views of the consulting engineer, I do not see it would be stronger against him in any way. Would he not be liable;—why put any more responsibility on him? As in previous matters, when mistakes have occurred accidents have been the result of the mistakes, and Royal Commissions or some other method of investigation has been the result of the accident. When these things are brought to bear on the real accident there would be documentary evidence to show that certain things had been ordered, and it would not be a question of obliging an inquirer to get certain witnesses to refute other witnesses, but the facts of the case would be there for whatever tribunal might be appointed. They would have the facts of the case.

1310. *Mr. Curley.*] Do you see any reason why a competent consulting engineer, a man that is well able to look after this kind of work, should have the least hesitation to place on record any orders he might issue? No; not the slightest reason.

1311. *President.*] Is there any necessity to legislate about it, because the more detail you leave to be done assuming you give responsibility, the better? Yes, quite true; I certainly as a practical miner have always regarded the mines regulations of New South Wales as leaving altogether too much detail, hence the necessity for this amended provision. Matters that rule ought to be embodied in the Act, if the Act is to be complete. There are quite sufficient details left out in the matter of mining that must be attended to.

1312. To a certain extent you look upon the English Act of 1887 as a very good Act I suppose? Yes, but I do not say that it could not be improved upon.

1313. You are aware that they have not got this section in that Act? I notice that the objection raised to this section, with regard to consulting engineers living out of the colony, will never apply in England?

1314. If the consulting engineer does live out of the colony how could he enter such directions in the book? He has no right to be out of the colony if he has to conduct the mine. A man cannot conduct a mine if he does not see it.

1315. *Mr. Curley.*] In that case, where a consulting engineer was out of the colony, the manager for the time being would have to rely upon his own judgment, unless the consulting engineer had left certain directions? Just so. That is the consequence arising from the fact that in the Bill the more details that are left for other people to take the responsibility of, the better. In the case of a coal mine there are certainly a thousand and one details that never come within the four corners of the plan, and must be directed by the man on the spot.

1316. Will you now look at section [19] 17, sub-clause 3, on page 7, of the Bill—"Inspectors to hold certificates" (*see Appendix A*). Will you read the clause as originally drafted, and then as it has been amended by the Council? I certainly cannot see any reasonable grounds for the alterations made by the Council. I think it is quite fair.

1317. *President.*] Don't you think that an inspector should hold a first-class certificate of competency? Yes, and as good as it possibly can be in the case of an inspector.

1318. You would make it a first-class certificate? Certainly.

1319.

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1319. You said that you saw no reason for the alteration of the section. When you included the words "first-class," you did not interfere with the section? I certainly intend that my evidence shall mean that every inspector under this Act shall, after the passing of this Act, hold a certificate of competency or service as hereinbefore provided to managers.

1320. Would you allow the holding of a second-class certificate of competency. Just turn to page 5, on page 2 of the Bill, "certificate of competency to managers and under-managers, commencing with, "There shall be two descriptions of certificates of competency under this Act" (see Appendix A)? Yes; but in the case of an inspector I regard the fact that we can only have one class of inspectors. There cannot be a first and second class for inspectors.

1321. Would you be satisfied with the inspector holding a second-class certificate? I would be satisfied with a certificate of competency. He is actually a man by himself.

1322. The certificate he is to hold is a second-class certificate—that is, of fitness to be an under-manager; the difficulty is that some of the men who make good inspectors would not be able to pass an examination; would it not be safer to say, "Every inspector shall hold a certificate of competency, or a certificate of service as herein provided with regard to managers?" But you see the placing of the word "first-class." I should like to see him be a thoroughly competent man as an inspector; but in the case of an inspector, a man who may have served well and a man who has been a thoroughly competent inspector in every respect, I think that man should have a certificate to enable him to retain the position that he holds.

1323. Then let him have either a first-class certificate of competency, or a certificate of competency for service; I am afraid we are getting into difficulty, for if you look at section 6 of the Bill, on page 3 you will see that a certificate shall be granted by the Minister to every person who satisfies the examiners? We want our inspectors as highly qualified as we can get them.

1324. So the Legislative Council have thought in dealing with this matter? Yes.

1325. A man might be fully competent and yet not be able to pass an examination for a certificate of competency. You think you might have a first rate man who could not pass this examination, and you want to qualify that man by some certificate of service? Yes; but in the case of new appointments, we want the very highest qualifications we can obtain in the case of a colliery inspector.

1326. *Mr. Curley.*] You would not object to an inspector who has practised for a considerable time having a certificate of competency? Certainly not.

1327. *President.*] How long would you have a man acting as inspector to qualify him for a certificate of service. Will you look at section 5, on page 2, sub-section 1, of the Bill "certificates of competency to managers and under-managers." Do you think an inspector should have a certificate after five years service? Yes.

1328. Then what do you say to this:—

Every inspector appointed under this Act shall, after the commencement of this Act, hold a first-class certificate of competency as manager, or shall satisfy the Board appointed under sub-section 5 of this Act that he has exercised the duties of an inspector for at least five years, whereupon a certificate of service as inspector shall be granted by the Minister, which shall qualify the holder thereof to be appointed an inspector under this section.

Does that satisfy you, Mr. Henderson? Yes, that is quite plain to me.

1329. *Mr. Curley.*] Now we come to section 21, with its five sub-sections, on page 8 of the Bill—"Powers of inspectors" (see Appendix A);—is there anything you see objectionable in that section? I see nothing in section 21 that is objectionable.

1330. You will notice in sub-section 3 that there are some words introduced into the latter part of the clause that were not in the previous Act;—I mean with regard to the care and treatment of the horses and other animals used in the mine;—don't you think that is a very humane provision? I certainly do.

1331. *Mr. Gregson.*] It follows the English Act? Yes.

1332. You will see that sub-section 5, of the clause under consideration, is not in the English Act? Is there nothing in the English Act with regard to the withdrawal of the men.

1333. If you will look on page 62, of MacSwiney's book on the English Coal Mines Regulation Act, section 42, you will see the provision made in that Act (see Appendix C)? Still I cannot, for the life of me, conceive why such a provision should not be embodied in that Act, as is here embodied.

1334. To require the manager to withdraw the men? Certainly; if an inspector happened to go into a coal-mine, and saw things whereby the lives of men through some circumstance or other were endangered, surely it would be,—I do not know what kind of an Act to term it—wrong for that man to simply go and look, and write to the department, and write to the manager, and things go on for a fortnight; and during that time the whole pit, and everything about it, may be closed up. Certainly there is no harm in giving an inspector power to require the manager to withdraw the men.

1335. *Mr. Curley.*] That would not necessarily mean the closing of the mine? Not at all; simply the withdrawal of the men from the mine, in order that whatever disabilities existed there in the opinion of the inspector might be at once remedied; and if the company or the manager thought that the inspector was wrong, well, I think they have the same power or tribunal as the inspector has if he thinks the manager is wrong, namely, the power of arbitration.

1336. You will notice in the latter part of the fifth sub-section that—

No person shall, except so far as is necessary for exploration, or inquiry into the cause of danger, or the removal thereof, be readmitted into the mine, or such part thereof as was found dangerous, until the same is stated by the inspector to be safe.

Yes; the inspector is certainly the proper party to examine collieries that might be found in a dangerous condition.

1337. Do you think that inspectors, as a rule, exercise their office in any imperious way? No; I have never seen anything like that.

1338. Would you now look at clause 22, 20, sub-section 1, on page 9 of the Bill (see Appendix A)? Yes; you will see that just simply strengthens the objection that I have already made to the idea of this provision being excluded from the Bill. Here are the words, practically, that I used, or the same sense. An inspector is a person who is interested in nothing else but his duty. It does not matter to him if one thousand tons or one ton of coal goes out of the pit; whether they are drawing or not drawing coal at all. He only has one duty, and that is to see that life and property, in so far as the regulations of this Bill are concerned, are preserved. He goes into a mine and says, "Here is something dangerous here," and the manager takes no notice. The inspector says, "I will see to getting that matter remedied"; and, possibly, there

Mr. G. Henderson. there is a rush of trade, and the manager inclines to the belief that the inspector sees things through a different pair of eyes to what he sees, and consequently goes on to provide for his rush of trade, and in doing so he is simply caught in the midst of an accident, because the inspector had to sit down and write, and lay the matter before the Minister of Mines, after telling the manager. The inspector saw the danger, but had no power whatever to prevent the accident.

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1339. *Mr. Gregson.*] What sort of a position do you think the manager would find himself in after the inspector had warned him of the danger? Within the provisions of this Bill?

1340. Far worse than that? He might find himself in rather a bad position.

1341. Do you think that any reasonable manager would do such a thing after being cautioned by an inspector? A manager is a creature of circumstances like most of us. He sees what is before him, and he knows what work he has to perform, and he is endeavouring to perform this in the case of the output of coal, and may reasonably conclude to himself that the inspector's opinion may be biassed, or that the inspector is altogether taking an exaggerated view of things. The manager may do it as reasonable under the circumstances in which he is placed, as reasonably as a man could do anything. That is why I think that this provision ought to remain. The inspector has only one duty; it does not matter to him what coal goes out, or what stress of work there is. An inspector having a duty goes to perform it, but a manager has many duties, and often it is his duty to get every shovelful of coal out of the pit. If not above all, this is one of the paramount ideas in his mind.

1342. Don't you think a manager knows his mine better than any inspector can possibly know it? I would not object to that fact.

1343. He would say the inspector thinks there is danger; I had better take some precaution, otherwise evil will follow? He might possibly do so, and at the same time see an order standing for five or six thousand tons of coal.

1344. He would never allow that to weigh with him in the face of the danger? He might not consider the order for coal as a matter of itself in the face of the danger.

1345. *Mr. Curley.*] For instance, Mr. Henderson, cannot you well understand this, that if an inspector sees anything that is particularly apprehensive with regard to danger, from any cause whatever, he is likely to draw the manager's attention to it? Decidedly so.

1346. And ask him if there is any possibility of getting this danger remedied? Yes.

1347. And don't you think he would do it? Decidedly.

1348. It would be the last thing an inspector would do, to issue any order to a manager for the withdrawal of the men? Yes, I think so.

1349. You know the very serious conditions under which some of the mines of this Colony are working? Yes.

1350. You know that gas exists in the Helensburgh mine? I do.

1351. You know that from hearsay? Yes, I know that from hearsay.

1352. You know from hearsay that several mines in the Northern district work under ocean and tidal waters? I do.

1353. Knowing these things, don't you think that circumstances may arise in connection with these mines, or in connection with any mine, where it may be absolutely necessary for the manager, or the inspector to order the manager, to withdraw the men? Quite so. I am under the impression that such circumstances might occur. In one or two cases I have been under the necessity, in coming into contact with apparent danger, of drawing the men at once.

1354. Was that as deputy? It was my duty to do it, and I performed it, and I made the matter square before allowing them to proceed with their work.

1355. *Mr. Gregson.*] You do not assume that an inspector must necessarily be a more experienced man than a manager? I assume nothing of the sort.

1356. He has got his experience, and derives his ideas from the teaching of experience? Quite so.

1357. So that each might be equally competent to pass an opinion, but have a different opinion? Yes.

1358. You do not look upon an inspector as a heaven-born legislator? Oh, no. I look upon him as a man, with simply one duty before him.

1359. *President.*] Supposing there was a case of doubt, you would not withdraw the men except in imminent danger? It is a matter of thinking there is danger.

1360. Suppose a manager thought there was danger in his mine, but the inspector came round, and, clothed with this power, said nothing through inexperience, don't you think that there would be a deal of harm done, risk run, and perhaps accident, through the manager feeling that this man is supposed to be a man of experience—"I will not withdraw the men as he has said nothing about it";—don't you think the men would run greater risk in such a case as that;—is it not better to give the manager all the responsibility you can;—under this Bill we are going to work under a new order of things;—take the case of an inspector with a tenth of the experience of a manager, and the inspector says, "I think it is safe enough," and there is an accident? We are not attempting to take the responsibility from the manager.

1361. But would it not? I fail to see now if in the opinion of the manager this man, passing by what he thought a danger, would justify his carrying on operations in the presence of the danger, and the accident happening. That would make it serious for the men who might be victims to the accident, but I do not see how that could occur, even if you gave the inspector power to withdraw the men in the presence of danger that would not warrant the manager keeping those men working when he saw the necessity for withdrawing them.

1362. *Mr. Gregson.*] Because when the accident has happened, he shelters himself under the inspector although having the power to withdraw the men? I do not see it. If you refer to the Bulli Commission, you will see that there is just the possibility that if the inspector had more power than what he had at that time, the accident might not have happened.

1363. The result of that accident goes to show want of proper discipline? Yes, that is the whole thing.

1364. *President.*] I am supposing that the Manager has a misgiving himself, that on his own responsibility, he would withdraw the men, but that the inspector comes and says nothing, or, "it is right enough;" then the manager goes on and an accident happens. Don't you think that it is far better to leave it with the manager? You are actually placing the inspector in a false position. It is not intended that the manager shall consult the inspector, nor that the inspector will in any respect advise the managers

on those matters. All that the inspector will do is to go round the mine, see what he can, and then draft his report. If, in the event of his going round, he comes into contact with some danger, the Bill aims at giving him the power to withdraw the men.

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1365. I want to get at—suppose that a manager has a misgiving, and, left to himself, he would withdraw the men, but the inspector comes round, and the manager has a certain amount of doubt; the inspector does not withdraw the men, and the manager thinks his misgiving wrong, and, therefore, does not withdraw the men, and an accident happens? I see the point, but fail to see any difference in the manager's position in the case you cite, or in the manager's position when this becomes actual fact.

1366. Suppose an accident happened, and the manager to be tried for manslaughter, don't you think it would be the strongest thing in his defence that the inspector came round and gave no orders;—would it not be one of the first things to be brought out by counsel, and the inspector be called to say, "Did you give any orders to withdraw the men";—don't you think that would exonerate the manager? I do not say so.

1367. This provision is meant to prevent the loss of life? Just so. It would take a great deal to prove the man was negligent.

1368. Suppose some of the people in the mine say, undoubtedly, he ought to have ordered the men out, the circumstances warranted it, and these deaths could not have taken place;—don't you think the first thing in the man's defence would be that the inspector was round yesterday;—would not that be strong evidence in the man's favour? Certainly it would be strong evidence, but I do not see that it should go in his favour. Whilst the inspector had power if he saw the danger, this Act does not intend he shall have power to make the other man see the danger.

1369. Suppose you are the manager of a mine, and I come round as an inspector, and you know all, and I know nothing, I know comparatively little to you, and you have some doubt as to whether you should withdraw the men, you wait till I come round, and I may say nothing about withdrawing the men, would not that fortify your opinion about withdrawing the men;—don't you think the fact of my going round would make you inclined to think there was no need to withdraw them? It is a very fine point. It might incline me a little, yet it would not in any way take the responsibility of my action.

1370. *Mr. Gregson.*] What about the position of the unfortunate men? Very bad.

1371. *President.*] Would it not be a great deal worse if the manager, thinking the thing to be dangerous, allowed these men to be inside, by saying to himself—If this inspector had not come I should have had these men out? Yes; he has to think for himself. It is human to err, and he might err on the other side. He might be biassed with circumstances, and the silence of the inspector, or want of observation, or a difference of opinion; but still it does not relieve the manager from responsibility.

1372. Is it not good policy to throw all the responsibility on the manager, rather than to relieve him of any responsibility. He has control of the men. Is it good policy therefore to relieve him of any responsibility? Certainly not.

1373. Well, it does relieve him of responsibility to a certain extent. If no accident happens, well and good, but if an accident happens, it is a strong answer to be able to say, as I did not tell the men, neither did the inspector who came round and saw the same condition of things as I saw. Are you therefore going to say I was negligent? Don't you think that relieves the manager of a great deal of responsibility? I see the trouble, but it does not remove the necessity of giving this power to the inspector.

1374. In the case you put of a vessel loading a cargo of coal and wanting it in a hurry, you think if some danger arose the manager in his anxiety to do the best for his owners would be apt to underrate whatever danger might exist, to get out the requisite quantity of coal? Yes; that is so.

1375. Then, if an inspector comes round who has not the power you seek to give, and sees danger, do you think if the inspector said that the mine was in a dangerous condition, the manager would, no matter for what quantity of coal, dare to keep the mine on? He would dare providing this condition in the Bill was omitted or erased. I don't like to have it put in such hard language. I want to put it that in the face of that fact the manager might do it.

1376. Do you think he might venture to do it? I think that he might venture to do it.

1377. You think he might chance it? He might chance everything in order to get the quantity of coal he wanted out by a certain time, being biassed by the circumstances around him.

1378. I am putting it that the inspector has told him that the mine is dangerous;—do you think he would venture to keep the men in after that? Perhaps he might, on the strength of his own opinion.

1379. Then he would be a wicked man? I don't think so. You know there are different circumstances by which a man is surrounded in life, and especially at these particular times, that makes him do many things that he does not do out of wickedness. Inwardly he does not think they are wrong.

1380. *Mr. Gregson.*] The object of the Bill is to try and save life;—the question is whether the responsibility must be left with the manager, with the inspector to overlook him, or whether the inspector is to be given co-equal powers with the manager? I do not like that way of putting the matter. Whilst we are endeavouring to save life by increasing the responsibility of the inspector we are in no way attempting in any way to reduce the responsibilities of the manager; and, in fact, I don't think it would happen.

1381. *President.*] You must, however, look at the effect of it? I suppose we have all opinions that sometimes differ. We look upon inspectors and managers as being of equal knowledge in mining matters; consequently, neither one has a right to look upon the other as being his superior in these matters.

1382. You look upon an inspector as a man of equal knowledge and experience? Quite so.

1383. Take it in this way:—I, as a manager, am causing men to work at a place in the mine that I have doubts about being safe;—I am very anxious to get coal out for one of the reasons you have put, and, being an inspector, you go round and say nothing about that place being dangerous—don't you think that fortifies me in the view I am taking that there is no danger? I may be a colliery manager and say, "Well, now, this chap is an inspector, but I know just about as much as he does." The managers may take that into consideration, and for the reason alone that they do not look upon the inspector as being superior to them, they should put no reliance upon that fact. The manager looks upon the inspector as not being equal in knowledge to himself, and, therefore, they risk the contingencies.

1384. *Mr. Gregson.*] You will see from that Commission of Inquiry that sat in England that there is no suggestion that this added power should be given to the inspector;—they said a good many things, but this is not amongst them? Perhaps not.

1385.

Mr. G. Henderson. 1385. What do you think of the reasons given by the Legislative Council for objecting to this clause? They say:—

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Because the new clause, which is an exact copy of section 41 of the English Act of 1887, provides all that is necessary to enable an inspector to do his duty if he understands his work, whilst, on the contrary, if clause 21 was retained, it would hand over in an arbitrary way the whole of the mining operations of this Colony to the whim and caprice of, it might be, an incompetent inspector, and would give him too absolute a power, which is undesirable. The power he possesses now under the present Coal-fields Regulation Act is quite sufficient, if not too extensive; as it is, whilst the substitution of section 21 in lieu of the law as it now stands would endow the inspector with such substantial power that, a his will, he could ruin any mining company if he thought fit.

All he would require to do, without rhyme or reason, would be to announce to the colliery manager that it was his wish the men should be withdrawn from the mine, in which case 400 or 500 men would be thrown out of employment, and a repetition of what occurred at the Stockton Mine possibly be the result. In that case the mining authorities declared the pit unsafe, ordered the men to be withdrawn, and the men themselves, after some enforced idleness, petitioned the manager to be allowed to go back to work, as the mine was safe, notwithstanding the opinion expressed to the contrary by the mining authorities. The men went back to work, and have been at work for the last two years, in the face of the order that they should be withdrawn, and the fact that a prosecution was instituted against the manager for not complying with the mining authorities orders, the manager being fined for working, what was then alleged, a property which was unsafe, but which as has already been stated has been at work for two years since, and is at the present moment in operation.

That is a very strong reason.

1386. An arbitrary power which, if an inspector was a bad man, could ruin a company either by wickedness or mistake? I regard coal-mining as an industry that employs a large number of people, and a large number of others depend upon the employment of those immediately engaged. I contend that no such thing as an incompetent inspector should continue on the rolls of inspectorship.

1387. Mr. Curley.] With regard to that Stockton business, are you aware that there is a very large surface subsidence that has taken place since this report? I am not very well up in the facts of that Stockton mine.

1388. Suppose that you knew that the men were 300 feet down there below ocean or tidal waters, and that you had heard tell of a surface subsidence where the curb-stones, supports under dwellings, steps up to houses, &c., had fallen in, would you not regard that as a serious matter? I certainly would. I would have regarded that mine as no place for human souls to be in.

1389. Assume that the inspectors gave a report against the mine that they had been sent for by the manager, and that the men had been withdrawn and they would not enter the mine until it was safe, would that mean that the inspectors wanted to close the colliery? I would regard that as a stoppage of work for the time being only until the danger had passed away.

1390. Will you look at the report of the inspectors on the Stockton Colliery, to be found in the Appendix to Final Report of Mr. Fegan's Select Committee, page 45 (*see Appendix J*)? Assuming this to be true, I would say that the inspectors, in withdrawing the men, were doing what any sensible men ought to do. When the top was going, there was what we call a creep, and in the face of this mine being under tidal waters.

1391. The subsidence was under the streets, not under tidal waters? Whilst apparently it was not under tidal waters, no one was prepared to say whether it was under or not. I think it was a poor reference on the part of the Legislative Council. This matter ought not to have been referred to.

1392. Was it not tantamount to this, that unless you get a big sacrifice of human life, there is no reason that an inspector should have power to withdraw men? I think so. If you had taken all the colliery managers of New South Wales, they would have arrived at the same conclusion as the inspectors. Why experience goes to show that inspectors are generally very good men.

WEDNESDAY, 4 SEPTEMBER, 1895.

[The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.]

Present:—

FRANCIS EDWARD ROGERS, Esq., Q.C., (PRESIDENT).

JAMES CURLEY, Esq.

JESSE GREGSON, Esq.

George Henderson, Secretary for Illawarra Miners, re-examined:—

Mr. G. Henderson. 1393. Mr. Curley.] Have you given this section of the Bill, relating to the powers of inspectors, and particularly the sub-section 5, upon which you were examined when we adjourned yesterday, any further consideration? Yes; at least I have considered the matter during the interval, but I have arrived at no other conclusion.

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1394. And that conclusion is that you think the section ought to remain in the Bill as originally drafted? Yes; I think the section ought to remain in the Bill.

1395. President.] Do you want all the short amendments in the sub-sections that are beyond the English Act;—in sub-section 1, for instance, there are a lot of words that are not in the English Act? The English Act does not mean any other than what this Bill means, nor does this Bill amount really to more than the English Act. It may be more definite. Under the English Act an inspector can go and inspect a mine when he chooses, but here it stipulates that he should make at least once in each month such examination. That is simply because it was necessary for the inspectors to look more frequently into the mines than what they have been doing.

1396.

1396. Do not you think that when proper inspectors are appointed, and they see what their duties are, that it is legislating too much in detail to direct all these things? Don't you think they would do this themselves without specifying it as in sub-section 1? Why is it necessary to tell them when they should visit a mine? Might it not be an objection that they would know when to look for them? Would it not be better that they should be on the lookout for them? Mr. G.
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1397. But not once a quarter or once a month? They have no knowledge of the day, consequently they might be looking for them on the first day of the month, and every day till the last day of the month.

1398. If you legislate to bind inspectors down to visit once every month, may they not get into the habit of parcelling out their work and be expected at certain times. That is my trouble. I am ready to give every power that an inspector ought to have, but it does no good to legislate in detail? We may admit of the truth of the evil, but sometimes it is better to legislate in that method with the intention and for the obtaining of the greatest good. We find at the present time that our colliery inspectors have very large areas to inspect, and they do not very frequently visit the collieries, may be it is absolutely impossible for them to do so. It certainly would be better provided that legislation of such a character was passed to ensure more frequent visits from the inspectors to the collieries even if in anticipation of keeping everyone concerned looking for the inspector coming. That would be a great benefit.

1399. *Mr. Gregson.*] How many inspectors have you in the South? One.

1400. And how many collieries? Eleven.

1401. And what is the greatest distance from one colliery to the other? Thirty miles covers the whole district.

1402. What are the duties of the inspectors in England, the number of collieries, and the distances they have to travel? They have a considerable number of collieries in England.

1403. Much more than thirty miles? Yes, in fact our own southern inspector is the inspector for the western district.

1404. How many inspectors are there connected with the Mines Department altogether? Four: Inspectors Rowan, Dixon, Humble, and Bates.

1405. Where is Mr. Bates? In the northern district.

1406. *President.*] There is only one inspector for the Southern district? Yes, only one; Mr. Rowan.

1407. Have they no inspector in the Western district? No; our inspector officiates in that capacity in the west right up as far as Cullen Bullen.

1408. How many coal-mines are there in the Colony? Sixty-eight in the Northern district, thirty-two in the Western and South-Western districts, and twelve in the Southern district.

1409. *Mr. Gregson.*] If your proposal is to hold good to that sub-clause as it stands, an inspector would be the whole of the month going his regular rounds in your district? He could not do it, and when we come to consider matters calmly, I think he has altogether too much work.

1410. You think, therefore, that there should be a larger staff? Certainly; when you consider the number of collieries in the South and in the West, and the amount of travelling, it seems as if he had altogether too much work to perform.

1411. Anyway, your opinion is that sub-clause 5 of Rule 21 on page 8 of the Bill should stand? My opinion is that it should stand as it is.

1412. *Mr. Curley.*] With regard to the discipline at the Helensburgh mine, do you consider that the standard of discipline at that colliery is of a high character? Yes, I certainly do, and I must say that I never in my experience knew of a colliery where better discipline existed than at Helensburgh.

1413. *Mr. Gregson.*] Is it daily inspection? Oh, yes; daily inspection.

1414. More than once a day? Oh, yes; more than once a day.

1415. How many times a day? I cannot say the number of times.

1416. Front and back shift? The miners all come up together. There are always deputies in the pit at all times.

1417. *Mr. Curley.*] Have they ever approached faults of any description in that mine? I think they have had one or two faults, but I am only speaking of what I have heard, although I have been in the mine. I have had the pleasure of going all round and having a look at it for myself.

1418. Have you heard of any large blower of gas being given off in approaching these faults? No; not of any large blast.

1419. Have you heard of any small blower? I have certainly heard that naturally she generates or gives off a quantity of gas pretty well at all times.

1420. Do you know how the fan is situated at the upcast shaft? I know it is situated there, and I have had the pleasure of looking at the fan at the top of the upcast shaft.

1421. Is the fan away from the shaft top? Oh, yes; a respectable distance.

1422. How far away? I cannot give the exact distance. This I do know, that I have comfortably located myself between the fan and the shaft, standing and looking into the upcast shaft.

1423. It is some yards away? Oh, yes.

1424. *Mr. Gregson.*] A matter of 50 or 100 yards? Oh, no. You mean from the coal shaft.

1425. *Mr. Curley.*] From either shaft? The fan is fully 100 yards away from the coal shaft.

1426. It is the other one I am referring to? In close proximity to the up-cast shaft. The whole arrangement is under the cover of the one building. They have a very powerful fan there—I suppose one of the most modern.

1427. *Mr. Gregson.*] A quick runner—a Schiele? I think it is a Schiele, but I would not be certain on that point.

1428. *Mr. Curley.*] It is not a Cappel? No, not a Cappel.

1429. *Mr. Gregson.*] Is the fan run outside the building? No, inside the building.

1430. What diameter is the fan—2 or 3 feet? The fan would not run in this room. I believe it is 32 feet.

1431. *Mr. Curley.*] Does every man in the mine work with a safety lamp? Yes.

1432. There are no naked lights? No.

1433. Are the lights all examined at the pit top or at the bottom of the pit? I think they are examined both at the top and at the bottom of the pit.

1434. Do you know the class of safety-lamps they use at that mine;—is it the Muoseler or the Meredith? I do not know which of the makers it is. Of course it is the new safety-lamp.

1435. One of the latest? Yes; one of the latest.

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1436. Do you know of any mines in your district where there is no mechanical ventilation of any description, where there is what is known as natural ventilation without mechanical power at all? No; we have no mines of that class. We have two mines that are ventilated with fans, and the remaining mines are ventilated by furnaces.

1437. Are there any other mines in your district that give off explosive gas or fire-damp? We have a mine that gas has been frequently observed in—namely, the South Bulli mine. We had a fatal accident in that mine through gas.

1438. What time in the day did the accident take place there? I cannot speak with certainty, but I am under the impression that the explosion of gas took place sometime between the hours of half-past two and half-past four in the afternoon.

1439. Do you know any of the circumstances in connection with that accident;—how it occurred? Yes; I pretty well know the whole of the circumstances. It occurred something like this:—A man or two men were working in a bord, the innermost bord in a certain heading. On this occasion, when their empty skips were sent in they were put past the turn, and in order to pull the full ones out they had occasion to go out of this bord and proceed a distance into the heading, in order that they might draw their empty skips back. This heading had a little dip from the turn to the bord, down to the face, and the empty skips had no doubt been put past the turn by the wheeler, and had gone in towards the face. When this man came out of the bord to seek his empty skips—no man being in the heading at the time, the heading man having gone home two hours previously—the gas exploded and burnt the man, and death was the result. Of course it was all naked lights. Those, briefly, are the circumstances.

1440. Do you know if there was any bratticing in that heading? There was no bratticing.

1441. Do you know whether the men work with any safety-lamps in that mine? At this particular time, when the explosion occurred, I do not think there were any safety-lamps used in the mine.

1442. Do you know anything about the method of inspection there? No, I do not.

1443. Will you now look at section [22] 20, on page 9 of the Bill—"Notice by inspector of causes of danger not expressly provided against" (*see Appendix A*). Will you look through the section. You will see that the words "and enter such report in a book at the mine" are struck out? I take the view that those words should not be erased; I think that that is an absolute necessity. Once an inspector has made an examination, and finds certain things that are not satisfactory, having inserted the same in a book at the mine, no one can dispute the fact of the inspector having made the observation.

1444. *President.*] Do you think that all these things are required of the inspector;—if you go back to section 21 you will see in subsection 4 these words, "and shall enter in a book to be provided by the owner or manager a report of any defect, or anything in or about the mine tending to endanger the safety or health of the miners employed therein;" then in this section [22] 20 that we are at, "and shall state in the notice the particulars in which he considers the mine, or any part thereof, or any matter, thing, or practice to be dangerous or defective"? I think that is simply repetition.

1445. If you require inspectors to make all these writings how will they have time to do other work? But that is one essential part of their work. What is the use of having an inspector if, after having made an inspection, you have no record of the work done?

1446. The object of his inspection is to require any defect to be remedied, and report to the Minister if he sees anything wrong? At the same time we must admit that, having officiated in a very important capacity, it is necessary that he shall leave some trace behind him. He may simply make an inspection and say to the manager so-and-so is the case. The manager possibly misunderstands or misinterprets what is said. I am not prepared to say wilfully neglects the observations made by the inspector, but through some force of circumstances he simply does not put into practice what has been ordered by the inspector, and he actually says he did not understand the inspector to mean what he said.

1447. *Mr. Curley.*] Is there not a qualifying circumstance in the section that we are now at. The report is only an after question, provided the manager takes up some obstinate position? Quite so.

1448. *Mr. Gregson.*] There is no such thing in the English Act, and there are no complaints before the Royal Commission on labour. The whole policy of the English Act is different to what is attempted to be provided here. The English Act assumes that a man is going to do his duty, but you want a heap of things that they do not dream of asking. They expect a man to do his duty;—you want them entered in a book besides? Having an English experience I tell you that the difference between English and Australian mining is almost incredible to any man. Having an experience in both countries as a miner, I must tell you that the whole of the mining arrangements in very many of the collieries in New South Wales seems to a man who has gone through English mines a tin-pot arrangement that is almost intolerable. That is the only way I can describe it.

1449. That itself might be removed when the inspector has the large powers that both the proprietors and the miners think he should have; hitherto he has not had quick power, but if he has the power to say this or that is to be done he can see it is done? Undoubtedly it would do, and it is the intention, and will remove a great deal of the disabilities we see around about us. Yet provided that this matter remained in the section, this provision of entering such report in a book, is there any particular injury that would be brought to bear against or upon any individual by such course of action? I certainly believe any of the work entailed would not be so great as we imagine. It is only a matter of a few minutes. Look at our deputies that go round and inspect the mines in the mornings. They come out of the mines and there is a report-book placed before them, and they go into the office and insert their daily inspection in this report-book. It is a matter of only ten minutes. Having done that, there is a record of their inspection, lying open to the manager and every other official about the concern, and procurable if necessity requires it.

1450. I am coming to the necessity of the position of a deputy, or the pillar inspection, to have it recorded that so-and-so is there, but in the case of the Government Inspector is there not a difference? He comes two or three times in a month, or two or three times in six months, and as long as he sees everything straight what necessity is there for him to record it? He has to make his reports to the Minister. As far as the safety of the mine is concerned, what difference does it make about him entering his report in the book? One man is a private servant, while the other is a public servant.

1451. It is part of the discipline of the pit? Ought not that discipline to apply to the public?

1452. *Mr. Curley.*] Have you seen the section in the English Act on this matter to make a comparison between the two methods;—the section is number 42, sub-section 1 (*see Appendix C, section 42, sub-section 1, of English Coal Mines Regulation Act of 1887*)? Yes.

1453.

1453. You think that the clause we are discussing should remain in the Bill as originally drafted? Yes.

1454. Will you now look at section [27] 25, sub-section 18, of the Bill, on page 12 (*see Appendix A*); there is a proposal I think to embody something else in connection with that clause to meet the words "a Police or Stipendiary Magistrate, or a Barrister-at-law"; the proposition is, "or other person agreed to by the arbitrators," so as to make the position as wide as possible;—would you look at the amendment proposed by the Legislative Assembly in the Minutes of the Proceedings of the Legislative Council, 1st May, 1895:—

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The Assembly agrees to the amendments in clause 27, but proposes to amend that on page 11, line 1, by omitting therefrom the words "a Police or Stipendiary Magistrate, or a Barrister-at-law," and inserting the words "or other person agreed to by the arbitrators," instead thereof.

? So far as the District Court Judge is concerned, I certainly believe it is the proper course to take, but I have never been favourable to Police, or Stipendiary Magistrates having anything to do with these matters whatever. I do not know that it would be to the best interests of either parties that they should have, and I certainly favour the idea of omitting a Police or Stipendiary Magistrate, or a Barrister-at-law, with a view to inserting the words "or other person agreed to by the arbitrators." Of course, if those persons choose to agree upon a Police or Stipendiary Magistrate, or a Barrister-at-law, I have not the slightest objection.

1455. Might they not agree to some gentleman that might not have any legal connection at all? Quite so. We have done so in cases in our own district.

1456. *Mr. Gregson.*] Suppose these words were all taken out, and it was agreed that any person appointed by the arbitrators should be an umpire; but if the arbitrators failed to agree, the Minister must appoint a District Court Judge? I think a District Court Judge is better than a Stipendiary Magistrate or Barrister-at-law. We had an experience of that in the county of Durham. I rather like to have an agreement between the arbitrators if possible; but if not possible, next in preference comes the District Court Judge.

1457. *President.*] What do you wish to say, then? And any person may be appointed as an umpire under this section; but, in the event of the arbitrators failing to agree, the Minister shall appoint a District Court Judge to be the umpire.

1458. *Mr. Curley.*] Will you now look at section [30] 28, sub-section 1, on page 14 of the Bill—"Plan of the workings of the mine" (*see Appendix A*);—what do you say to that provision? In giving you an individual opinion, it is one of those provisions against which there should not be any objection, because all colliery managers keep a plan of their workings.

1459. *Mr. Gregson.*] Not made up to date? In most of the cases the plan never gets very far behind.

1460. What is the provision in the English Act in this respect? I think three months.

1461. Your view is that it should be as speedy as possible? Yes.

1462. *Mr. Curley.*] Will you look at sub-section 3 of clause [30] 28 (*see Appendix A*);—you will see that this section is crossed out? I think if a plan is to be kept at all that it may as well be a plan. This section is, in my opinion, simply the carrying out of sub-section 1 that we have just passed.

1463. *President.*] But do you see the detail it goes into? The view I take is that it would not be a plan if these things in this sub-section were not there.

1464. What is the good of legislating for what this plan is to contain; the section is not in the English Act, and they are very careful in regard to these matters;—there is such a tremendous amount of detail? Yes; there seems to be so.

1465. *Mr. Curley.*] Is it not possible that an inspector may inspect a colliery and look at the plan, but that there might be a creek on that estate on the surface workings of which he knew nothing;—he might look at the plan of the internal workings, but that plan would not indicate it. It might be a lagoon of which he would have no knowledge? Quite so.

1466. Is there any undermining down in your district—the undermining of streets, roads, or districts? I know something about it, but up to date we are not troubled with that kind of work. We are penetrating the mountain side.

1467. But do you not think it is a very desirable thing? I certainly think so. Our municipalities are down below the coal; but I certainly think that, in view of the fact that collieries are working under houses, roads, bridges, rivers, and so on, that this provision is really a necessary provision under such circumstances.

1468. It is necessary in the interests of the general public? Decidedly.

1469. *President.*] Would not this answer your purpose, Mr. Henderson, to add on to sub-section 1 the latter part of sub-section 3—"and in addition to the plan hereinbefore provided for there shall also be so provided, if required, a surface plan on the same scale showing thereon all streets, roads, buildings, creeks, rivers, bays, swamps, navigable waters, and limits of any tidal waters within the said boundary"? Having provided for a complete plan, that can only mean that the shaft and everything connected with the workings of the colliery must be shown on some plan or plans.

1470. *Mr. Curley.*] With the knowledge that we have that some of our mines are working under tidal waters, do you not think that it is almost absolutely necessary to know the kind of strata gone through, and that the inspector should be fully informed of all these matters? Yes, I do.

1471. So that he should always know of the possibility of any danger? Yes, certainly.

1472. *Mr. Gregson.*] The objection is putting too much information on one sheet? I am not satisfied to leave anything out where it is believed there is public good to be derived, especially as in the latter part of sub-section 3.

1473. Do you not think that the latter part of sub-section 3 might be added to sub-section 1, and the first part of sub-section 3, down to the words "or bore-hole," be struck out? Yes.

1474. *Mr. Curley.*] You believe that there should be a surface plan? Yes.

1475. And that that plan should indicate the bore-holes? Yes; I do not make it imperative which plan should indicate the bore-holes. I do not think it matters much on which of the plans they are shown.

1476. But they should be shown? Yes; certainly they should be shown.

1477. Will you now look at sub-section 5, of Rule [30] 28, on page 14 of the Bill [*see Appendix A*]. You will see that the words "or tracing" are erased in that sub-section? I do not see any necessity at all for the words "or tracing." It is quite evident that all that is wanted is comprehended within the meaning of sub-section 5, without the words "or tracing."

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1478. *Mr. Curley.*] Perhaps the Commissioners will deal with this matter later on? It does seem as though it was an entirely new departure when coming to the words "nor shall such plans." Plans should, perhaps, read "copies," be open to inspection, &c.

1479. We now come to section [31] 29, sub-section 1, on page 15 of the Bill (*see Appendix A*). You will see that the word "serious" is inserted; that is a new word inserted that is in the English Act; Mr. Fegan and Mr. Cook do not want this word left in? Whilst the English Act has the word "serious," it may really mean exactly what we want to mean by leaving the word serious out, because you can depend upon it that reports of all accidents in England, no matter what they are, are always made.

1480. *President.*] The clause in the English Act is No. 35, sub-section 1, and reads (*see Appendix C*). The argument, so far, is that this word "serious" should be left out of the sub-section? I cannot, for the life of me, see why the word "serious" should be inserted at all, because, as a rule, we look on some kinds of accidents as being very small accidents indeed which ultimately turn out to be grievous and serious.

1481. Supposing a man got his hand slightly scalded or his finger hurt, this would necessitate sending in this to the Minister; whatever slight accident happened would have to be reported; do you not see that this is tremendous detailed legislation; surely no humane man would, if there was an explosion which caused personal injury, be likely to say it was not serious personal injury; I think it is well to follow what we have here in the English Act; there are a thousand and one different accidents that may happen: one man may throw a piece of coal on another man's toe, and is that to be reported; if you say "any personal injury," that would have to be reported; the object of the section is, where personal injury occurs through a serious thing, such as a gas explosion or the explosion of a boiler, the injury is to be reported; but in other cases you do not report it unless the injury is serious; in the case of an explosion, no matter what the injury is, it does not matter how slight, it must be reported, but you need not do it in other cases unless the injury is serious? But, Mr. President, I do not think that these slight matters that you have referred to really come under the heading of an accident at all.

1482. It is personal injury? Here is a matter of fact: We will depart from theory for the present. Say that there are two men loading a skip, for instance; one man happens by accident to knock a piece of coal on to his mate's foot. The accident or injury is one of those momentary things that will cause an amount of pain for a day or two, but it will not prevent the man from following his occupation, and so long as it does not do that it is never considered a personal injury. So soon as an accident or injury occurs that is calculated to throw a man out of employment—we never have any knowledge of what the nature of it will be, and especially if the man may have a little bruise—it ought to be reported. I have in my mind a man whom I know, a fine fellow, who fell on the side of a skip—that, of course, would never come under the heading of a serious accident, simply because the man stumbled—however, he finished his day's work and came out of the pit, mingled with his fellows, and came back to his work the next day. He followed out his work next day under some little disability, through pain in his ribs. That night he came home and felt his injury very much more serious, and it happened that nine or ten months lapsed before that man was able to put his feet to the ground, all traceable to that little personal injury.

1483. *Mr. Gregson.*] What would have been the good if that accident had been reported? I do not know.

1484. It was not discovered at the time to be a serious personal injury? I am giving an illustration of what may possibly occur in other cases.

1485. What would be the good of reporting an accident of that character? We know it is better in all cases to have records of injuries, and how they take place.

1486. A mere accident of stumbling? Oh, no! Here, in this sub-section, we have it plainly, that this only means that it shall be reported within the twenty-four hours. If the injury is such as of course would not be felt within the twenty-four hours, then the necessity of reporting it, or the possibility of reporting it in the twenty-four hours, goes away.

1487. *Mr. Curley.*] Do you think that one-half of the non-fatal accidents are reported? I do not think they are.

1488. *President.*] In the 28th section of the 1876 Act they have mixed these accidents up; but in the present Bill they have separated them? In the present Bill they have followed the English Act, and the framers have carefully considered this.

1489. *Mr. Curley.*] Do you know, Mr. Henderson, yourself, of any accidents that have turned out to be serious that have never been reported in your district? I cannot say I know of any other accidents.

1490. *President.*] The accident you have mentioned no one would have thought of reporting;—if you had this Bill you would not have reported that accident;—the man was able to go to his work next day? Yes; I have pointed that out.

1491. *Mr. Curley.*] If a man was knocked down by a train of skips on the engine plane, and some of those skips passed over him, and he had to have some of his fingers amputated, would that be a serious personal injury? Certainly it would; and that accident or injury ought to be reported. Taking the Report of the Department of Mines for 1894, the injuries that have taken place in the southern district correspond with those we have ourselves taken; so that all accidents that we really know of have been reported up to date, and I certainly think they should continue to do so, but in the case mentioned by Mr. Curley there was great neglect of duty somewhere.

1492. *President.*] That is no argument about this section; this section of the Bill provides that, if hurt by accident, it must be reported? As a matter of fact, those words that are inserted here in this sub-section with certain managers bear such wonderful construction; and whilst I think that the case mentioned by Mr. Curley was a strict dereliction of duty, if we had the person who ought to have reported it, he might think it was not sufficiently serious to come within the terms of the Act.

1493. *Mr. Gregson.*] My experience is, that on the chance of accidents being serious they are reported.

1494. *President.*] Is the inspector of the district, if you put in any personal injury, to have a report sent to him if a man has a bit of skin knocked off his hand, or if a piece of coal falls on his toe: is that to be reported;—is that to be reported unless it occurs by reason of an explosion? That is all right, but I will have you to understand this, that here in connection, say, with the Southern District Report of the Department of Mines, page 100 (*see Appendix L*), when this report was drafted, Mr. Rowan was very careful in considering the matters reported to him, knowing that in the future he has a report to submit to his Department, and that it is just possible that that report might come into the hands of Mr. Henderson, or any man placed in the same position as myself, and he would investigate that report, and if Mr. Rowan's report is what Mr. Henderson could prove to be incorrect there is a possibility of things becoming

becoming very unpleasant for the inspector. In that sense they would not dare to depart from their duty because of the smaller accidents that come in. There is no possible chance of injuries such as bits of skin coming in. They cannot know that they have actually taken place, and you cannot by law force a man to know.

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1495. The injured workmen will never complain? No. Why we object to the word "serious," if you can call it an objection, is because, as Mr. Curley has pointed out, we sometimes come across matters that ought certainly to be reported and that are actually neglected.

1496. Do you think this matter of sufficient moment, when you see the distinctions drawn between these accidents, to have care about whether this word "serious" should be in the sub-section the way it is put here;—in one case accidents must be reported, but in other cases they must only be serious? I do not consider it myself of very vital importance.

1497. *Mr. Curley.*] I know at the time it was pointed out, that in a matter not being reported at a certain time, that if you had to bring a notice against a company that had to be given at a given time? Yes.

1498. *Mr. Gregson.*] There is no complaint about this word in the English Royal Commission of Investigation? It is a well-known fact by the number of accidents that are reported, and the circumstances, that they are pretty well all reported, save and except those that we have been conversing about—little bits of an injury that a man would not take the slightest notice of—but all other injuries are fairly well reported.

1499. *President.*] Would you make them any more reported by leaving out the word "serious";—take the case put by Mr. Curley, would that accident have been reported any more under this section? A man, with the word "serious" left out, may say "it is a part of my duty—this is a personal injury," and might have reported it.

1500. *Mr. Curley.*] In the section we have been considering there are the words "forthwith, but not later than within twenty-four hours"; even with the word "serious" the Council still objects to having these words in? What is the difference?

1501. I want your opinion about this? My opinion is that there is not sufficient difference between the wording "forthwith but not later than" and "within twenty-four hours." There is not sufficient difference in the construction to cause any comment.

1502. You are satisfied with the wording "within twenty-four hours"? Quite satisfied.

1503. We come now to section [32] 30, sub-section 4, on page 15 (*see Appendix A*). You will see that we come to the same word again in this sub-section; but on this occasion it is not in connection with twenty-four hours, but one month. Will you give us your views on this alteration?—

1503. *President.*] The wording in the English Act is "within two months"? I do not think the words "one month," ought to be in this sub-section at all. I think the word "forthwith" is really the most applicable to the circumstances. Why should there be a month intervening between the time of commencing a mine, or of shutting-up a mine—between the time of doing so, and the inspector being informed of it. I certainly think the words "within one month" are entirely out of place.

1504. It leaves it a question as to what "forthwith" means? Yes. I think it really ought to be within a much less period than one month, because I do not see any necessity for one month to intervene. The object is simply to inform the inspector that the mine has been abandoned; that some part of the mine is going to be commenced; or that a mine having been abandoned is going to be re-started; and this provision, seeing that the Coal Mines Regulation Act applies to coal-mines, is really an essential that must be carried out; and I see no reason why one month's grace should be given for any such act, because if a colliery was to be started, or they wanted to start it, a manager, or some one for the head manager, in some respects, could notify the inspector, surely, within seven days, anyhow.

1505. What is the object of their having notice in such a violent hurry? The object in commencing new seams is, that the inspector may at once proceed to the scene before this work is commenced. That ought to be the method of inspection in that case.

1506. Would they get very far in a month? It all depends on circumstances. It might be that a large section of a pit, for instance, had been standing for a number of years, and all at once they intend commencing, or re-commencing, this section. Whilst they would not get very far within a month, they could pop in forty or fifty men in that section. Hence the inspector, knowing all about it, as speedily as possible goes there in order to be acquainted with the system of ventilation necessary for that section, and all other matters appertaining to mining.

1507. Practically, the manager or owner has to give notice; but it does not say how? No; but it has to be done within one month, and I take it that this word "forthwith" was inserted, whatever we may construe it to mean, to provide that the thing should be done at once.

1508. Suppose we make the wording "fourteen days," instead of "forthwith," making it so that you can bind him down to it;—is fourteen days enough?—

1509. *Mr. Gregson.*] In the English Act it says, within two months. My only reason for adhering to those words is that unless some reason is shown why the system followed in England should not be adopted, we ought to follow it here? I do not think it really matters much.

1510. *Mr. Curley.*] We will now go to section 36, on page 17, of the Bill, "Hours of employment" (*see Appendix A*). You will notice that this section has been erased by the Council; do you consider that this section should be erased? Certainly not; I consider the section ought to remain as at first proposed, for very good reasons too.

1511. What are the reasons? Some of them are that really I am of opinion—and I think we all agree to the fact—that almost nature herself so designed it, that a man should work eight hours a day. It seems to be quite the natural thing for us to do so, and we find that in endeavouring to get this, which seems to be a very natural provision, we are blocked on every hand, and instead of being called upon to work the reasonable eight hours' shift, we have coal-miners, whose occupation we know is very far from being a pleasant one, called upon actually to go into the pit, and the manager of the pit will say to them, "now you stop there till I send for you to come out again."

1512. What are the circumstances in your district—the time of working at the different mines in your district? I am sorry to say that we have no real general custom. For instance, at Helensburgh we work one shift about eight hours and three-quarters, or nine hours per day—getting on to nine hours.

1513. What time do the men come in? At 8 o'clock, or half-past 7—from half-past 7 to 8 o'clock, and they come out again at 4:30 at night.

1514.

- Mr. G. Henderson. 1514. That is nine hours? Yes.
- 4 Sept., 1895. 1515. *Mr. Gregson.*] Is that from bank to bank? Yes; it may extend a little longer than nine hours from bank to bank. There are other mines where no hours of labour practically are recognised at all, but it is a question of blowing the whistle, which is to inform men that they are wanted at the pit, and it is not a miraculous thing for a man to go into the pit, and be told by the manager that he is to stop there until he is sent for.
1516. Until he is sent for? Yes; until he is sent for.
1517. *Mr. Curley.*] For how many hours is that? In some cases sixteen hours, and in this period of the nineteenth century.
1518. *Mr. Gregson.*] At the face? Yes, at the face. I have known a man, after he has been about fifteen or sixteen hours at the face, to be allowed by the manager to go home and get a little bit of tucker, and to be told to get back straight to the pit again, and do another eight or nine hours work. The manager has allowed him to come out, but compelled him to go back.
1519. *Mr. Curley.*] Under what circumstances was this done;—were there any special circumstances? The only circumstances that I can imagine or conceive of are these. There is not very much rolling-stock, and it is a question of making rolling-stock of flesh and blood. A steamer comes, and a quantity of coal is required to load that steamer. The mine may have been idle, but a steamer comes into the jetty, and the quantity of coal that is standing in the waggons is placed on board the steamer; then it is a question of getting the men to work, and keeping them there until that steamer has received the whole of her cargo, or the quantity she came for. The men are, practically, the rolling-stock.
1520. *Mr. Gregson.*] Then you do not have a steamer every day;—you get a long spell? We do not have a steamer every day.
1521. *Mr. Curley.*] Can you give us the prevailing general custom in your district? The general custom is that the collieries shall draw coal from 7 o'clock in the morning until 5 o'clock at night—ten hours per day. That is the general system.
1522. *President.*] In all of the collieries? In all of them, save and except Helensburgh, and that colliery works on the conditions that I have stated, but the other collieries are supposed to draw coal from 7 o'clock until 5 o'clock—ten hours a day. They draw coal often a good deal longer than that.
1523. *Mr. Curley.*] They exceed that time occasionally? Yes; in fact, there are one or two collieries who seem to never for one moment come within the limits of general custom. Almost every day they work outside the limits of general custom. They start at 6 o'clock in the morning, and work till 7 o'clock at night, and never seem to come within the limits of general custom.
1524. *Mr. Gregson.*] Are there any young people under the age of 18 years, employed for this number of hours? I am inclined to think there are.
1525. If so, it is an infringement of the Act? I am inclined to think the Act is infringed.
1526. Well, you know there is a remedy? Yes, I know; if you can get at them.
1527. *Mr. Curley.*] If a man or boy refuses to work what is the alternative? The alternative is to clear away, there is another man or boy for your job. That is why the hours of labour are in such a complicated state in the Southern district.
1528. *President.*] Do you know of any other place to which that applies? Well, I know several places where they have tried, but where we have up to date succeeded by organization in preventing them from bringing such exacting conditions upon us. I will give you an example. Here is a notice posted up on one of the mines in the Illawarra district, on the 15th day of June, 1895.

MOUNT KEMBLA COLLIERY.

15th June, 1895.

FOURTEEN days from this date miners and other workmen employed at this colliery will be required to work on Pay Saturdays for such number of hours as the exigencies of trade demand, and to start work at any time up to 9 a.m., as on other days when required, and employment will be subject to acquiescence in this rule.

J. H. RONALDSON,
Manager.

This only applies to Pay Saturday in regard to that particular colliery. We have not worked under the exacting conditions that are here set forth, but it came to a question of this, that we were driven actually to the verge of a strike, and it was only by the calmest and the greatest amount of consideration that a strike could actually be prevented. We see here that one is necessary to prevent such conditions of slavery as are within the conditions of that notice. It only applies to Pay Saturday. Up to that date we had not been working on Pay Saturdays at all, and for some reason or other they wanted us to work on these Saturdays, and put up a notice that that limitation to Saturday was actually from 9 o'clock in the morning until 12 o'clock on the Saturday night. We, of course, were very nearly driven to a strike, but ultimately we compromised by incessant representations. We wrote those who intended to enforce the conditions, and we interviewed them by deputations, until at last we arrived at an agreement that allows our men to come out of the pit at 1 o'clock on Pay Saturday.

1529. And what time do the men work from? Any hours between 6 in the morning and 1 o'clock. But you see the struggle we have to battle against; that is continually being fought in order to prevent the most serious conditions that may be imposed on men. I can understand that kind of thing in Siberia, but I really cannot understand it here.

1530. *Mr. Curley.*] They work eight hours in Siberia? Well, they are better off than we are.

1531. What is the practice of the hours in that particular colliery you name? It is that the miners work two shifts, front and back, of eight hours each. The miners work eight hours. This the miners have struggled to maintain, and as you know we have come through a number of years of very serious depression, and it has affected us down there, as well as other people. We have consequently been weakened in our stand, and whilst we have this provision for the men to work eight-hour shifts, only quite recently an employer or the manager ordered both shifts to go in at one time.

1532. Where was this? At Mount Kembla, and to come out at one time, for two or three days or something like this, and the consequences of course we know to a man who refuses any of these impositions—he is turned *holus-bolus* from the colliery.

1532½. Were the shifts kept for more than the eight hours? The manager had intended they should be kept ten or eleven hours, and did it on the first day, because the men had no opportunity of getting themselves together, but I know that after the first day's work, the men called a meeting and they unanimously decided that rather than submit to those conditions they would stop at home altogether. The result was that
the

the men went to work in their usual shifts, and fortunately no notice was taken of them. They were permitted to go on, and no strictures were brought against them for having met and remonstrated.

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1533. *President.*] What time does the first shift go in? At 6 o'clock in the morning, and they leave the face at 2 o'clock in the afternoon—eight hours. The second shift goes in at 9 o'clock and leaves the face at 5 o'clock in the afternoon—eight hours.

1534. When you were asked to work longer, until that time had you only been working the eight hours? Yes.

1535. And they tried to put on some more hours? They are continually trying.

1536. And you have resisted? Yes.

1537. And successfully? Yes, so far, at that particular colliery.

1538. *Mr. Curley.*] What time do they draw coal at Mount Kembla? For ten hours.

1539. Have you given us a statement with regard to most of the collieries in your district? I think so.

1540. Does that statement cover the whole of the collieries? Yes, concerning the working of ten hours. Of course, as I have said, there are some of the collieries that depart from that rule as to drawing coal, and not infrequently either. One of the collieries, in particular, during the last month. I do not think I would exaggerate matters by saying that one colliery has drawn coal on an average eleven and a half hours for half the time she has worked during the month.

1541. *Mr. Gregson.*] Are the men underground? Yes; working the whole of the time.

1542. I want to know with regard to Mount Kembla;—is it in the case of Mount Kembla that they are required to work sixteen hours? No, it is not.

1543. At other collieries than Mount Kembla? Yes, at others.

1544. *Mr. Curley.*] Will you give us the name of the colliery? At Clifton they have been working sixteen hours.

1545. *Mr. Gregson.*] Eleven and a-half hours a day for half the time they have been at work? Yes.

1546. Can you give the names of those collieries? Clifton and Corrimal are two that very frequently transgress the order of the ten hours.

1547. Clifton was the colliery where the miners have to remain at the face for sixteen hours? Yes; that is the Clifton Colliery.

1548. What about Mount Keira? Mount Keira draws coal for ten hours per day, and she does occasionally depart from that order of work. I have known her, by reputation, to work from 7 o'clock until 7 o'clock—twelve hours—drawing coal all the time. The miners were working the whole of that time, viz., twelve hours per day. At the same time I would like to impress this fact, that this order of things is altogether contrary to the wish and the desire of the men who are working these hours. It is not any free will of their own by which it is done.

1549. *Mr. Curley.*] You mean to say that they are ordered, or requested, to do this? They are requested to do it, and we know what that means, provided that there is a refusal.

1550. Do you think there is a need for anything like such irregularities in connection with this work? I certainly do not think so.

1551. *Mr. Gregson.*] Perhaps you cannot form an opinion? I am speaking from observation.

1552. *Mr. Ourley.*] Do the men work anything like full time all round? No; very far from full time.

1553. *President.*] What is full time? Eleven days per fortnight at some collieries would be full time.

1554. *Mr. Gregson.*] How long have you not been working full time? I think during the last three years we have not had many collieries in our district that have done full time for more than half a dozen fortnights in the three years. Even those collieries that work the long hours, putting the long hours into reasonable shifts—ten hour shifts—that would then bring them up only from nine to ten days per fortnight.

1555. Just consider this: you have to do the trade when it comes to you;—do you not think you would be in a predicament if the eight hours were fixed by law? I do not think so.

1556. Do you not think that you would often lose an order? I do not think so.

1557. Do not hide that possibility? We are not hiding that possibility at all. As a matter of fact, we are almost prepared to say that we know differently. We do not think that it would make any difference in that respect.

1558. Your trade is conducted on certain economic considerations;—there are so many steamers coming at certain times, and you get a certain amount of work in a certain way, and if you could get it in another way no doubt it would be more to your comfort? We have taken notice of all these things. We have known a pit to work for twelve hours one day, and not do a turn the next day.

1559. If you did not work twelve hours to-day you would not have got the trade? In cases I have mentioned the steamer was not there at all.

1560. *Mr. Ourley.*] Do the companies keep a fair amount of rolling-stock—skips and waggons? Mostly all of them have a fair amount of rolling-stock. Some of them have very insufficient rolling-stock.

1561. *Mr. Gregson.*] What do you call a fair amount of rolling-stock? Five or 6 tons to every man that is getting coal.

1562. That means two days' work? Yes; we have not that, but that is what I would call a fair amount.

1563. Some of the collieries have considerably less than that? Yes, some of them have considerably less than that. Some of them will fill everything up in a day.

1564. *Mr. Ourley.*] Do you not think if they have a day's work standing ahead in the trucks, or the skips, that that is a very fair supply to start with? I do; consequently that is one of the grounds why I consider that the matter of these long hours is a questionable method of working; and, apart altogether from that fact, it is injurious to coal-miners to remain in the bowels of the earth in the presence of the several injurious gases for that number of hours.

1565. *Mr. Gregson.*] But supposing you had this option, you have got to remain in the bowels of the earth for so many hours or be without your work; there comes the difficulty? I am telling you candidly, Mr. Gregson, that is not my opinion at all, because I am a very great believer in the fact that if one colliery does not get the trade the other will.

1566. The trade might go to the north? I do not care where it goes to so long as men are worked like reasonable human beings.

1567. If the necessity was so great, you would rather see the trade go from Illawarra than work the hours you are doing? I would rather see the trade out of the road than to enforce inhuman conditions. I have had

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- had a fair experience in working six-hour shifts, and I have tasted the working of the long hours in the Illawarra district, and I was a much better man at the six hours than I was at the long hours.
1568. *Mr. Curley.*] Where did you work the six-hours shift? In the county of Durham.
1569. Did a man feel more vigorous for his work there? I should think so.
1570. He always went into the pit a man? Yes; prepared to do his work, and could do it.
1571. *Mr. Gregson.*] I see the average number of hours at Durham is given at 5:37? That is six hours to all intents and purposes. How the decimal comes in is, that the front shift-man goes to work at 4 o'clock in the morning, and he is relieved by the man who goes down at 10 o'clock, so that he actually works six hours at the face; but the man who relieves him at 10 o'clock has to be back at the shaft at 4 o'clock at night, consequently he cannot remain at the face six hours. That is how the decimal under the six hours is found.
1572. They do not draw after 4 o'clock? No; from 6 o'clock in the morning until 4 o'clock in the afternoon.
1573. *Mr. Curley.*] Did you notice that everything was carried out on uniform lines there? Oh, yes; everything is as regular as a piece of machinery—everything is worked methodically. The men are all there to go down at one time, and to come up at one time.
1574. Have the tunnels in this Colony something to do with this business of irregularity—the tunnels being favourable to get into the pit at any time? I think in some cases, but they are very exceptional ones. It is in exceptional cases where I know of men to desire to get in at an early hour of the morning. We are not much troubled with that in our district, unless they are ordered to be there.
1575. *Mr. Gregson.*] What hours do these men make or go when they make these sixteen hours? They are called at all times, in that colliery in particular, to go in. One of our collieries, Corrimal, for instance, only quite recently blew the whistle for the front shift men to go to work at 7 o'clock in the morning. When the front shift men went to work at the pit everything was filled—waggons and skips—and there was nothing for them to do. They went to the pit, and found there was nothing to do. A few of them wended their way back home again, and whilst the management knew there was nothing to do, they blew the whistle for the back shift men to come up; that is, two lots of men were brought up for nothing to do. The men finding things useless, sat down for an hour, and then wended their way back to their homes, and at 12 o'clock the whistle went again for the third time, and demanded the men to come back to work.
1576. Was there any friction between the men and the managers? No, not the slightest. The reason we assigned to ourselves for this was, that it was merely caprice on the part of the management to show that they could do practically with the men as they chose to.
- 1577-8. Can you give me the date when this was done;—were you there yourself at this time? No; I was told this by people I can credit. At the same colliery they have a system of sometimes filling slack—no round coal at all; and when they do this, the management says we will only want twenty men to fill the slack, but we will blow the whistle, and the consequence is that every man, probably 100 men, must go 4 miles from their homes up to the pit, and when they get there they will see on a paper at the pit top the twenty names that are required, and the other eighty or 100 men whose names are not on that paper must turn about and walk all that distance home again. If they do not come at the call of the whistle, and they are known not to come, it is simply a question of, "You can take your tools out."
1579. *Mr. Curley.*] I presume that numbers of these men, apart from their work, have pieces of land that they might profitably work in their own time? Yes; some of them have.
1580. Do you think that a manager should encroach on men's time in that way? I certainly do not, and I have complained very bitterly about it. I have gone so far as to interview the manager about this matter, and ask him to make such regulations as were really decent in the management of a colliery, but he went on in his own way.
1581. *Mr. Gregson.*] Did he give you any satisfaction? No, not the slightest. I think the words that he used were that he was most acquainted with his own business, and that it was no concern of mine.
1582. You were not working at the pit? No.
1583. Did any of the workmen, as far as you know, remonstrate with him? Yes; the men have many a time, but still he will not make any other arrangement.
1584. How many men are there employed there? Somewhere between 130 and 140—say 130 in round numbers.
1585. *Mr. Curley.*] With regard to this question of hours, Mr. Henderson, that you are now referring to; is there a general feeling on the part of the men to have the hours limited to a uniform time? It is so general that I went to the trouble some time ago of drafting a petition, in order that I might ascertain the real feeling of the men who were getting coal in the Illawarra district on this question. We had 1,450 coal getters at that particular time, and there were over 1,240 of these men who signed that petition in favour of the eight hours becoming a legalised enactment. The remaining number might have been at home, as you know you cannot always catch the men at the pit.
1586. Do you think the men fully realise the import of that business? I think they are as fully alive to the position as we are here to day, and that they have recognised the gravity of every position that may be conceived on this matter.
1587. *Mr. Gregson.*] Although they may lose trade? They have thought of that, to arrive at the conclusion emphatically, that it will make no difference to them.
1588. *Mr. Curley.*] Where you have referred to the short hours in England, at any part of your time in connection with those mines, do you remember the hours being longer than at the time you speak of? Yes; I remember when I was a boy, going into the pit, that I used to get away to the pit, and get down about half-past 5 in the morning, and my mother used to meet me at the bottom of the gangway, and bring me away from the pit at 7 o'clock at night, sometimes later, and it was a case of wash me and put me to bed till next day. That went on till the passing of that Act that stated the times a boy should work. I was three days at school and three days at work.
1589. *Mr. Gregson.*] Before you were eighteen years of age? Yes; before I was fourteen.
1590. *Mr. Curley.*] Do you think the alteration in the hours of working has led to any diminution in the output of coal? I certainly think it has done no such thing.
1591. Has it interfered with the profits of the colliery proprietors, as far as you know? As far as I know it has not.

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1592. Has it interfered to any material extent with the earnings of the workmen? No, it certainly has not. It has not made their earnings any less.

1593. Taking the condition of matters all round—the condition of the mines as a whole, the condition of the miners and colliery owners—as far as you know, do you believe that matters are better under the limited hours than they were prior to that? I believe the conditions all round are infinitely better. So far as I can see, I do not see anything of an injurious character, and I certainly believe that the proprietors must be in a better position than when the miners were working longer. We know that previous to the hours being shortened the people were practically steeped in the depth of ignorance, but since the shortening of hours there has been wonderful progress in various stages of life, and certainly in the intellectual stage.

1594. *Mr. Gregson.*] The hours have been shortened, but they have been shortened voluntarily? They have been shortened, I believe, if we speak correctly, by force. Whilst we may look upon it as voluntary if we choose, nevertheless public sentiment expressed itself in favour of it, and trades organisations combined for it, and obtained it.

1595. *Mr. Curley.*] When you say force, you mean moral force? Decidedly; not physical force.

1596. With regard to the shortening of the hours for boys, was not that obtained by legislative enactment? Decidedly it was, hence my having to go for three days to school. When the hours for boys were shortened it became a matter of great inconvenience to the employers at the particular time, but only for a very brief period. It came down all at once, and for a brief period boys had to go to work in order that the pit should draw coal, at a certain age, in two shifts. They were allowed to go into the pit at 6 o'clock, and come out at 5 o'clock at night. That was their limit per day. Part of the boys would go down at 6 o'clock in the morning, and come out a couple of hours before the pit knocked off. Another part would go down two hours later, and work the pit up to the evening. The difficulty was got over in a very brief period of time.

1597. Would that mean the employment of additional boys? Possibly in a mine where a large number of men were employed there might be an increase of two or three boys. In one colliery I know there was no increase in the boys at all. The employers shortened the hours of drawing coal in order to meet this inconvenience that was brought upon them, and the shortening of the hours proved for itself that the output of the mines was none the less, proving that the shortening of the hours was a benefit to those who received the shorter hours, and was of no detriment to the employers themselves.

1598. You are aware that with all these changes mechanical appliances have changed as well? Yes; wonderful progress has been made in that line, and is made every day.

1599. As far as you have thought upon the question, and as far as you express the views of others, do you think any opposition to the change arises more from the idea of innovation than anything else? I really think that is the groundwork.

1600. Simply because it is a change? Maybe. There are one or two mines that have machinery that should have been thrown away thirty-five years ago, and in this case they might think it was because of their modes of getting their coal out.

1601. *Mr. Gregson.*] Do your trains of skips come out of the mine all hours of the day? Yes.

1602. What number of skips do you draw? Some of the mines draw twenty skips upon a train, whilst others draw sixty. Mount Keira, for instance, draws sixty skips on a train, and Mount Kembla draws about thirty, or between thirty and forty, and South Bulli run from twenty to thirty. The mines vary very much in that respect.

1603. *Mr. Curley.*] How many screens have they at these different collieries? Some of them have four, some five, but the most of the collieries have four screens.

1604. How many men work at a screen? One man generally does the whole shift.

1605. Does one man attend to all the screens? Yes, with the exception of the weigh-screen, where there are two men.

1606. *Mr. Gregson.*] Is there any band or dirt in the coal? No; it is simply a question of rushing it into the waggons.

1607. *Mr. Curley.*] If you have your waggons under the screens, and you are running skips from the bank top, one man could not get that coal out of the screens? I do not think he could, but none of the collieries in our district use more than one screen, with the exception of the weigh screen. When they require unscreened coal they may use two screens at the one time. I have been brought out of the pit at Mount Keira to do work outside as weighman—sometimes one thing, sometimes another. I have once or twice had the job of screen-man, and I have put 700 tons of coal over one screen in one day, so you will see that there was not much cleaning.

1608. Was that coal all screened? Yes; it all went over the screen.

1609. Was there a waggon underneath the screen to take the slack? Yes.

1610. With regard to the question of putting coal into waggons;—there is no serious expense there with the limited number of hands? Oh, no; there is no expense at all.

1611. Are there many deputies in a mine? That varies. I cannot give you the exact number at Helensburgh, but certainly Helensburgh has the largest staff of deputies. I suppose there are half a dozen deputies there.

1612. How many deputies are there in the other mines? None of the other mines will exceed three, and some of them not more than two. The most of the mines have two.

1613. You think that section 36, on page 17, dealing with the hours of employment, should be retained in the Bill? I certainly do.

1614. *President.*] When these men work such long hours as in the cases you have put, are they paid anything for overtime;—how are they paid? They are paid by the ton.

1615. They are not paid at so much a day? Only daymen are paid by the day, such as men who are assisting to get the coal away. Screen-men and others are paid by the day, and some of those men may get all their time.

1616. Will you now look at section [41] 38, sub-sections [1] 4, on page 18 of the Bill: "Payment of persons employed in mines by weight" (*see Appendix A*). Please read that section, and tell us what is the system adopted with regard to the weighing in your district;—how is the weighing carried out? In the Illawarra district it is about the most irregular system that can be conceived of by any man. Sometimes they take it into their heads to weigh one skip one day at some of the collieries, and may be they will

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will miss the next two days entirely, weighing no coal at all. The next day they will weigh five or six skips.

1617. Do you mean to say one skip for the whole colliery? Yes, at the colliery I referred to in connection with the hours—Corrimal.

1618. Is there a check-weighman there? Yes; there is a check-weighman at all of the collieries. At that particular colliery I speak of they have weighed during one fortnight eight skips per thousand. During another fortnight they have weighed twelve skips per thousand, and during another fortnight they have weighed twenty skips per thousand. At another colliery we have had as low as three skips per thousand.

1619. What colliery do you refer to? South Clifton. There we have so low an average as three skips per thousand. At other collieries we have at the rate of fifty skips per thousand, but I do not think that we really come over that at any of our collieries. It is a most unsatisfactory system of weighing (*see Appendix S*).

1620. How many skips would that amount to in a day—the days the men were working? Some days the highest number of skips that are weighed at any of the collieries in one day will run to about forty-five; occasionally it may be fifty skips. Other days they will work the whole day and possibly draw out 500 or 600 tons of coal, and weigh three skips, or, in other words, 30 cwt. or 2 tons of the 600 tons will be weighed.

1621. Have you such a thing as standard weight at any of the collieries in your district? We have standard weight at South Bulli.

1622. Have you standard weight at any of the other collieries? Yes, at Clifton. Clifton and South Bulli are two collieries where the standard weight is. At the Mount Pleasant Colliery there is also a standard weight of 20 feet.

1623. Do you know if the men have lost much weight by the standard weight being established? Yes; they have lost a good deal of weight. We cannot ascertain the exact amount lost, for the simple fact that the weighing-machine stands at the standard weight.

1624. The weighing-machine does not record anything more than the standard weight? No.

1625. What is the standard weight at the collieries you have mentioned? In South Bulli, for bords and headings, it is 15 cwt. It used to be 14 cwt. for pillars, and 15 cwt. for bords and headings, but now it is the same all round. At Clifton the standard weight is only 13½ cwt.

1626. Are the skips at those collieries about the same size? Yes.

1627. Is the quality of the coal much the same? Oh, yes; there is no difference in that respect.

1628. *Mr. Gregson.*] Do you say that at Clifton the weighbridge will not record over 13½ cwt.? At Clifton the weighbridge just stands at the standard weight. It will not go above 13½ cwt. It will not record a ton, simply because the bridge is placed at 13½ cwt. The bridge stands there in order that the check-weighman may not see the extra coal that may be on the skip.

1629. What do you mean by that—the bridge stands at this weight? Nothing more than that the bridge, as in the case of South Bulli, is placed there so that when the coal goes into the box and the beam goes up at the 15 cwt., she goes away. Provided that there is 13 cwt., the Company's weighman draws it along from the 15 cwt. to the 13 cwt., or to whatever other weight it is below the 15 cwt. which he wishes to ascertain. After he has done that he will place his balance back on the 15 cwt., and if the next skip takes the beam right up he tilts it up at once into the waggon. The weighman for the men has, therefore, no opportunity of finding out whether that skip has 17, 18, 19, or 20 cwt.

1630. *Mr. Curley.*] Is not that a great injustice to the men? I think the whole system of standard weight is an abominable disgrace.

1631. Have you in your district anything like the standard-bar regulation to prevent overloading? No; we have no such thing as standard bar.

1632. *Mr. Gregson.*] Can you fill up to any height? Oh, yes.

1633. Without any objection? We have skips coming out of Mount Pleasant running from 15 cwt. to 24 cwt.

1634. There is no limit as to height? The men are instructed not to fill up their coal so as to destroy the property.

1635. Is there any kick-up or tumbling tommy? Yes; the skip goes into the tumble tom, and Tom, if the coal is sufficiently high, would knock it off.

1636. Does the miner get the benefit of that coal? I think the miner would lose it.

1637. Do you look upon that as unfair? I do not look upon that as being wrong. The man knows the height, and as long as that is not tampered with I do not think that is a great detriment at all, but with the standard weight it is quite different altogether.

1638. *Mr. Curley.*] Will you look at the words in subsection 1 of this section "large coal or shale" (*see Appendix A*). Are there any collieries in your district where the miners fill large and small coal away together? We are not paid very much for filling anything. There is one colliery where we do fill everything away, and receive pay for it.

1639. What colliery is that? Austinmer.

1640. Would the drafting of that clause interfere with that method of working? We want this very particularly to remain as a clause with the elimination of those words "large coal or shale." I think we have the most sufficient grounds for our contention too. One fact is undeniable. We have an annual output in round numbers of 1,000,000 tons in our district, taking round and small coal together. A little over one-third of that 1,000,000 tons is what we term slack, or small coal. The miner has the getting of that small coal, and the filling of it, and it goes into the market making one-third of his 1,000,000 tons, but he receives no consideration for it.

1641. *Mr. Gregson.*] Assuming the proportion to be two-thirds large coal, and one-third small, what are you getting for your coal? 1s. 10d. in pillars, and 2s. in bords.

1642. *Mr. Curley.*] That is in a pure, clean seam? Yes.

1643. You are paid for round coal? Well, I suppose yes.

1644. *Mr. Gregson.*] You think this clause in the Bill is unfair? This alteration in the clause will certainly interfere with collieries that are filling all away together.

1645. Could that not be met by putting in words to meet the case;—the wording will not apply to the colliery that is filling round and small together, and you have only one colliery? Yes, Austinmer is the only one at the present time, but nearly all the collieries send away unscreened coal.

1646.

1646. *Mr. Curley.*] The proprietors can send away unscreened coal without interfering with the men's wages;—they are just paid as at present? Yes.

1647. Is it the wish of the men with regard to this weighing business that every skip should be weighed, or are they satisfied with a fair average;—say there is a fairly liberal number of skips weighed, what number would meet the case? I will tell really what the opinion of myself and the southern miners is. We know for a fact that we are being unjustly dealt with. I cannot put it in any milder language than that, and we want a law that will give us what we really produce, and render it nearly impossible to rob us. That is just the plainest way of putting it.

1648. How do you propose to do that? By making a provision for weighing every skip that comes out of the pit.

1649. *President.*] Could that possibly be done, and still let the colliery proprietor carry on? Oh, yes, Mr. President.

1650. *Mr. Gregson.*] Would it cost anything more? It might cost the erection of a new weighing machine in some cases, and that would not be very much. I am even prepared, from my own knowledge of things, to advocate a certain amount of expense being incurred in order that men may have their just due. I think it is fair when men come to think that 130 or 140 of them are producing 103 to 200 tons of coal a fortnight for which they get no pay.

1651. You would not favour any arrangement for averaging the skips? I think that every skip ought to be weighed; that the matter ought to be definitely fixed.

1652. *Mr. Curley.*] With regard to the choice of skips, does not the check-weighman have any choice about skips? None whatever. He just stands by to see that they do certain things fair, after they have done everything else unfair, but so far as anything else is concerned, he is simply a figure-head.

1653. *Mr. Gregson.*] Supposing there is this defect in the weight of the men, why could they not get over it by filling to the skip level, and contenting themselves with that? There is no law to prevent them from doing this; but suppose they did it, and the manager saw that those skips were being badly filled, and he went into the pit and told the men to take their tools out that filled these small skips.

1654. You think that might be done? I have good reasons for thinking it would.

1655. In the case of the two collieries where the standard weight obtains—that is, South Bulli and Clifton—is there any possibility of insuring that they shall be within the limit of what the scale shall weigh? There is no possibility there. It is a matter of mere judgment. There is no record to show when they are over their weight.

1656. Could the check-weighman not give them any idea about that? I do not know whether he could do that or not when the balance of the machine is chock up. He has no real knowledge as to whether there is 16 cwt. or 17 cwt. in that skip.

1657. Supposing he saw a skip that just went the limit, or a little under the limit, he would take notice how that skip was filled, and say, "Now always fill up to that height, and we will see what comes of it?" He could do that, but it is quite possible for a man, owing to the variation in the nature of the coal, to fill a skip a foot higher than the skip tipped to-day, that would go 16 cwt. to-morrow. A skip filled of similar size might go 1 cwt. or 1½ cwt. less owing to the density of the coal.

1658. Within a certain margin a man could have an idea of when he was likely to exceed the standard or otherwise? Well, he could approximate matters.

1659. *Mr. Curley.*] As a rule, does not he fill for weight? He wants to get as near as he possibly can to the standard.

1660. Do you think that the men are utterly opposed to any system of average? Decidedly; they are absolutely opposed to it.

1661. *Mr. Gregson.*] You think the men feel that way? I know it for a fact. It is quite a matter of unanimity with the miners on that point.

1662. *Mr. Curley.*] Does the coal vary very much in the workings of your district? Yes; the coal varies—it is harder in some parts, and softer in others.

1663. Is that the reason why you wish every skip to be weighed? That is certainly one of the strong reasons, inasmuch as we have had quite a multitude of men in our district who have been standing at possibly a low weight for as long as from three to four months at a stretch, never having one skip placed on the weighing-machine to their credit.

1664. Was work suspended during that time? No; work was going on—that is to say, the ordinary course of mining work. The same thing is obtaining in fact at this present moment. While we are discussing the matter, we could go and take out of a check-weighman's book records of a similar character.

1665. Can these check-weighman's books be obtained? Yes; but I am afraid you will want a check-weighman along with them.

1666. *President.*] Cannot a man insist on having his coal weighed;—cannot he say, "I want so many skips weighed to-day"? He can ask it, but he cannot get it done. He would be told that if he was not satisfied he knows what he can do—take his tools down the hill.

1667. *Mr. Gregson.*] Have you ever known such a case;—have you ever known such a request to be made? I have known the request to be made, not once but scores of times, that a man should be weighed, and they have been refused. I am not going to say that they have received their quietus, but there is a reign of terror with the men in those positions that makes men almost afraid to look over their shoulders. I have myself interviewed the manager on the men's behalf to show the reasonableness of weighing forty or fifty skips, and I have been quietly told that it was inconvenient for them to do so. I have pointed out that there were only certain skips weighed, and asked the manager to see to it. They say, "Oh, yes!" but it is never done, although you go from time to time.

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MONDAY, 16 SEPTEMBER, 1895.

[The Commission met in the Board Room, Chief Secretary's Office, at 2:30 p.m.]

Present:—

FRANCIS EDWARD ROGERS, ESQ., Q.C. (PRESIDENT).

JAMES CURLLEY, Esq.

JESSE GREGSON, Esq.

Mr. George Henderson, Secretary for Illawarra Minors, re-examined:—

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1668. *Mr. Curley.*] Have you any further evidence to tender on section [41] 38 of the Bill—"Payment of persons employed in mines by weight"? I would like to give the matter a little more definite shape with regard to the number of skips that are weighed than I have done. I have taken the precaution to furnish myself with exact details upon this matter since I was last examined. The figures I would like to put before the Commission have been taken from check-weighmen's books during the interim. In the Helensburgh, or Metropolitan Colliery, as the colliery is commonly known, there are something like 232 men getting coal daily. During the period extending from the 8th July to the 31st August—about seven weeks—there were 31,549 skips of coal raised from this pit. Of this aggregate number of skips, there were only 477 weighed. There are 230 or more men getting coal in that mine, and out of a total of 31,549 skips only 477 were weighed, leaving 31,072 skips of coal that were not weighed. In the case of the Coal Cliff Colliery, or Old Clifton, there are several men who have been weighed at periods varying from one month to three months, and whilst there has only been from twenty-seven down to as low as twenty-four men getting coal, there are actually four men who have never been weighed within the three months at all. In the case of the South Clifton Colliery there are seventy miners getting coal there, and during the last three months the average number of skips weighed, per thousand skips raised, has been something like four skips per 1,000, or, in other words, there have been twelve men during the three months who have never been weighed at all, thirty-two men who have never been weighed for over two months, and fifty-eight men who have never been weighed for over one month. The result is that only fifty-three skips have been weighed during the three months for the whole quantity of coal that has been raised from the pit. There are seventy men, and they have been averaging thirty-six skips per week during that time (*see Appendix B*).

1669. *Mr. Gregson.*] How many skips do they get out in a day at that colliery? The skips there run about 12 cwt. each, and the men calculate doing about 4 tons daily, so that it would be about eight skips per man.

1670. That is at the South Clifton Colliery? Yes. I want to say in regard to this matter, that there are occasions when actually there has never been a skip weighed for a whole week.

1671. What colliery are you speaking of? I am referring to the South Clifton Colliery, and there are other collieries that I will mention by-and-by.

1672. Is the weighman at that colliery standing by, ready? Yes; he is there upon the weigh-screen, waiting from early morning till the pit knocks off. He is there ready to weigh, but for a whole week—I would not exaggerate if I say that for two consecutive weeks there were no skips weighed there. It arises from this, that at nearly the whole of the southern collieries, although they have a weighman, his duties are not exclusively confined to those of weighing coal. The miners' coal seems to be the last consideration, because the weighman is called here and called there, with the result that there are for a week, or possibly longer, no skips weighed at all.

1673. *Mr. Curley.*] Are there any other collieries in your district where such things as you have described take place? Yes; Mount Pleasant Colliery also goes for a week without weighing, and just the same thing obtains at all of the collieries.

1674. *Mr. Gregson.*] At Mount Keira or Mount Kembla, are there any complaints of this kind? At every other colliery in our district, with the exception of Mount Keira, there are complaints of the same description. There may be complaints at Mount Keira, but I cannot speak of them, because I am not aware of them. So far as the collieries I have mentioned are concerned, deputation after deputation has interviewed the whole of the colliery managers, and brought under their notice the necessity for weighing the coal the men were getting in the pit. These deputations have always received a promise that the matter would be looked into, but it was never carried out.

1675. *Mr. Curley.*] With regard to the appointment of a check-weigher, will you look at section [43] 40, subsection (i), on page 19 of the Bill (*see Appendix A*);—please read the clause as it was originally drafted, and then as amended by the Legislative Council? Yes.

1676. Do you think that the miners should have liberty to select a check-weigher from whom they please? I certainly do. I think that the miners should have the right to appoint any man they choose, that, having to pay him after he is appointed, they have a perfect right to select their own servant.

1677. *President.*] What is the reason for their wanting to have a man outside of those connected with the mine;—are there not plenty of men in the mine who would be fit for that particular position? There are plenty of men in the mine, as far as numbers are concerned. There are quite a number of men that are capable, and, if not interfered with, men could be got from the employees of any particular mine.

1678. Is the reason then for wanting a man from outside of the employees for fear of his being interfered with? That is not the only reason. The main reason is that the men have a man they wish to employ, and, having a servant to employ, they simply think it rather absurd that the employer should say, "Here are a number of men, and only out of this number of men will we allow you to employ that servant."

1679. Supposing there is absolute freedom of choice given to the men to choose from out of their number one of the men working in the mine, would not that meet everything? Yes, I think so.

1680. In England, since the passing of the Act of 1887, they have passed an Act making regulations for the appointment of a check-weigher;—have you seen that Act? I have only seen references to that provision.

1681. I will read you the Act I refer to (*see Appendix B*);—would that provision in the English Act meet all you want? I do not think so. I do not think that would remove the provision that is made in this Bill.

1682. The provision there is that you can appoint a check-weighman outside of the men altogether;—cannot you get lots of men in a mine if you have absolute freedom of choice? We could, but there is

no

no absolute freedom of choice. Say there are forty-five men in a mine, and that you are left the choice of choosing from those forty-five men, may be the very man who is chosen may be sent adrift before you do choose him, and that has practically been tried on.

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1683. The miners may choose some very objectionable person if they go outside the mine altogether;—surely they could get from the number of persons in a mine a man whom they can rely upon as a check-weighman? Possibly they might do so, but they might see a man outside the mine, who, to their minds, is a far better man for the position, but as he is not an employee of the colliery, they are prevented from selecting him.

1684. They might select some undesirable man, in a case where they did not care for their manager;—they might seek some one who would be objectionable to the manager? But, when we clearly understand the position of a check-weighman, it does not matter who he is, so far as the employers are concerned. He can only be objectionable by appearance, because he has duties to perform which he cannot go outside of, and in performing those duties he cannot interfere with the management of the men, or with any regulations whatever about the mine, and, consequently, only the appearance of any man could be objectionable; certainly nothing he could do.

1685. You want the words in the section we are considering, "who shall be an employee of the colliery" struck out? Yes; we want the section to read as it was originally drafted.

1686. Do you know of any objection in England to a man being an employee of the colliery? No; I do not know of any case in the old country, but I know that there are cases out here that have certainly inspired this provision being made in the Bill—that have set forth its necessity.

1687. What cases do you refer to—can you instance what you mean to convey? Only a very short time ago we had the case of a check-weighman who was acting at a colliery, and I suppose he became what is commonly termed an objectionable man to the management. The same man, known as he is amongst the people of the southern district, is one of the most respected men in that district, but either on account of his words, or his deeds, he became objectionable to the manager of the colliery. The check-weighman objected to the overman going into the pit, and then coming back and acting as weighman, because it was supposed that his reasons for going into the pit were to pass the heavy skips, and get a number of the lighter skips weighed. As soon as this check-weighman objected to this course, the overman said to the men, that they would have to stop paying to that man, otherwise their names would be "Walker." He gave them to understand that the best thing they could do would be to stop paying to that man, and that by-and-bye they would see what could be done. The course taken by that overman was successful, as under a reign of terror the men were actually afraid to let this overman know they were paying this check-weighman wages. The overman had in view another man, and told the men that they could put him on, thinking by this means to get the weighing in their own hands, and they made that one of the things at that colliery.

1688. Would not this Check-weigher's Act in England (*see Appendix E*) meet a case like that? It might; but I hardly think it would.

1689. *Mr. Curley.*] You notice that in this same section the Legislative Council has also inserted again the words "large coal or shale"? Yes.

1690. Would not that section have to be re-modelled according to the circumstances of the different collieries where they are filling large and small coal away together. In a case like that, would you not have to weigh the whole of the mineral? Certainly.

1691. *President.*] When they weigh coal at the different collieries, is the skip put on to the weighbridge? In some cases, yes. In the generality of cases it is turned over the tumbling-tom into a screen, with a mesh of three-quarters of an inch between the bars. The coal goes down that screen for a certain distance into an iron box, or pan, at the bottom of the screen, and this box, or pan, is really the weighing machine. The register for the weight stands by the side of the pan, and after the small coal has been taken out, the coal goes into that box or pan, and is weighed. What we want is that all mineral shall be weighed, both round and small coal. We consider the present system is very unfair. For instance, nearly all our collieries have a different elevation for the weigh-screen to the screen they sell from. The coal goes flying down the screen that they sell from, but the screen that they buy from, or weigh the miners' coal from, is generally a very flat screen, and at one of our collieries it is almost impossible to get it into the pan or box, unless the weighman gets up on to the screen to shove it in, and by this means destroying a quantity of the miners' coal, through it passing through the screen as small coal.

1692. The coal is tipped first of all on to a screen, and that gets rid of the slack? Yes.

1693. Then the best of the coal goes into this pan, or box, and is weighed? Yes.

1694. Then suppose a lot of the coal is knocked into small coal is not all that put into the pan? No; it passes through the screen.

1695. *Mr. Curley.*] You will notice that there are several clauses in this section where large coal or shale is again mentioned? Yes.

1696. What you have said with regard to those words in what I have drawn your attention to will apply to them in the connections they appear in in other parts of the section? Quite so.

1697. *President.*] Would it be possible, or practicable, in the conduct of a mine, to weigh every skip of coal? Oh, yes; quite practicable. I have worked at a colliery that has weighed every skip of coal, and that colliery actually draws as much coal out of the pit as any four of our collieries do.

1698. Under the conditions we have in this Colony, would it be practicable to weigh every skip of coal. It is my wish to deal with all fairness to the men? With the apparatus that some of the collieries have, it would certainly not be practicable to weigh every skip, but we hope to see this very soon abolished.

1699. If you close a mine you must not forget that there will be so much less employment for labour? The expense would not be very much. A man, only a short time ago, offered, through the daily press, to erect a machine at the whole of these collieries at the cost of a very few pounds. I am not certain what the cost was, but it was so small that, in my opinion, it need not have caused five minutes thought, for the mere sake of doing justice.

1700. Would not a great many alterations have to be made? Certainly there would have to be some alterations, because, as I have pointed out, they have appliances that are not of modern invention. Very many of them have been out of date for forty or fifty years.

1701. The colliery owners now pay higher wages because they only pay for round coal; if, therefore, they weighed all the coal that is got, would not the wages come down? We do not admit of that at all.

- Mr. G. Henderson.
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1702. Would they not of necessity come down;—if the colliery owners paid the miners for both round and small coal, would not the wages come down? No; I do not think so.
1703. If the mine owners tell the truth and say they can only afford to pay a certain amount of wages now, must they not of necessity have to pay less wages if they pay for both round and small coal? Yes; but we believe that they can afford to pay higher wages than they do pay at the present time. We think that the men do not receive nearly sufficient remuneration for the work done, and we think that labour ought always to have consideration.
1704. *Mr. Gregson.*] How long has the state of things you have been referring to with regard to the weighing obtained in the south? Ever since I came into the Southern District—ten years ago.
1705. When you were giving your evidence before the Select Committee, why did you not lay stress on these things? Because I had not the opportunity.
1706. Your questions and answers before that Select Committee are comprised in a very few paragraphs? Yes; simply because I had certain questions put to me, and I was put off with those questions. My evidence before that Select Committee did not occupy more than thirty-five minutes.
1707. Is it not probable that if you had mentioned to the gentlemen who sat upon that Committee that you had something to say further, they would have listened to you? I think I said two or three things of a similar character to what I have stated before this Commission.
1708. If so, they have not been reported? We did not get on very well. I was very much dissatisfied with the way things were conducted.
1709. You did not get the same opportunity before that Select Committee as you have had here? Certainly I did not. There were some seven or eight gentlemen, and I know perfectly well that the questions that were put to me were shot from one part of the table to the other. The whole course of the examination lasted only about thirty-five minutes, and I was given my quietus, and I was passed out, and was no more called. Still I can assure you that the grievances I speak of existed then, and are becoming more intensified every day.
1710. *Mr. Curley.*] Will you now turn to section [46] 43, on page 21 of the Bill, "Single shafts" (*see Appendix A*); the whole point in that section is the distance between the shafts;—what, in your opinion, is a reasonable distance between shafts? My opinion is that there should not be less than 50 or 60 yards between the shafts.
1711. *Mr. Gregson.*] Are you not only working tunnels in the south? Yes.
1712. Have you any experience of shafts? Yes, in the old country.
1713. *Mr. Curley.*] Do you know the distance between the shafts in the old country? Yes; they are from 120 to 200 yards.
1714. Have you anything further to say about this section? I do not think that it is really necessary to say more, because I do not profess to be a geologist.
1715. *President.*] In England, the most competent people they could obtain considered this question, and yet the English Act provides only 15 yards;—do you know the general distance of the shafts in England? The distance varies; but I have not, to my knowledge, seen a pair of shafts within less than 100 yards of each other. Of course, I am not saying that there are none nearer.
1716. The Bill says that they must not be nearer than 15 yards? I think, the idea of having two shafts, apart from the matter of ventilation, is for an escape in the case of something occurring that may block one road up, and there are many things that might occur, more particularly in the case of an upheaval. One would think that in the case of two shafts within 15 yards of each other, an upheaval affecting one would almost certainly affect the other.
1717. Surely, the people working a mine would know the kind of ground they are working into; would not they know what the probability was, and if necessary have these shafts further apart;—would not they judge of any probability such as you have mentioned, in the shape of an upheaval, or something like that? No doubt they would have a knowledge of what they go through, but they might be deceived in that respect.
1718. I cannot understand why in England, where they have so much experience in these matters, they put the distance down at 15 yards, and yet you think this is not sufficient; you say 50 or 60 yards, and the Legislative Assembly say 30 yards, and they have some people who understand such matters;—why is 30 yards no better than 15 yards? Well, it is a little better, but very little—that little, that there is little difference.
1719. What do you say the minimum distance ought to be? I certainly think it should not be less than 50 or 60 yards between the shafts. When reference is made to the English Act, and whilst it provides for 15 yards, we have to look at that as they work under the English Act. It seems, in England, to be the idea of all managers and mining engineers, to do all that is in the Act, and a little better if possible; but in Australia it seems to be the rule to do as little as you can, and to get out of as much as you can.
1720. Would not people, for their own sakes as well as for economy in working, have shafts as far distant as possible;—is it not to the managers and mine owners interest to have these shafts as far away as possible? I cannot see that it is to their interests to have them close. I certainly think the greater distance is more to the interest of the mine owner.
1721. If you make a minimum of 50 yards, that is a good long distance? It is not much when you are down in the bowels of the earth.
1722. What is about the smallest area that is ever worked for coal—the surface area; how much ground would a man take up as a coal lease;—what would the smallest size of ground be? They sink a pit sometimes on one allotment of ground. There is no provision that I know of to prevent them doing so.
1723. But there is a provision here, because at least there must be two shafts or outlets; if shafts are to be sunk 40 or 50 yards apart, this would shut up any little people with one allotment;—you think however that the distance should be 40 or 50 yards? Yes; I think so.
1724. *Mr. Curley.*] We will now turn to section [49] 46 on page 23 of the Bill, "Division of mine into splits" (*see Appendix A*); the Legislative Council has erased the word "splits," and substituted in its stead the word "parts";—do you think that the word "splits" should be retained in the Bill? I think somebody who does not know very much about mining must have made that alteration. All people connected with mining understand the meaning of the term "split."
1725. *President.*] The English people ought to know a lot about it, and they say "parts"? It does not make the slightest difference, as far as the English Act is concerned, because both words have the same significance.

1726. *Mr. Curley.*] Will you look at the reasons assigned by the Legislative Assembly when dealing with this section. The Assembly "disagrees to the amendment in clause 49—which omits subsection (III)—because if the provision as to splits be omitted there may be some difficulty about enforcing a separate current of air for each district;" will you also read now the third subsection of the Bill, which you will see has been erased by the Legislative Council;—do you know that splits are in operation at the present time, under the present Act, and do you believe in them still being in operation under the Bill we are considering? I do. The system of splits is the best.

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1727. *President.*] Ought it not to be left to the manager when he is dealing with his ventilation? I have no doubt that is the idea.

1728. Therefore, inasmuch as it is for the manager to look after the proper ventilation of his mine, do we not hamper him by legislating in this detailed way as in subsection (III); he is bound to ventilate his mine—to have an adequate amount of air, and how he is to do it is a matter for him to decide; the question is, whether he should be hampered by being told by the Legislature how to do it? I think it is very much better for it to be placed in the Bill.

1729. *Mr. Curley.*] Have you known this to happen, that in one part of a mine there may be a very vigorous current of ventilation, and in another part the ventilation may be very still and stagnant through the district not getting its proper quantity of air? Yes.

1730. And when the Inspector takes the return air at the return, he finds the requisite quantity for the mine, and yet one district may not get its portion of the air that is going? Yes.

1731. Are not the men the sufferers by this? They are.

1732. *President.*] Is it wise to hamper this matter by legislating for it;—the miner is bound to have the air? As a matter of fact, it is generally acknowledged that this system is the best system of ventilation. When it is acknowledged to be so, we want to see it complied with, and there is no assurance of its being complied with unless it becomes a legislative enactment, or part of a legislative enactment.

1733. If a manager is bound to give an adequate amount of air, is it not better left to him, and if splitting is best, we still will have these splits, but why limit him to all this minuteness? Because we think the provisions are essential to the welfare of the miners, and for the better sanitary conditions of the mine we want this fixed in the Act to assure us that this will be a provision in the future. This has not been so in the past, and we have never been assured of good sanitary conditions.

1734. *Mr. Curley.*] Will you please read what is said in the Annual Report of the Department of Mines for the year 1878, in connection with the Vale of Clwydd Colliery. See what is said there on page 147 about ventilation: "Ventilation still very defective, notwithstanding repeated complaints made by myself to the manager on the matter. The fire-damp having lately been removed from under the up-cast shaft, there was no artificial means used for creating ventilation, when I visited the mine in December last. The miners are not yet paid by weight for the coal they get?" Yes.

1735. You have stated your opinion in connection with this section [49] 46; from what you have heard of the provisions of the English Act, do you feel inclined to modify your opinion? I do not.

1736. Do you think that subsection (III), of section [49] 46 should remain in the Bill as originally drafted? I think that subsection (III) is really the foundation of it.

1737. We will now pass on to the second part of the Bill, section [50] 47, "General Rules" (*see Appendix A*). The first rule you will notice deals with the ventilation of mines. Several amendments have been made in this rule by the Legislative Council, and I want to know whether you believe in the rule as it was originally drafted, or as it is with the amendments suggested by the Legislative Council? I believe in the rule as originally drafted in the former part; and I may tell you that I am not opposed to the amendments made by the Legislative Council in the latter part.

1738. How far do you go with the former part of the rule? I approve of the clause as originally drafted down to the word "therein" in line 50.

1739. What have you to say to the substitution of the words "35 yards," for the words "25 yards"? With regard to the substitution of 35 for 25, I am favourable to 25 yards being retained, but I would not oppose the matter of 35 yards, provided the system of bratticing was properly adhered to.

1740. What do you mean by the system of bratticing? I mean, provided that brattice was used to convey the air to the face of the working place. I would not make any strong objection to the bord being driven 35 yards.

1741. What about the cut-through in addition to that 35 yards? It has to go the 35 yards. The cut-through, in my opinion, ought never to be more than 10 yards thick, and then the brattice ought to convey the air into the face of the cut-through, as it did into the face of the bord.

1742. Do you mean to convey that bratticing ought to be placed in every bord to conduct the air to the working face? Certainly I do. I believe in the system of bratticing in its entirety.

1743. Do you consider that there should always be a stipulated minimum quantity of air? I consider there ought to be a minimum quantity of air.

1744. Do you know that the English Act provides for an adequate quantity? I am alive to that.

1745. Do you know the arguments that have been put forward about the word "adequate"—that its meaning is sufficient, &c.? I do.

1746. In full view of this argument, do you still adhere to a minimum quantity of air being provided for the miners? Yes; I still adhere to that idea.

1747. Would you state your reasons for agreeing to the latter portion of the rule starting with the words, on line 50, "And no place shall be driven," &c.? I simply say that I see no strong objection to the substitution of the words "35 yards" for the words "25 yards," provided that brattice conveyed the air to the face of the working place, and also conveyed the air to the face of the cut-through, but I certainly think that when a bord has been driven 35 yards that the cut-through ought not to be more than 10 yards thick.

1748. *President.*] What size are these cut-throughs generally? It depends upon the system adopted; they vary in different systems.

1749. *Mr. Curley.*] Do you see any reason why the latter part of that Rule I should be objected to; you will see that two or three lines have been erased by the Legislative Council; the wording of the clause originally read, "or where gas is known to be generated, it shall be bratticed up to within 3 yards of the face of such working place, and no return air-ways shall be used as travelling roads"? I cannot for the life of me see any reason for an objection to that provision.

- Mr. G. Henderson.
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1750. Does not the present Act we are working under provide that where gas is generated brattice shall be used? Yes; I think that will be found in subsection (iv), on page 4 of the Act of 1876. [*See Appendix B.*]
1751. Seeing that this is the case, can you understand why these words were objected to? No; I certainly cannot.
1752. Is not the erasure of these words inconsistent with the conclusion arrived at by the Royal Commission that investigated the Bulli explosion? Certainly it is.
1753. Was not the manager of that colliery censured for not providing brattice? Yes; it was believed that a few yards of brattice would have saved the terrible loss of life that took place there.
1754. Would you in any way recommend the alteration of the words in the latter part of the rule as originally drafted? I can only recommend the stroke being withdrawn from the words again. I think they are an absolute necessity.
1755. You consider that the words should stand in the rule as originally drafted? I do.
1756. We come now to rule 4 on the same page, subsection (i). (*See Appendix A.*) You will notice that the words erased refer to a miner having not less than two years' experience in a coal mine;—do you consider that a necessary provision in the Bill? Yes, I certainly do. I look upon that as a very very important matter indeed.
1757. Do you think it is necessary for every working place to be examined in the morning? Yes, before a man is allowed to go to it.
1758. Do you think that a man who has the important duty entrusted to him to examine collieries in the morning should have some tangible experience in a mine? Certainly I do, and I think that two years is sufficiently limited, because we all know that a man must have experience, and a good long experience to carry out this work efficiently. He has in many cases, first of all, to search for fire-damp, and then to ascertain that the mine is safe concerning other matters—that it is safe in every respect for men to go to work.
1759. With regard to subsection (ii) of the same rule (*see Appendix A*);—do you think that report is necessary whether danger exists or not? I certainly think that there ought to be something in the Bill with regard to these reports. When writing out my report of my morning's examination, I used to place in the margin "I also examined, so and so, during such and such a time, before leaving the pit."
1760. At what colliery was this done? In Mount Keira.
1761. Was that when you acted as deputy there? Yes.
1762. Would that be a very onerous task to perform? Oh, no.
1763. How many minutes would it take you to go through it? About ten minutes.
1764. You wish a report to be made whether danger is found to exist or not? Yes.
1765. Do you think that the words erased should be retained in this subsection of the rule? Yes, certainly the words should be retained.
1766. Now we come to the rule dealing with the withdrawal of workmen in case of danger; that is rule 7 on page 25 of the Bill (*see Appendix A*);—do you consider that the words, "by such person" should stand in the rule? I am not particular about that matter. It does not look to be a matter of very great importance. I think the first person is implied whether it is left out or not. It ought to rest on the person who found out it was dangerous.
1767. Will you now look at rule 10, subsection (iv) (*see Appendix A*);—did you work under the Act of 1897 in England? No, I did not.
1768. How do you understand that subsection? I am under the impression that the meaning of it is that there is some sort of a chamber round about the cap. The idea is, I think, in connection with firing with a cap and fuse.
1769. We come now to subsection (v) of rule 12:—"Nor shall coal or coal-dust be used for tamping" (*see Appendix A*); the Legislative Assembly suggests dry coal-dust—"nor shall dry coal or coal-dust be used for tamping";—do you think that it will meet the case if the word "dry" is inserted? I think it would. We know it would be a very awkward thing for the miner to have to seek for anything else to tamp with.
1770. Will you please read this short extract from Fairley's book, "Ventilation made easy"? "A Royal Commission has been appointed to inquire into this question of coal-dust and colliery explosions, and the members have already taken evidence from several practical and scientific men on the subject, some of whom have expressed their doubts as to the explosibility of coal-dust, without the presence of, at any rate, a small proportion of inflammable gas. The writer cannot call to mind any colliery explosion having taken place from coal-dust during his forty years' experience in coal-mining operations in different districts."
1771. Do you agree with what is said there? Yes.
1772. Now, with regard to subsection (e) of rule 12 (*see Appendix A*);—do you notice the latter portion of that clause has been erased? I do.
1773. Do you know that it is a dangerous business to go back to a shot after it has missed fire? I do not understand why the Legislative Council should be careful in regard to the clause about tamping, and then expunge the latter portion of this clause.
1774. What do you think is a reasonable time to allow for coming back to a shot that has missed fire? I think that a place should always stand for a night, if possible, before a man goes back to a shot that has missed fire. If not for that length of time, I am certain that no man should go back to a shot inside of eight hours. I think we have had a shot go off in our district after it had been standing fully eight hours.
1775. *President.*] Don't you think that eight hours is too long;—would not you know what was likely to take place in less time than that? If they were shooting with fuse they certainly would not. If they were firing with straws, as they do in the old country, they would very soon know. There is a great deal of difference in fuse; some fuse is found to be much more trustworthy than other fuse.
1776. Do you think that an amendment to the effect "where fuse has been used" would meet the case? So far as I am concerned it would.
1777. What are the different ways of firing a shot? By squib or straw, and fuse; and of course there are electric batteries.
1778. Would the words "where a fuse is used" meet the case? Yes; I think so.

TUESDAY, 17 SEPTEMBER, 1895.

[The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.]

Present:—

FRANCIS EDWARD ROGERS, ESQ., Q.C. (PRESIDENT).

JAMES CURLEY, Esq. | JESSE GREGSON, Esq.

Mr. George Henderson, Secretary for Illawarra miners, re-examined:—

Mr. Gregson.] I would suggest that the evidence taken before the Select Committee of the Legislative Council appointed on the 5th October, 1893, be put in as evidence, and be added to the Appendix to the Report of this Commission.—*Agreed to.*

Mr. G.
Henderson.
17 Sept., 1895.

1779. *Mr. Curley.*] I think when you were last examined we were considering sub-clause (x) of rule 12, on page 26 of the Bill (*see Appendix A*)? Yes.

1780. I think you were of opinion that that clause should stand as it was originally drafted; that in no case, where fuse is used, should a person go to a charge that has missed fire within a period of eight hours? Yes.

1781. *President.*] You were of opinion that where a squib or straw is used the miners could use their own judgment? They would know in the course of two or three seconds in such a case whether a shot was likely to go off or not. There could be no danger, because when the squib is lighted they would know within a few seconds whether the shot was likely to go off.

1782. In other cases you think that eight hours is not too long before a person should return to a place where a shot has missed fire? No, I think not. I think that there is a possibility, if the fuse is cramped in the hole, or if it was to get coiled, of it being dangerous. Being of cotton texture, the cotton may smoulder for a time, and some considerable time may elapse before it reaches the shot.

1783. How long would this fuse be? If you had a 5-foot hole the fuse would be 5 feet or 5 ft. 6 in. long. I do not think many holes would be bored more than 5 feet.

1784. *Mr. Curley.*] Will you look at rule 15, on page 28 of the Bill (*see Appendix A*), "Man-holes for travelling roads";—do you think that is a necessary provision? I certainly think that refugo holes are a necessity.

1785. Do you think that man-holes, 6 feet high, 3 feet wide, and 4 feet deep, are too large? I certainly do not. I would advocate 6-foot holes, because in most of the places they are compelled to make their roads 6 feet high.

1786. The Legislative Council say that these holes should be of sufficient height, and at least 3 feet in width;—would not the height vary according to the seam? I think the amendment made by the Council is the most workable provision.

1787. That is, that these man-holes should be of sufficient length? Yes; the engine plane might be 5 feet or 5 ft. 6 in. high, and to have to cut through the bottom to get the height, might make it dangerous for the men.

1788. We now come to rule 19, "Trolley over pit-mouth" (*see Appendix A*);—do you think that that rule should stand as originally drafted? I agree with that rule as originally drafted.

1789. We now come to rule 25 on page 29 of the Bill, with regard to the working of coal under roads (*see Appendix A*);—do you consider that is a necessary provision? Yes, I think it is; I cannot conceive of any reason why it is struck out.

1790. We come now to rule 34 on page 30 of the Bill, "Examination of boilers" (*see Appendix A*);—do you approve of that rule? I certainly think it would be better to have something in the Bill with regard to the inspection of boilers; I think that these examinations should be made.

1791. We now come to rule [39] 37, "Books and copies thereof" (*see Appendix A*);—do you think that any person employed in a mine, or anyone having the written authority of any inspector or person so employed, should have the right of examination of these books? Certainly I do.

1792. With regard to rule [40] 38, "Periodical inspection on behalf of workmen" (*see Appendix A*), you will see that an alteration has been made in this rule by the Council;—do you approve of the clause as originally drafted, or the clause with the substitution of the words, "not being mining engineers who are practical working miners," placed by the Council? I do not quite comprehend the drift of those words. I agree with the clause without the insertion of those words; but I might believe in those words provided I comprehended their drift. It says, "persons not being mining engineers, who are practical working miners." In the event of a man being a practical mining engineer, and being a miner at the time,—would this provision exclude him from becoming one of the representatives of the men in this inspection?

1793. It appears to be so? Well, I certainly think it is wrong.

1794. Now, with regard to rule 41, "Persons not to be employed in coal-getting without experience" (*see Appendix A*), and also the rules 42-51, dealing with the working of coal under tidal waters, and the size of pillars, and so on;—do you approve of these rules being embodied in a Coal-mines Bill? I do. I think they are necessary provisions in the Bill.

1795. Have you read the Bill through very carefully? I have read the Bill several times very carefully.

1796. Do you believe in the latter portion of the Bill, taking the whole of the clauses as they were originally drafted, or as they have been amended by the Council? I believe in the Bill in its original form.

1797. With regard to special rules, do you think that there should be some kind of uniformity with regard to special rules, that they should be put, as far as it is possible, in some uniform way at the different collieries? I certainly think they ought to adopt a uniform principle as near as it is possible for them to do so.

1798. Will you look at the Annual Report of the Department of Mines for the year 1894, and take the number of fatal accidents that have happened in this Colony from the year 1875 down to the year 1884 (inclusive); that is for ten years—will you add up the number of fatal accidents for those ten years and say what the number is? Eighty-three fatal accidents.

1799. Will you now take the figures from the year 1885 down to the year 1891, including both these years; that is, for another ten years, and give us the number of fatal accidents during those ten years? Two hundred and fifty-two fatal accidents.

1800.

- Mr. G. Henderson,
17 Sept., 1895.
1800. That is, there are eighty-three fatal accidents for the first ten years, starting from the year 1875 down to the year 1884, and for the next ten years, that is, from 1885 down to 1894, there is a record of 252 fatal accidents? Yes.
1801. Do you think that those figures reveal a rather unsatisfactory state of affairs? I certainly think they reveal an important increase of fatal accidents.
1802. *President.*] When you were speaking of the working hours, and the weighing question, did you say that the managers of the different collieries in your district know of the irregularities you have pointed out? Complaints innumerable have been made to the managers with regard to the weighing question.
1803. And they have not been attended to? No; we have always had a promise that things would be made better, but they seem to be growing worse.
1804. Do you say that they are growing worse? I think that is the indication from the statements I gave yesterday.
1805. *Mr. Curley.*] Those statements are certified to by the check-weighers? Yes (*see Appendix E*).
- [Witness withdrew.]

James Thomson, Esq., M.L.A., sworn and examined:—

- J. Thomson, Esq., M.L.A.,
17 Sept., 1895.
1806. *Mr. Curley.*] What are you, Mr. Thomson? I am a Member of the Legislative Assembly for Newcastle West.
1807. Have you followed the occupation of a coal-miner? I have.
1808. For how long have you followed that occupation? For about twenty-eight years.
1809. Have you been connected with any of the coal-mines in Great Britain? Yes.
1810. What mines have you been connected with in Great Britain? The earliest mining I did in Great Britain was in mines in Fifeshire. I have also been working in Lanarkshire, but I forget the particular designation of the companies.
1811. Were you getting coal there, or did you do any other work in connection with the mine? I was chiefly getting coal.
1812. What was the system of working there? In Fifeshire it was chiefly long-wall, and in Lanarkshire chiefly bord and stall, or pillar and bord system.
1813. Do you remember the width of the bords? They were chiefly 12 feet in Lanarkshire.
1814. Can you mention the size of the pillars? Well, the pillars I can think of were generally a chain square.
1815. What mines have you worked at in this Colony? I have worked pretty well all over the Northern District.
1816. Will you mention the names of the mines? I was a good deal of my time in the A. A. Company's mine, Brown's Miami, Wallsend, Stockton, and a little of my time in Burwood. I think I have spent most of my time in the Borehole as far as mining is concerned in the Northern District.
1817. Have you held any official position in connection with the miner's lodges? I have occupied all the various positions at different times.
1818. Have you acted as check inspector? I have.
1819. I believe you were at one time President of the Miner's Association? I was.
1820. In connection with your business as check inspector, had you ever occasion to point out any deficiencies in connection with the ventilation? Yes; I had.
1821. In what respect;—can you recollect what these deficiencies were at the time? Insufficiency was the chief point I observed. The air was not conducted in sufficient quantities to the men.
1822. Do you mean to convey that the air was not taken up to the working face? Certainly.
1823. Did you ever discover any less quantity of air than was stipulated by the Act? Certainly, very frequently.
1824. *President.*] Where? Chiefly in the Bore-hole mine; that was the only mine where I acted as check inspector.
1825. *Mr. Curley.*] What pit was that in? Chiefly in the old pit that is working now—number two.
1826. Was not that a great many years ago? From between 1885 and 1887, I suppose.
1827. Where you have spoken of the insufficiency of the ventilation, that is, where the air was under the stipulated quantity, was not that mostly where you heard complaints from the men? Invariably that was so. We generally found that where the men complained there was an insufficiency of air.
1828. Did you ever notice, in attempts to measure the air current, that the anemometer would not work? Yes. We have tried various places, and found we could not obtain a measurement.
1829. Do you look upon efficient ventilation as one of the principal items in connection with mining? It is most important, unquestionably, the most important.
1830. Have you ever met with any fire-damp in the A. A. Company's mine? No.
1831. Have you ever met with any carbonic-acid gas or stythe? Yes, I have seen it occasionally, immediately after a big fall, but as a rule the Bore-hole has been fairly free from that.
1832. *President.*] What company does the Bore-hole Mine belong to? The A. A. Company.
1833. *Mr. Curley.*] From the official positions that you have held, were you in a position to hear complaints occasionally from some of the collieries in connection with defective ventilation? Yes, I was.
1834. Do you recollect an agitation many years ago being set on foot for getting an amended Coal Mining Bill? I do.
1835. Was that because it was very generally considered that the present Act was somewhat defective? Undoubtedly.
1836. Where were you working in the year 1889? I was working in the Wallsend Colliery during a portion of the year 1889.
1837. Was that in the former part of the year? Yes, in the former part of the year.
1838. Do you recollect what is known as the Hamilton Pit disaster? I do.
1839. Do you know the names of the men who lost their lives on that occasion? Yes, I remember them; do you wish me to mention their names?
1840. Yes, if you can recollect them. There was Peate, and Peate junior, Proctor, Hodson, Banfield, Meadows, Grant, and Beaumont.
1841. Do you know how many men lost their lives on that occasion? Eleven men.

J. Thomson,
Esq., M.L.A.
17 Sept., 1895.

1842. Do you know whether a number of men had a very narrow escape? Yes; on that occasion all the men in the pit had a very narrow escape.
1843. *President.*] What did that accident arise from? A fall of roof.
1844. *Mr. Curley.*] Do you recollect some seven of the men that had a very narrow escape? Yes; six or seven of the men had an exceedingly narrow escape.
1845. Was there not a man named Petit? Yes; that is one of the names I forgot to mention.
1846. Were you down the mine on that occasion? Yes; a few days after the fall, on the following Wednesday.
1847. Did you see the fall? Yes.
1848. Where was it? In the cross-cut.
1849. Was that a main road? Yes; the main outlet, and the only outlet as far as I could see.
1850. Was that road blocked when you were down the mine? Yes.
1851. Was the fall a fall of stone from the roof? Yes, stone.
1852. Were you at the inquiry in connection with this matter at any time? Yes; I was at the Coroner's inquiry.
1853. Do you know the conclusion the jury came to in connection with this matter? I think it was a somewhat indefinite conclusion, if I remember rightly, but I cannot say with any degree of certainty what the wording of the verdict was.
1854. Was any reference made to the weakness of the pillars? Yes; I remember that a reference was made to the insufficiency of the pillars left.
1855. Do you recollect the work being abandoned after being prosecuted for a certain distance? I do.
1856. Upon the representation of the officers of the Miners' Association at that time, did the Government decide to carry the work on? Yes, they did.
1857. Did the A. A. Company consent to that being done? Yes.
1858. After an interview? Quite right.
1859. Was the work that was carried on undertaken with a view to rescuing the bodies of the workmen supposed to be entombed or killed? I suppose that was the chief object.
1860. Was the work successful? Yes; very successful.
1861. Did you see any of the men that were found in Murphy's heading on that occasion? I did.
1862. Did you see them after they had been got out? Yes; Meadows, Beaumont, Hodson, and Grant.
1863. Do you think these men had been killed by a fall of roof? No; I do not think so.
1864. You do not think the four men you have mentioned met with their deaths from this cause? No.
1865. Do you think that these men had been entombed? Yes; I think they were starved to death.
1866. Do you recollect that while the company was prosecuting the work they came across a live pony? I do.
1867. Did the company's manager assist the rescue party as far as possible? Oh, yes.
1868. He gave every attention to the business in conjunction with the manager who was appointed by the Miners' Association? Yes; I always found the manager ready to lend any assistance in his power.
1869. From your experience as a miner, what conclusion did you come to in your own mind as to what was the cause of that accident? The only conclusion I can come to is that the pillars were not sufficient to bear the strain that was brought upon them by the excavation behind. The pillars had been taken out and a big gob left, and of course the weight is supposed to come gradually; but in this case I think it came very suddenly, and when the weight came suddenly on the pillars they were not sufficient to bear the strain, and, instead of having a clear way out, the men were caught in a trap through the roof having fallen behind as well as in front of them.
1870. What was the system of working at that colliery? The bords were supposed to be 8 yards, and the pillars 4 yards.
1871. Do you think that the roof in that particular case had been a very strong roof? I am inclined to think so.
1872. Do you think that the roof had held up for a considerable time? Yes; it must have held up for a considerable time.
1873. In consequence of the strong roof standing for such a considerable time, when it made a breakaway, was that the reason why it came over these thin pillars? No doubt that was part of the reason. If the pillars had been thicker they would have checked it. Some of the pillars were very thin; I am afraid they were even under 4 yards.
1874. Have you known them to be less when you have been working yourself? Yes, I have.
1875. From a sad experience of that character, would you conclude that there should be no doubt about substantial pillars being left in the working of coal mines? I certainly should say that it was a safe mode of working, both for the company, as well as the men.
1876. From a commercial point of view, that is, in making the most of your coal, and getting the largest quantity out, don't you think that, as a rule, you would get the most coal out by leaving the large pillar? Yes, I should imagine you would; that is the reason why it would be an advantage to the proprietary, as, by that means, they would get all the pillars out, get better coal, and run no risk of losing property through the extraction of the pillars.
1877. With that particular exception, I suppose the mine we are speaking of was, as a whole, pretty free from accidents of any thing like a general character, or of that description? Oh, yes; fairly free from accidents. Of course there have been accidents, such as a man losing his life; but they would occur generally at the working face.
1878. The accidents you refer to would be individual accidents? Yes.
1879. These accidents still keep occurring? Yes; and will be occurring as long as coal-mining is carried on, because all men are not equally careful.
1880. Do you not know that some of the most careful men have sometimes lost their lives? Yes; these are recognised as pure accidents—some of them, at least.
1881. Do not a number of these isolated single accidents occur from unseen dangers, such as slips or sooty backs? Yes; these are accidents so far as the individual is concerned.
1882. Have you ever worked in the Newcastle Company's colliery? No, I have not.
1883. Do you recollect, some years ago, about some danger that was apprehended there? Yes.
1884. Were you living in the locality? Yes.

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1885. Did you hear anything about the danger in that mine? Yes; I remember they were creeping on pretty close to their shafts—that is, the A pit.
1886. Was there not only the A pit at that time? Yes, what was called the A pit.
1887. Did you hear the general current of conversation that was passing at the time? Yes; I had occasionally to converse with some of the men who were working there prior to the creep, and also during the creep. I refer to the men who were working there to prevent the roof from coming down.
1888. Were the men stopped for some time? Yes.
1889. Do you know whether a considerable amount of energy and extra effort had to be made to secure the mine from collapsing? Yes, and an extra amount of timber, and that was more useful than the energy.
1890. Would you conclude from that that the pillars in that particular locality had been left too thin? Certainly, that was the cause of it. It was supposed to be over anxiety to obtain a dividend.
1891. Was that in the early history of the mine? Yes; it caused them to turn away the workings close to their shafts, and leave small pillars.
1892. Have you ever heard tell of other collieries in the Northern district being affected in a similar way? Yes; I have heard of Wallsend; that is an extensive mine, and they are always taking out pillars. I have known, where a big stretch of goaf has been left, two or three pillars to have been lost entirely.
1893. Did that occur at Wallsend when you were working there? Yes.
1894. Do you know the district where that occurred? I cannot localise it; but it was in what was called Willis' tunnel.
1895. Did that not happen a good few years ago? It was in the beginning of the year 1889.
1896. Did you hear tell of anything similar to this occurring at Stockton about the same time? Yes; I heard of some of the movements in Stockton.
1897. Did you hear tell of the men being stopped there for a while as well? Yes.
1898. I suppose you have given some attention to the proposed Coal-mines Regulation Bill that has been before both Houses of Parliament? Well, I have. Of course I took a very lively interest in the Coal-mines Bill that was introduced in 1889 and 1890; but I have not devoted very close attention to the matter since.
1899. Have you a copy of the proposed Bill? Yes.
1900. Do you know of a provision in the proposed Bill dealing with the hours of employment? Yes; I believe there is a clause dealing with the eight hours.
1901. You will find that the section is No. 36, on page 17 of the Bill (*see Appendix A*); just look at that provision;—have you given any thought to the provision that is there embodied in the Bill? Yes; I have given it a little thought from a general standpoint, but I have not examined this clause very closely.
1902. Are you in favour of the clause as it stands in the Bill being embodied in a mining Bill in that form? Oh, yes; I do not see anything objectionable.
1903. Do you think it is necessary for that clause to be in the Bill? Yes; I think so. I am strongly of opinion that there should be such a clause as that in any mining Bill.
1904. What is the position without a provision like that? Well, at the present time, of course, a man, through force of circumstances, is compelled to work any hours that may be required of him.
1905. There is no uniformity? No uniformity.
1906. Do you think that the hours of employment can be regulated in a voluntary way between the men and the managers? No; not under present conditions; certainly not. I do not think myself that that would ever succeed very well.
1907. Do you think that a provision of that character would add materially to the cost of working the collieries? I do not think so. I cannot see how it would add to the cost of working.
1908. There is practically no limit to the supply of coal in connection with the collieries? No; the supply seems to be very much in excess of the demand.
1909. What has been the experience of the men during recent years;—have a number of the collieries shut down now and again? Yes; a great many of them are shut down half their time.
1910. Have some of the collieries cavilled out a number of their men? They have.
1911. Have the men had to shift the best way they could? Yes, or to starve.
1912. Do you think it was an absolute necessity in some cases that that should be done? I think not. The chief object was to throw men out of employment.
1913. Have you noticed the regular dividends that have been declared by some of the collieries under these circumstances? Well, yes; they have declared dividends.
1914. Have you noticed the Wallsend Company declaring their dividend half-yearly? Yes; I have seen very frequently an account of their dividends.
1915. Have you seen the same thing in connection with the Wickham and Bullock Island Collieries? I have.
1916. Do you think that eight hours is sufficiently long for a miner to be employed in the mines? I think it is too long.
1917. Do you think that the miner out in this Colony is exposed to lots of climatic influences that affect his general health, that he would not experience in a colder climate? Yes; I believe he suffers here more than in a colder or more settled climate.
1918. Do you know that in connection with numbers of the mines here, at present, that occasionally there is fire-damp given off? Yes.
1919. Do you not think it is necessary there should be some kind of uniformity, for starting work, and leaving off work in the mine? I think it is an absolute necessity in the cases you have mentioned.
1920. Have you considered the clauses in the Bill with regard to ventilation? Well, generally speaking I have.
1921. Would you look at section 50 [47] of the Bill on page 23 (*see Appendix A*)? I see that some of the clauses in that section have been altered materially.
1922. Will you look at the provision in the section as it was originally drafted? Yes; I see that there is, a minimum of 150 feet of air provided, and that bords are not to be driven more than 25 yards.
1923. Do you approve of that section as it was originally drafted? Yes, I certainly do.
1924. You would not prefer the amendments suggested by the Legislative Council? I certainly would not prefer the amendments.

1925. Do you think the minimum quantity of air provided in that section is absolutely necessary in a Coal-mines Bill? I do. J. Thomson,
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1926. Do you think that there should be any doubt about a miner having a stipulated quantity of air? There should not be the least room for doubt. 17 Sept., 1895.
1927. Can you understand why there should be any objection to a limited quantity of air? No, I cannot. The proprietors profess to be quite willing to ventilate the mines efficiently, but they all object to a minimum quantity being fixed, and I cannot see the reason for their objection at all. I hold that the fact of a minimum will not prevent them from sending as much air as they like.
1928. Are you aware that in mines where there is much gas that that minimum quantity would not meet the case? In some cases it would not.
1929. Would it meet the case of a mine like the Helensburgh Mine in the Southern district? It does not interfere with a case like the Helensburgh Mine at all, because if 150 feet of air was not adequate, they could put 300 feet.
1930. You think they would have as much air as would sweep out the gas, or the place could not be worked? Certainly. If all the mines were troubled with gas there would be less need for a minimum quantity.
1931. Do you think that if no minimum quantity was stated, that in some instances the management would not be as active as they might otherwise be? I am quite satisfied that some—I will not say all—but some of the managers would be as indifferent as they possibly could be. They would not care if there was ventilation or not. They would tell the men, "If you say there is not sufficient ventilation I say there is, and I am the judge."
1932. Would not the manager say in such a case as that, "I am the manager of the mine"? Of course he would.
1933. Might not that seriously interfere with the health of the miner? Most assuredly; nothing more so.
1934. Do you believe in the provision in the Bill for splits in connection with ventilation? Yes, I do.
1935. Have you given any attention to that matter? Yes, I have.
1936. Will you look at the section [49] 46 on page 23 of the Bill (*see Appendix A*);—do you notice that subsection (III) has been crossed out by the Legislative Council? I do.
1937. Do you think that that subsection should be embodied in the Bill? It would certainly be all the better if it was, but a part of it does not seem quite clear to me.
1938. What part do you refer to? The part that refers to where gas does not exist.
1939. Do you think that brattice is an absolute necessity where gas does exist? Most unquestionably.
1940. And where no gas exists? I think bratticing would not be necessary where the distance between the cut-throughs was considerably shortened below 35 yards. I would be prepared to have cut-throughs 20 yards apart in preference to the brattice.
1941. Do you think brattice is required if the cut-throughs are not shortened? Undoubtedly; 35 yards is much too great a distance between cut-throughs.
1942. Do you think the clauses in the Bill providing for the working of bords and pillars under ocean or tidal waters should stand as they were originally drafted in the Bill? I do.
1943. Will you look at rules 41–51, on pages 31 and 32 of the Bill (*see Appendix A*);—do you approve of the 1st rule, rule 41, that deals with a person not to be employed as a coal-getter until he has had two years' experience? I do.
1944. Do you approve of a regulation width for pillars under ocean or tidal waters? I am strongly inclined to think that these pillars are none too big. I think that provision ought to be good enough. If it is not, it is hardly possible to work it.
1945. In cases of danger do you believe that inspectors should have power to withdraw the men? I do.
1946. With regard to a check-weigher, do you think that the men should have the right to select their check-weighman? Most assuredly.
1947. Do you think they should have the right to select him from whom they please, whether he be an employee of the mine or otherwise? Certainly.

[Witness withdrew.]

Treharne Evans sworn and examined:—

1948. *Mr. Curley.*] What are you, Mr. Evans? A miner.
1949. Where are you employed at the present time? At the South Waratah Colliery.
1950. Have you been employed at the Lambton Colliery as a miner? Yes.
1951. For what number of years have you been employed as a miner? I have been somewhere about eight years working as a miner, and three years, all but two months, as check-weighman.
1952. Were you appointed to the position of check-weighman by the men? Yes.
1953. Do you recollect the suspension of work at the Lambton Colliery some time ago? I do.
1954. Were the men given notice in connection with the matter? Yes.
1955. Were the whole of the men dismissed from the colliery? Yes, with the exception of myself, but I believe that some of the men outside did not receive notice. Through not being an employé of the Company I did not receive notice.
1956. For how many weeks did the colliery stop work. For about five weeks.
1957. When work was resumed again, did the great bulk of the men get taken back to the colliery again? Yes.
1958. Were the men, after they were taken on again, willing to still allow you to follow on at your old occupation as check-weighman? Yes. The check-weighman at the Lambton Colliery is appointed half-yearly, and I had another six weeks to go before the term of my six months expired. The chairman of the miner's lodge, through something he had heard, advised me to make an application to the manager of the colliery for re-employment.
1959. Did you do so? I did. I did not ask him to employ me as an employé of the colliery alone, but, after a short conversation, I asked him to be good enough to withdraw his objection to me, and allow me to take my old position as check-weighman, and this he refused to do.
1960. Could he not have permitted you to have gone back and have taken up your position? Yes.
1961. He could have kept his objection back? Yes. During the eleven years I was employed in and at that colliery, there had been three strikes previous to this. The check-weighman, after one strike that lasted

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- Mr. T. Evans. lasted for nine months, was not re-appointed by the men, but the check-weighman has never been known to ask the manager to reinstate him.
- 17 Sept., 1895. 1962. Was there ever any objection to you? No; I believe I would be appointed to-morrow by the same lodge.
1963. Were you out of employment for the time being? I was out of employment for five months.
1964. Do you consider that the miners as a body at the different collieries should have the right to select their check-weighman? I do.
1965. *President.*] From anywhere they like? Yes, as long as the men pay him.
1966. *Mr. Curley.*] Do you understand that the present Act states that he must be an employé of the mine? I was an employé of the mine when I was appointed.
1967. Had any objection been taken to you in connection with the performance of your duties? No; I intended to see the general manager, when the young man, his son, objected, and I could not see him; but I saw him afterwards, and asked him if he knew of anything I had done detrimental to the Company or to the men, and he said, "No, Treharne; I do not." I then asked him had he anything against me during the time I was employed under him at the pit, and he said, "No; I have nothing against you. I believe you are as good a man as any man we employ at the present time."

[Witness withdrew.]

WEDNESDAY, 18 SEPTEMBER, 1895.

[*The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.*]

Present:—

FRANCIS EDWARD ROGERS, Esq., Q.C. (PRESIDENT).

JAMES CURLEY, Esq. | JESSE GREGSON, Esq.

The Honorable Joseph Cook, Postmaster-General, sworn and examined:—

- The Hon. Joseph Cook. 1968. *Mr. Curley.*] You are at the present time, I believe, Mr. Cook, Postmaster-General? I am.
1969. And you are one of the Members of the Legislative Assembly? Yes.
- 18 Sept., 1895. 1970. Previous to your entering the Legislative Assembly, what occupation did you follow? I was for four years check-weighman in one of the collieries at Lithgow.
1971. What were you before you were check-weighman? I was a miner.
1972. How long have you been out in the colonies? For about eleven years.
1973. Have you worked in coal-mines in England? I have; in fact, I have been engaged in coal-mines since I was a little boy about 9 or 10 years old.
1974. At what mines in England were you employed? I was employed in North Staffordshire, where the system of mining is in many respects peculiar.
1975. What were the names of the mines you were engaged in in England? The Sheriff Mine was one, and another was called the Holywood; both mines were at Silverdale.
1976. Were those the only two mines you worked in in England? Oh, no; I worked in a number of mines, but I specialise the Sheriff Mine because I worked in it longer than the rest; I never worked in any other district. That is the only coal-mine I worked in; the other mines were ironstone seams.
1977. Were the coal seams thick seams or thin seams? There were a large number of seams.
1978. I refer to the seams you worked in? In the one mine there were nine or ten different seams of coal, worked from the one shaft, and varying in thickness from 10 or 11 feet down to 2 feet.
1979. Were they working all these seams? Yes.
1980. Simultaneously? Yes; you might say each one was really a separate mine. They dipped at very sharp angles, but the one shaft would pierce all the seams.
1981. What was the thickness of the seam you worked in? About 7 feet. As a matter of fact, there were two seams separated by about 2 feet of mullock. One seam was 7 feet thick, and the other seam about 5 feet thick. We wrought both seams from the one bord. We took out the lower seams first, and treated the top seam as tops, but there were two separate seams.
1982. Did the miner deal with the whole of that mullock as well as the coal-getting? Yes, it was soft mullock.
1983. It was not a hard material? It was nothing like your bands in the Northern district.
1984. What method of working was pursued in the mine? Pillar and stall. The method of working was peculiar. You went first of all to the boundary, and brought it out in 10-yard pillars. No other plan was possible, owing to the nature of the roof.
1985. When you drive to the boundary like that, would you drive parallel drives in order to cut one on to the other? You drive on to the boundary.
1986. Would you call it a heading? No, a self-acting plane. We used to call it a gig dip.
1987. Would it be a main road? No, you drive your main road to the boundary, but these rises are equidistant. Where it is flat, you can adopt the long-wall system.
1988. What was the width of the places you put across? The rises would be about 10 feet wide, and the headings driven along to fetch the 10-yard pillars back would be about 5 feet in width. The width was really never a given quantity, and if the coal is soft going a bit wider, but about 5 feet as a rule.
1989. Were the pillars of substantial size;—what size were they? There were no pillars; you kept bringing back the pillars. It is quite a different method to what we work here. You go to your boundary first, and there is no need for pillars.
1990. There would be sectional blocks? Yes; when a 10-yard section is taken out you bring down your gig dip, drive your heading, and bring out another block.
1991. What was the method of ventilation in connection with a colliery of that description? Bratticing and pipes.
1992. *President.*] Was it a gassy mine? Oh, yes; and being nearly perpendicular, the gas rested on the top, and it was almost impossible to drive it out. Explosions of gas were a usual thing. They were so located

located that they did not wreck a mine, as they sometimes do the large mines. I should imagine they would be the most dangerous mines in England, owing to the fact that they are nearly perpendicular, and it is difficult to drive the gas out.

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1993. *Mr. Curley.*] There would not be much complaint about ventilation in such a mine as that? Well, self-interest would lead them there to ventilate sufficiently. That would be one of the cases in which protection to property and life were coincidental, and the motive in each case would be nearly equal. They had to have the very latest appliances to keep the property safe, because gas was always a trouble.

1994. Were the other mines similar to that? Oh, yes; they were all similar in that district.

1995. Now, coming to this Colony; what collieries have you worked at in the Lithgow district? At the Vale of Clwydd, and the New Vale Collieries.

1996. Did you work in these collieries as a coal-miner? Yes, as a coal-miner.

1997. What was the method of working pursued at the Vale of Clwydd Colliery? The ordinary bord and pillar system.

1998. Do you know anything about how the ventilation is conducted at that colliery;—was it by furnace, fan, or what? By furnace, and quite sufficient too, I should say, if properly looked after. They are only small collieries, and the conditions are the simplest.

1999. Were there many men employed when you were there? The number of men employed varies according to the condition of the trade—sometimes 100 men, sometimes twenty. At the present time there would not be more than twenty-five men in any of the mines.

2000. How many men were employed when you were working yourself? As high as 100, and at one particular time as many as 200. It all depended on the condition of the trade.

2001. What kind of stoppings were erected on the main roads? I think they varied in the collieries I worked in—chiefly slack.

2002. Was that in the main intake road? Yes, occasionally there would be a brick stopping.

2003. Was that mine fairly well ventilated when you were there? Yes, on the whole it was fairly well looked after. Of course, there were occasions when it was defective, like most other places.

2004. Did they work out the pillars in that colliery? No.

2005. Did they leave any pillars? They did not leave any pillars, that could be called pillars. It is only fair to say that the roof was of such a nature that hardly any inconvenience was caused by the roof.

2006. What was the size of the pillar left? It would vary from 4 to 5 yards. The mine was intersected with faults, which formed a very substantial support to the roof.

2007. Did these faults come through the seam? Yes; it was not like an ordinary fault or dyke, because it did not interfere with the level of the seam, never more than a few inches. The faults up there are peculiar to the district.

2008. Was it what is termed a stone-dyke? I do not know that I have seen anything like it before. It was a sort of conglomerate, sometimes hard, and sometimes soft, but peculiar to the district.

2009. What thickness was it? The thickness varied. The seam sometimes would not run entirely out, sometimes it might be a few inches, sometimes a foot, sometimes 3 inches, sometimes it would run out altogether. You could never depend on what one of them would be like.

2010. Did they go right through the ramification of the mine? They go about all ways; you scarcely knew when you were going to hit them. Some of them ran fairly regular, but they formed a substantial support to the roof.

2011. Have you to go through them? Oh, yes; and the miner does not like the job.

2012. No matter what it is, don't you think there is a danger of it tumbling down;—have you really nothing underneath it? Hardly anything. It has all grown together, naturally, and you have to make your own parting. There is hardly any danger about a fault there. The fault is peculiar to the district.

2013. No matter how you deal with a quantity of rock of that description, do you mean to say that there is never any danger of that tumbling down? There is a danger if it is soft enough, but the danger is at a minimum there. The entrance through them is very narrow, and there is no natural parting, therefore there is very little danger.

2014. Did they work out the pillars there—the pillars they could work out? They did not leave very much pillar there. I would not say that there is a very great deal of danger for the reasons I have mentioned. The faults themselves are substantial supports to the roof. I believe at the present time they do leave more substantial pillars in some of the mines.

2015. Have you ever known there any very large sectional area to be worked completely out, in the way of pillars, and all the coal to be got? No; not in that particular mine. I believe they are working under those conditions in one of the mines now.

2016. Do you know the width of the bords? I think they are about 7 yards wide. I am only speaking from what I hear in the district.

2017. At the particular time you were working there, what was the width of the bords? About 8 yards.

2018. What was the name of the other mine you worked in in that district? The New Vale.

2019. What was the method of mining pursued there? The method was practically the same as in the Vale of Clwydd Colliery.

2020. Did you meet with the same faults in the New Vale Colliery? Yes; but considerably more than in the Vale of Clwydd Colliery.

2021. What kind of stoppings were put up there in connection with the main intakes? Slack, or brick stoppings, according to the nature of the workings.

2022. Did you ever meet with black damp or anything of that kind while working there? No.

2023. There was no such thing as gas in any of these mines? No, never.

2024. What was the system of ventilating at the New Vale Colliery? Practically the same as the Vale of Clwydd—furnace.

2025. *President.*] Was there always fair ventilation there? I would not like to say that, because it varies considerably—if everything was going right, yes. It all depends on the system; you may have 100,000 feet of air at the bottom of the pit, but a place a mile away may be suffocating—it all depends on the system adopted.

2026. On the whole, was the mine fairly-well ventilated? Yes, on the whole, fairly-well ventilated.

2027. *Mr. Curley.*] Had you occasionally to make complaints with regard to the ventilation? Occasionally we used to send round our check inspector.

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2028. *President.*] Does not that arise in nearly every colliery; that does not show bad management? It all depends, it may or may not. As a rule, bad ventilation means defective management. Some places may be very badly ventilated at times that may ordinarily be well ventilated.
2029. May there not be accidental cases? Yes; want of sufficient ventilation for a time.
2030. *Mr. Curley.*] Is not that a serious matter for the man that has to work there? I rather think it is.
2031. It is not an accident for him? I think it is not.
2032. Is it not a case of slow poisoning every day that he works there? It is very bad.
2033. Do you think with regard to matters of that description that, with a little sharper supervision, numbers of these cases could be improved? I am sure of that.
2034. More particularly with a good current of air flowing through the mine;—is it not a matter of conducting the air? Yes; it is a matter of good internal arrangements.
2035. That can be done, I suppose, with proper management? It could. It is sometimes a little expense.
2036. Do you think that expense sometimes stands in the way of accomplishing this? I think so.
2037. You think that the miner may be punished in that particular way for the sake of economy? No doubt.
2038. Do you think that the miner has a right to be punished in that way? No, I do not.
2039. Are those the only two mines you have worked in in the Western district? Yes, those are the only two mines—the Vale of Clwydd, and the New Vale.
2040. Do you know anything about the method of ventilation in any of the other mines? It is generally the same—furnace ventilation.
2041. Are there any mines in the western district where you have no furnace ventilation;—have you any mines with artificial ventilation, or ventilation without mechanical power? We have one mine, I believe, where there is no furnace.
2042. How is that mine ventilated? I cannot say.
2043. Is it what is termed natural ventilation? I suppose so, but I do not know.
2044. Do you think that a mine should be left to ventilate itself in that fashion, if it is a fact? I do not.
2045. What is the name of the mine you refer to? The mine I refer to is the Oakey Park mine; that mine has no furnace, and it is the last mine that has been put down.
2046. Do you know the number of men that are employed in that mine? I should not think there would be more than twenty-five.
2047. *President.*] How can the mine ventilate itself? Well, it does; I suppose the same kind of ventilation goes on in a modified way as that that goes on in the atmosphere around us.
2048. That kind of natural ventilation would almost be in any mine? Oh, yes; I do not think you could thoroughly systematise it in any way.
2049. Could you not systematise it by saying that it was ventilation looking after itself? I suppose that would be the correct way to describe it.
2050. Are there a number of men employed in that mine? I should say there were about twenty-five miners. I suppose there would be more, including wheelers and shift-men—say, thirty-two or thirty-three.
2051. *Mr. Curley.*] Do you enter most of these mines by a tunnel? Only two of the mines have tunnels, that is, on the west side where the outcrop is. The coal dips east as you come towards Sydney, and the seam gets deeper.
2052. What is the depth of the shafts in the other mines? They vary, of course, as they go east. The first shaft, which is close to the railway station, I should not think was more than 50 or 60 feet, and the one nearest to Sydney, the Oakey Park Mine, would be over 300 feet.
2053. That is the mine where there is no mechanical ventilation that you are aware of? Yes.
2054. *President.*] I cannot understand why the manager of that mine has not been brought to book under the present Act—the Act of 1876? He cannot be brought to book if he has 100 cubic feet of air for every man employed—that is, if the mine ventilates itself to that extent you cannot compel him. The Act says nothing about a system. When the inspector goes to measure the air I suppose he finds it adequate according to the Act.
2055. *Mr. Curley.*] Take the case of a mine that generated gas;—if the minimum quantity stipulated in the Act was not sufficient to cope with that gas, would not an adequate supply of air have to be provided in order to meet the case? First of all there would be an argument entered into about it. There is no provision in the Act to deal with a case like that. The Act says that an adequate amount of air, not less than 100 cubic feet, shall be provided.
2056. Would not a manager have to do it for the safety of the mine? He might do it if he thought it was necessary.
2057. If the manager had a person at that colliery whose duty it was to inspect the working places in the morning, and he found there was gas in the mine, and there was not sufficient air to drive it out, would not the manager have to provide sufficient air;—if he did not, would not the gas explode? The protection of the property might make him drive the gas out, but there is nothing in the Act to compel him to give more than 100 cubic feet of air. A man might be working in a place in a state of suffocation, and yet the quantity of air stipulated in the Act may be passing along the airway, but it never reaches that man. The Act provides that the air “shall sweep undiminished along the airway,” but, “past each working place.”
2058. *President.*] Subsection (I) of the Act of 1876 says: “An adequate amount of ventilation shall be constantly produced in every mine to dilute and render harmless noxious gases to such an extent that the working places of the shafts, levels, stables, and workings of such mine, and the travelling roads to and from such working places, shall be in a fit state for working and passing therein”? Yes, and subsection (II) says how that is to be done,—“An adequate amount of ventilation shall mean not less (as a minimum) than one hundred cubic feet of pure air per minute for each man, boy, and horse which shall sweep undiminished along the airway past each working place.”
2059. The Act says that they must dilute these noxious gases? Yes, with 100 cubic feet of air, which shall pass undiminished along the airway past each working place.
2060. How are you going to remedy that;—if you get a bad manager or a bad inspector, in what way can you regulate that by Act of Parliament? I should say it would be a bad job.
2061. *Mr. Curley.*] In spite of all the conditions, will not circumstances make men complain? They have to do so ultimately. They have to take secret means of making their wants known.

2062. *President.*] Have you any cases in your mind, or are you speaking only of what might happen in cases where insufficient air is supplied, and the men are frightened to complain? I have cases in my mind.

2063. In the Western district? Yes.

2064. *Mr. Curley.*] You know that has occurred in the Western district? Oh, yes.

2065. Do you know whether any anonymous communications have ever been sent to the inspector? I do not know.

2066. Could not that be done? Yes, readily.

2067. Do you know that the Secretary of State in England has recommended the inspectors to take notice of these things? No, I did not know that. I have had anonymous letters myself.

2068. *President.*] About weighing? No, about ventilation.

2069. Anonymous letters asking you to do something? Yes, and I am not much in love with anonymity.

2070. *Mr. Curley.*] Will you please read what is said here in Mr. Nelson Boyd's book, "Coal-pits and Pitmen," on this subject:—"The Home Secretary, in reviewing the debate, repeated the statement that accidents had greatly diminished since the passing of the Act. He looked on the certificate of colliery managers as quite as important as those granted to masters of vessels, and had always given instructions to prosecute managers when there was sufficient cause for doing so; but, for safety, it was necessary to depend mainly on the responsibility of employers and employed. He repudiated the view that inspectors were not to visit a mine unless an accident had occurred, and he had issued 'consolidated instructions' to the inspectors on that subject. These instructions enjoined on the inspectors to examine a mine on invitation or complaint; to pay attention to anonymous complaints without divulging the source of their information; not to send notice of intended visits to mines, unless advisable to do so; and to examine mines as frequently as possible without announcing their intention, as the liability to an official inspection without previous warning might be a most effective prevention of abuse." Lastly, "That a record should be kept of the inspections and the results obtained."

2071. Do you approve of what is said there? I do, certainly. A weak point in the Act of 1876, the Act we are now working under, is that the air shall sweep undiminished along the airway past each working place, but the Bill we have now under consideration proposes to carry the air into each working place, and makes provision for doing so. The sections I refer to in the Act of 1876 are subsections (II) and (III) of section 12 (*see Appendix B*). You are told in subsection (II) what to do, and in subsection (III) how to do it.

2072. *President.*] Supposing the Bill we are considering does not pass the Legislature. I think it will be a grave thing for that interpretation of the Act to go forth to the world as the proper interpretation. I think that would be a very bad thing. It is my opinion that the inspector can take action under the present Act, and compel the minimum of air to be provided in each working place. Has such a case ever been tested? I do not think so.

2073. My reading at present of these two subsections is, that a manager is bound to supply the minimum quantity of air to the men at the working face, but I would like to give the matter further consideration.

2074. *Mr. Cook.*] I should like to say that in England where a mine is very dangerous, self-interest drives them to observe strict conditions. They could not drive 35 yards before the air. In the principal mine I wrought in, they never drove more than 10 yards, and even then they had to carry the current to the face by pipes, or brattice. Self-interest drove them to do this.

2075. *President.*] Are there any mines in England without gas? Oh, yes.

2076. *Mr. Curley.*] The Bill we have before us says this air must be carried into the working face by means of brattice. If it is generally done, why do the managers rebel so fiercely?

2077. *Mr. Gregson.*] The managers do not object.

2078. *Mr. Curley.*] The managers object to any steps being taken to force the air by means of brattice.

2079. *Mr. Gregson.*] The managers recommend the English Act of 1887. If the Bill said what the English Act of 1887 says they would be content with the Bill.

2080. *Mr. Curley.*] You have looked at the provisions in the proposed Bill sections [50] 47, on pages 23 and 24, "Ventilation of Mines" (*see Appendix A*). You notice the amendments made by the Legislative Council in the rule, the alteration of the words "twenty-five" to "thirty-five," and also the erasures further on in the clause? Yes.

2081. Do you consider that the section should stand as it was originally drafted, or do you believe in the amendments made by the Legislative Council? I think the clause should stand as originally drafted.

2082. *President.*] Will you look at the provisions in the English Act, section 49 (*see Appendix C*)? I do not agree with the English Act in all cases; it is not stringent enough in some things.

2083. Why? I have worked in places in England myself where it was almost impossible to work owing to the black damp, and have suffered long periods of sickness through it. I have seen places where the light would not burn at all, and where, when you had to run your skip out, you had to leave your light at both ends, and run the skip through the dark. The English Act is not necessarily a perfect Act any more than our Act is perfect.

2084. It seems to me to be well drawn? The gassy mines in England are the main care of the owners there, and those conditions dominated their ideas in framing an Act, but in the non-fiery mines there is no possibility of doing anything to make the conditions more sanitary. In the case of a very fiery mine self-interest comes in, and the inspector in England has very much larger powers than he has here.

2085. In what way? If an inspector finds that an accident is due to defective management he can move the Secretary of State, and put the manager on his trial. He has a penal power there.

2086. Is not that proposed here in this Bill? Yes, it is. Only a little while before I left England I knew of a case where an accident occurred owing to a fire in the goaf. The manager concentrated his attention on saving the lives of the people in the mine, but the owners and the inspectors thought he had not done his duty. He was a man who had risen from the ranks, and the experts moved the Secretary of State, and succeeded in getting the case tried before a County Court Judge. The judge who tried the case commended the manager for considering the safety of the lives under him rather than the property. That could not occur out here.

2087. Why? It could under the proposed new Bill.

2088. But you must take the two things together? I am willing to do so, but people in England are living lingering deaths by this black damp.

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- The Hon. Joseph Cook. 2089. Do you mean to say they are doing so to-day? Yes; I do not see anything in the Act to make it different.
- 18 Sept., 1895. 2090. They cannot be giving an adequate amount of ventilation? They give what is thought adequate.
2091. *Mr. Gregson.*] The latest statistics do not bear out what you say? I am speaking from my experience.
2092. *Mr. Curley.*] Your opinion is, Mr. Cook, that there should be a stipulated minimum quantity of air fixed in any Act that may be passed in this Colony? Yes; as a matter of interpretation as to the least amount that can be called adequate.
2093. Do you look upon the provision in the Bill [49] 46, on page 23, "Division of mine into splits," (*see Appendix A*), as an essential part of the whole question? Oh, yes.
2094. With regard to the provision in the Bill for giving additional powers to inspectors, section 21, page 8 (*see Appendix A*);—do you believe in that provision? I do.
2095. Do you consider that an inspector should have power to call men out if he notices there is any danger? I do.
2096. *President.*] Suppose an inspector says to the manager, "This mine is dangerous, you ought to take the men out"; do you think any manager would keep on after that. Suppose the roof is dangerous, perhaps it is working, and the inspector says, "You must take the men out at once," leaving the provision as it is in the English Act—do you think a manager would dare to keep on working after that? Yes, under our present Act he might.
2097. Suppose a case in which the inspector is a man who is prejudiced, could he not ruin an owner by suddenly withdrawing the men from the mine for an insufficient cause? Yes, that is so. A bad inspector must always do mischief, and a bad judge might do the same, or a bad Governor, but you must have a final authority.
2098. *Mr. Gregson.*] Do you think that three months' imprisonment would be an assistance in making a manager careful? Yes, I suppose they would not care to go to gaol. We meet a defect of that sort in the proposed Bill.
2099. And it is willingly accepted? As to the power of the inspector to withdraw the men?
2100. No, that is another matter? No, it is the same matter.
2101. We are considering a case in which the inspector tells the manager that he thinks a mine is dangerous, and that the men should be withdrawn, and that the manager differs from the inspector, and they go to arbitration, and if the manager is wrong and he has not withdrawn his men he gets three months' imprisonment. He is committed for the offence. Will you look at the supplementary part of the Bill, section [64] 59, on page 35, "Imprisonment for wilful neglect, endangering life or limb" (*see Appendix A*)? With the other provision in the Bill as to arbitration, how extremely difficult it would be to prove that anything was done wilfully. Suppose a manager says it was my honest opinion that the inspector was wrong.
2102. Now, take the case at Stockton, which is one in point. There the provisions of the present Act have not been carried out, which provides they should go to arbitration, but nobody has done that. In such a case as Stockton, under the proposed Bill, the manager gets three months? Yes, after the arbitration. In Stockton the water might have got away, and the mine might have been flooded while the arbitration was going on.
2103. Here are the guardians of the miners who do not know their duty. Why does not the inspector force arbitration, or why does not the Minister? I am sure I do not know.
2104. *Mr. Curley.*] Is it your opinion, Mr. Cook, that this subsection (v), of section 21, should be embodied in the Bill as originally drafted? Yes.
2105. Now, with regard to the weighing question, as it affects the Lithgow district, can you give us any information as to the system adopted there? It is the system of averaging, the same as obtains elsewhere.
2106. Were you only employed in one mine as a check-weighman? Yes, that is all; but the same system obtains at other mines.
2107. Are the men in your district anything like satisfied with the system of averaging? They want more skips weighed in order to get at a truer average.
2108. Have the miners in your district been contending for having every skip weighed? No.
2109. They are satisfied with an average weight? Yes, if they can get a fair average, but they want to have some say in the system of weighing, and not to leave it to the caprice of the manager.
2110. Have you standard weight in your district? No.
2111. It does not obtain? No; our trouble is that we do not get enough skips weighed.
2112. What number of skips do you weigh daily? We go weeks together without a single skip being weighed.
2113. Is that at any particular mine, or do you refer to all the mines? Mostly all the mines. The weighing is absolutely at the caprice of the manager.
2114. *Mr. Gregson.*] Is the check-weighman standing by always? They used to, but now at most of the mines they have no check-weighman.
2115. When you were there were you always standing by? Yes, but I did not weigh, because the manager did not choose.
2116. Had you power to choose? I had no power.
2117. Did you request the manager to weigh coal? It was a source of constant friction; one of the most prolific sources of friction when a man goes six or seven months without being weighed.
2118. Can you give us any idea as to the proportion of the skips that were weighed? I do not know that I could.
2119. Have you any books that would supply this information? I think I could get them, but I know the proportion is extremely small. The system of weighing coal is more unsatisfactory than anything else.
2120. *President.*] Can you give the Commission this information? I will try and get the information for the Commission (*see evidence given by Mr. Coates, minutes of evidence, pages 129-130*).
2121. *Mr. Curley.*] Say the number of skips that have been weighed within a given time, the number of skips that have come out of the mine, and what the skips carry? Yes. I should not think the percentage is one per cent. at many of the mines.
2122. Do you think the same kind of thing obtains now? Yes, it is entirely at the caprice of the management.
- 2123.

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2123. *Mr. Gregson.*] May not that tell against the management? No; the manager knows the average weight of the mine. He knows the skips that come out. All that he has to do is to get the weight from the railway station, and when he gets the weights he knows whether he is losing or gaining. If he is gaining, he lets the weighing alone.

2124. The protection to the mine-owners is railway weight; the manager can see if he is over-paying and if so, gets more skips weighed? He weighs just as he likes; just as it suits him.

2125. What would you suggest to meet the difficulty? I would suggest a very reasonable course, provided in the Bill as it was originally drafted. The section in the Bill dealing with weighing is [41] 38, on page 18 (*see Appendix A*). In England, in some of the collieries, they weigh every ounce of coal that comes out of the mine, and, while admitting that it might be an inconvenience to weigh all the skips here, the men, I think, although that is their right, because there is no other way by which they can be paid absolutely, do not ask for anything of the kind. They say, "we do not want to insist on this method if you will allow us to make a mutual arrangement with the management as to what proportion of skips shall be weighed." I refer to the words in the Bill as originally drafted, "and, unless otherwise mutually agreed upon, all the mineral gotten by them shall be truly weighed, &c."

2126. Will not the alterations suggested by the Legislative Council meet your views? No; there are no penal powers by which the men can enforce their rights.

2127. What would you suggest? The retention of the words "and, unless otherwise mutually agreed upon, all the mineral gotten by them shall be truly weighed, &c."

2128. Might I suggest to you a difficulty that may arise there; if the wording you suggest is put into the agreement a strike or lockout might be the result;—suppose a mine-owner does not care to agree, and the men insist on having every skip raised weighed, it might mean a block? Then the men say this man has shut his mine hoping to put us to inconvenience. It is an infringement of the Act.

2129. *President.*] Suppose the mine-owner finds that it would not pay him to have every skip weighed; the men, you know, sometimes get rapacious in their demands, and they may ask the extreme of their rights, and if they did do so the mine-owner might say, I cannot afford to work my mine, therefore I must shut it up;—would that be an offence? It ought to be no argument. A contract is entered into, and a basis of payment agreed upon to weigh all the mineral gotten, &c. I think that if a mine-owner cannot work his mine according to the Act he had better not work it at all. If he said, I have got to weigh all this coal, therefore I will shut the mine up, he does so in a penal way.

2130. *Mr. Curley.*] Do you think, Mr. Cook, that as a matter of right that every skip should be weighed in connection with a colliery? Yes, as a matter of right, by that I mean fairness.

2131. Do you consider the men would have any objection to an average provided that a fair number of skips were weighed each day at the collieries? They would be glad to get it; very glad indeed.

2132. Do you believe that all standard weight should be abolished? Yes, I think that whatever a man puts in a skip should be weighed.

2133. *Mr. Gregson.*] Have you any objection to the standard bar? As a matter of right I do not see how the standard bar can be objected to.

2134. *Mr. Curley.*] Will you leave that as a matter of mutual arrangement? I think it is far better to leave it out altogether from the Bill, although if a manager thought a bar was necessary for the protection of his working he has the right to say so.

2135. Have you looked into the question of certificates of service for managers, and under-managers, and inspectors? Yes; I quite agree that there should be certificates for service.

2136. Do you think that the provision in the Bill, as originally drafted, is a fair one? I do.

2137. *President.*] You believe in the Bill exactly as originally drafted? I do.

2138. And in nothing else? Yes.

2139. *Mr. Curley.*] Have you looked into the provision in the Bill with regard to sinking shafts; will you look at Rule 19 on page 28, "Trolley over pit mouth" (*see Appendix A*);—do you agree with that provision? I quite agree with that.

2140. Are you aware that men are frequently liable to things falling down the pit shaft? Yes; I stood by one shaft and saw a tub go down the sinking pit.

2141. Where was that? At the New Vale Colliery, when they were putting down the shaft.

2142. Did that occur after the tub had come to the surface? Yes.

2143. Was there any trolley at that particular shaft? There was, but it had not been run in. I think the man did not hook the tub properly. It was not the fault of the trolley. It was more of an accident than anything else, and, strange to say, it did not hurt anybody.

2144. From the experience you have had in connection with mines out here, do you think it would cost anything like 6d. or 8d. per ton extra to comply with the provisions of this Bill? Certainly not.

2145. Do you think that the miners should accept the onus whatever it was? I do not see that they should. Why should they pay for making things safe. The men under our present commercial system must work for the employer or starve. The employer has no right to say they shall work under any conditions he chooses unless they like to pay for it.

2146. Is there anything else you would like to refer to, Mr. Cook? I do not think there is anything else at present.

2147. Do the miners set their own timber in your district? Yes.

2148. Do the miners lay all their own roads? Yes; and they do a good many other things additional since the union got weak. I suppose surplus labour and the combination of capital has largely brought about the present state of things.

2149. *Mr. Gregson.*] Does the same unsatisfactory method of weighing that obtained while you were working in the Western District still obtain? Similar conditions to those I have mentioned still obtain, principally with regard to weighing, at other mines in the district, although some are not so bad as others.

2150. What would you put the proportion of skips at that the best of the collieries weigh? I cannot say; it is not as bad at some of the collieries as at others.

2151. Is this a matter of common talk amongst the miners themselves? It has always been a bone of contention.

[Witness withdrew.]

Alfred Edden, Esq., M.L.A., sworn and examined:—

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Esq., M.L.A.
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2152. *Mr. Curley.*] You are, I believe, Mr. Edden, at the present time a member of the Legislative Assembly? I am.
2153. You represent the constituency of Kahibah? I do.
2154. What occupation did you follow previous to entering the Legislative Assembly? Mining.
2155. Have you been engaged in mining pursuits for any considerable time? I never did anything else in my life. I have had thirty-two years experience in mining. I entered the mines when I was ten years of age.
2156. Have you worked in any mines in England? Yes.
2157. What districts have you worked in in England? In Staffordshire, Warwickshire, Derbyshire, and Nottinghamshire.
2158. Have you worked in these mines as a coal-miner? Yes.
2159. Take the first place you mentioned;—what was the name of the colliery you worked in in Staffordshire? Pennings and Harrison's.
2160. What was the system of working followed out in that colliery? It was longwall work there.
2161. What was the system of working followed out in the other places you mentioned? It was all longwall work. I never worked under any other system till I came to this Colony.
2162. Did you find the ventilation fairly good in those mines? When I first started to work in the mines the ventilation was not so good as it was years afterwards, when things were altered by Acts of Parliament and other matters. When I left home the last mine I worked in was in Nottinghamshire; it was over 600 yards deep, and we never worked with our shirts off, only in the straight work—headings.
2163. Did the men do their own timbering in these mines, or did they have deputies? We used to do our own timbering there.
2164. What mines have you worked in out in this Colony? I have worked in the Newcastle Coal-mining Company's mine for nine years, and in the Waratah Company's mine; also with the Lambton Company the Scottish Australian Mining Company, and at West Wallsend.
2165. Were you working continuously at the Newcastle Company's mine for nine years? I had a break of twelve months; that was all.
2166. What was the system of mining pursued in that mine? Bord and pillar work.
2167. Do you recollect the width of the bords at that colliery? Some 8 yards, some 6 yards, and some 4 yards; but the general practice was 8 yards—what we call narrow bords.
2168. The 4-yard bord was what you called a narrow bord? Yes.
2169. What was the size of the pillar in that colliery? Four yards.
2170. Was that the system throughout the mine? It was. I believe during the latter portion of the time I worked there they increased the size of the pillars; that was after the fall came on, but I am not certain.
2171. Did you have opportunities of seeing different parts of the mine during that time? I worked for four years as a shiftman, doing different work in different parts of the mine.
2172. With regard to the creep you have referred to, where did that take place? In what was known as the No. 1 heading—the main heading from the shaft.
2173. Was it far from the bottom of the shaft? No, not a great distance. I should think 100 yards at the outside, no more.
2174. Were the men in the mine at the time that creep came on? It came on the night previously. I was working in the night shift, and we perceived the creep coming on. The roof fell in the night-time, after the pit had knocked off. It shut off one part of the workings altogether for some time.
2175. Did the roof come down on to the roadway? Yes, right up to the surface.
2176. Do you know the extent to which it blocked the roadway? It was a terrible distance; I should think fully 100 yards in length. It took some months to get through it to get ready for work again.
2177. If that fall had occurred in the day-time, and the men had been at work could they have got out of the mine? It would have been a risky affair, because even in the return airway, that is the No. 2 heading, a portion of that heading fell. Fortunately it happened to break before it got to the cut-through that led into the return airway, otherwise the men would have been entombed. There was another road they could have come out of, called the No. 6 heading, but this was practically closed through the coal bulging from the sides. There may have been other ways of getting out.
2178. Do you know whether that fall crushed the pillars, or came over them? It came straight over all the pillars till it got to the main road. In the main road the bords were broken off between the main road and the airway. There was a 12-yard pillar, and had it not been for that 12-yard pillar the mine would have been closed. The 12-yard pillar broke it. If that pillar had been 6 yards or 4 yards, like some of the others, it would have resulted in the collapse of that part of the mine. The 12-yard pillar saved it.
2179. What would be the number of men employed in that particular district at that time? They employed about 300 men at that time, and in that district there would be upwards of 100 men.
2180. *President.*] Do you say that 8-yard pillars would not have saved the mine? It is very doubtful whether they would have saved that part of the mine.
2181. Is that a sort of thing that is very unusual? It is a common occurrence here.
2182. *Mr. Curley.*] Did that impress you at the time with the idea that this matter of small pillars was a mistake in mining? It did, because I ran a very narrow escape at that time, and also a friend of mine who was with me. We might have both been smothered. We could see the fall coming, and we put in chocks—in fact, we stopped longer than we ought to have stopped. We were thrown down on our faces when it happened to fall, and it was with an effort that some of us who were there got clear of it.
2183. How far was that away from the bottom of the shaft? From the first end of it—at the furthest 100 or 150 yards.
2184. Was that portion of the mine stopped for some considerable time? It was some months before they got the road ready for working.
2185. Did you ever notice the ventilation of that colliery in any way defective? I did, and in every colliery that I have worked at in the district; not that colliery more than others.
2186. Was there plenty of air on the headings? Yes.
2187. What was the difficulty then? There was not proper means for having it where the men were working.

working. All the reports of the check-inspectors, and everybody else that measured the air, go to show that there was always plenty of air on the main roads, and if conveyed to where the men were working there would never have been bother about it.

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2188. Could the air have been conveyed to the working places? Yes, it could.

2189. Do you know of any reason why it could not be conveyed? Only one reason, and that is a matter—a small matter—when it is considered that health is at stake, and that is probably the expense, which is a trifling matter.

2190. Do you think that provisions for better ventilation to carry the air into the working faces would cost anything like 4d., 6d., or 8d. per ton? I do not. On a subject such as this I would suggest that you do not take my evidence at all, but evidence of men who are not in the position I am in, and who can give the practical and theoretical side, such men as Mr. Humble, or Jonathan May, who can show by figures what the expense would be. Mr. Humble says that it ought not to cost 1½d. per ton, assuming that the brattice would have to be renewed at every bord. Others put it down at one half-penny per ton. A colliery manager, in my hearing, John Turnbull, told us that he managed it for one half-penny per ton, that that was what it cost him for labour and everything. I think there is a mistaken idea about the cost of this bratticing. In the old country I worked where it was used, and it has a longer life than some give to it, and the expense to put it up is a mere trifle.

2191. Would not the expense vary according to the size of the seams at the different collieries? Yes.

2192. One seam might be thinner than another. Do you think, taking into consideration the variation of the seams, the cost would come to what has been stated by some of the colliery managers? No, it is impossible for it to come to that. I was the mover of the amendment in the Legislative Assembly that the air should be taken to within 15 yards of each working face by brattice where gas does not exist, and to 3 yards of the working face where gas does exist. A bord would be worked 15 yards before brattice was to be put up and according to the Bill it should be worked only 22 yards more before the brattice could be taken down again, so that the brattice would not have to be up very long at all. It would be up till the cut-through was put through. In our mode of ventilation we have no means of carrying the air to the men where they are working. I have seen places with only a narrow way for the skip and horse to get along through the refuse that is thrown on each side, and when the shots have been fired first thing in the morning the place has never been clear of smoke all day. I have a book with me, written by J. T. Beard, called "Ventilation of Mines." In chapter I, on page 1, under the heading of "Ventilation," he says:—

First, we understand by the term "Ventilation," as applied to mines, the removing of the air contaminated and laden with the poisonous gases of the pit, and supplying in its place fresh air from the outside. To do this requires the maintaining of a constant current of air through the pit, and conducting such current by means of doors, stoppings, over-casts, &c., around the entire pit and particularly to the working faces, where it is most needed.

My argument has always been, how can air go unless it is taken. I know I may be met probably with this question:—How is it that these things have not been argued for before, and my answer is, that they have been argued for before, and that in this Colony, and especially in the northern district the working of our mines and seams have altered so much that it is absolutely necessary for an alteration in the mode of ventilation. We know there are mines to-day where the seam ranges from 8 to 9 feet thick. Several years ago the men used to be allowed to work that seam all before them, taking it in a body. Now the managers and masters have managed to get an agreement, which we agitated for, making 5 feet a minimum height. Where there is over 5 feet they can compel the men to split this seam into two sections, and there is one pit where they work the seam in three sections. In working these different sections their work is so much harder, because they have to do twice the amount of holing to get out the same coal as before, and nearly double the shooting, and they work to make what little wages they do at the present time. The thickness of the seam also makes it necessary for an alteration in ventilation for the sake of the health of the men. I know how circumstances stand with men to-day. It would not do for me to give men's names for the sake of their bread and butter. Through the ventilation men cannot work, they have to struggle on the best way they can.

2193. Your opinion is, Mr. Edden, that if the ventilation was carried up to the working faces it would remedy numbers of these complaints? I have no doubt about it whatever.

2194. Do you think it should be put beyond a question of doubt whether that should be done or not? There can be no doubt about it at all; it should be done. I know there are a lot of mining authorities that can be quoted upon this matter. The majority of mining experts have had experience in the old country, and they cannot gainsay the fact that they take a pride in ventilating a mine in England. They are forced to do so, because if they did not in some cases they would not have any mine.

2195. Did you ever see any other fall in the Newcastle Company's mine? No, not of any consequence; only what might be expected by the taking out of pillars, which is necessary.

2196. With regard to the taking out of pillars;—do you think that it is more economical to leave the larger pillar and work it out afterwards? I believe there would be more coal saved if larger pillars were left.

2197. Would it be safe for the Company? Yes, and safer for the miner. I have seen pillars taken out in mines in this Colony that have surprised me. The way it was done makes one think there is no care about one's safety. A bord worked on each side, and falling in on each side. They would start on the main road to take out the pillar, so that in case of danger they would have no place of safety. The pillar has been worked off the main heading—that is, when they are thin.

2198. When a man is going in like that with his pillar, he has the width of the bord on each side? Yes.

2199. Does not that form a big vacuum? Yes—at the least 20 yards wide.

2200. I think you referred to having worked in the Waratah Company's Mine. Did you notice anything unusual while you were working there? No; when I worked there I left the Newcastle Company's Mine to put in a drive to find the bore-hole seam.

2201. Was that a stone drive? It was a mixture of coal and shale, and bands of all descriptions. While we were driving that heading it let off a large amount of gas. I have heard it explode after we had gone out.

2202. That is, when you went back to your work again? Yes. That drive was a mile and a quarter through, and all driven by bratticing. The air was carried by bratticing.

2203. Do you mean, when you say explode, an actual explosion? No; light up, but there was no explosion. We were not away long enough for it to accumulate; but it is an evident fact that it would have exploded.

2204.

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2204. Had you any opportunities while working in that drive to see the system of working throughout the mine? The mine was not opened up till we put the drive through.
2205. Did you leave after you put that drive through? I was not there long after.
2206. While you were there, was the work on which you were engaged on the 8-yard bord system? Yes, 8-yard bords and 4-yard pillars.
2207. Have you any idea what the depth of that mine would be? I think it was about 500 feet deep.
2208. You said you have worked at West Wallsend? Yes, for a short time.
2209. What was the system of working there? Bord and pillar.
2210. What was the width of the bord? 8 yards.
2211. What was the width of the pillar? The pillars were 4 yards and 6 yards wide—6 yards chiefly.
2212. Do you know the depth of that mine? About 600 feet.
2213. Where you have worked, with regard to the pillars—take the Newcastle Company's mine for instance—were the pillars kept to a uniform width; were they driven by any line? No.
2214. Would they sometime be less than 4 yards wide? Oh, yes; sometimes less than 4 yards, through the men encroaching on the pillar.
2215. When you were working in these bords, if the manager or deputy wished you to leave a portion on, would he put a mark on the coal? Yes, I have seen that done.
2216. Had that mark to be left on? Yes.
2217. Was he the only man that gave authority? Yes.
2218. Had his authority to be respected? Yes, sometimes.
2219. Could he enforce it? No, he had no power that I know of to enforce it, except to send you out of the mine.
2220. Could he not give an imperative order, and see that that order was respected? Oh, yes; he could do that. As far as I was concerned I always respected such orders.
2221. With regard to the other mines, are you aware whether the bords were driven by any line at West Wallsend? When I worked there they were not.
2222. Do you think that a regulation of that kind should be adopted? I think it would be a big improvement. Unless the bord is driven by a line, it is impossible to keep it, as it ought to be, without eating into the pillars.
2223. What is intended to be kept as a pillar you think should be left? Yes, it would not be much trouble. I do not think there would be much expense in connection with that.
2224. What system have you noticed adopted in these mines with regard to entering the mine in the morning. Was there any mark on the face showing there had been an inspection? I never saw that carried out specially to my knowledge. I have never seen it done in this Colony. It was always done at home in the old country. A mark was always put up on a board at a certain point.
2225. Do you think that that should be done in this Colony? Yes, I do, because many of our mines now are not what they used to be. A lot of them are letting off gas in larger quantities than they ever did before, and it is absolutely necessary that these places should be visited before men enter them.
2226. Do you know whether there is any uniformity with regard to men entering the mine. Do all the men go down at the same time? I think there may be uniformity at some mines, but not at all of them. It is not the management that keeps up that uniformity, it is a rule with the men. I am told there are some places where the men are going in at all hours, and stopping all hours.
2227. Will that apply more to where there are tunnels to enter the mine by? Yes, it chiefly applies to such cases.
2228. Do you think it would be more advantageous if some uniform system was adopted for entering a mine? I think there ought to be a uniform system adopted. I do not think that men ought to have discriminating powers to enter a mine or come out of it when they think fit.
2229. Do you know the provision in the Bill with regard to the working hours. Will you look at section 36 in the Bill, on page 17 (*see Appendix A*). Have you thought this matter over? Yes, I have.
2230. What are your views? I believe it ought to be enforced, that some provision ought to be made for limiting the hours for working in mines, and everybody is of the same opinion. We do not find anybody of a different opinion. I have never heard anybody yet say, but that that is quite long enough for men to work. The fact, however, remains that encroachments are made, and that it is getting from eight to eight and a half, and nine hours, and so on. Only a short time ago I had a letter from one of the collieries in the North stating that a manager had told the men that if they dared to leave the face until a certain time they could take their tools out, and we know what that means at the present time. Everybody says we are favourable to it, but we believe the men should get it by the power of their unions. I think that is a wrong position to take up. If the men are to have it why not legislate for it—legalise it. I do not think it should be left to the Unions, as that course might result in the old barbarous methods of settling what one says is right and the other says is wrong.
2231. Have you heard what has been said about it ontailing more expense? I remember Dr. Robertson stating that in his opinion it would come to 3d. or 4d. per ton extra, but he never showed us how.
2232. Can you conceive how it would come to anything like that? I cannot. We put the question to men whose evidence on such a subject would have more weight than mine, because I am looked upon as a kind of partisan, and they said that it could not increase the cost more than 1d. per ton. Take the men I have already referred to, and they can have no object in view but the truth; they are practical men with technical knowledge also, men who have been in mines from their youth, and who now hold high positions under the Crown, and they state that the increase in cost could not be more than 1d. per ton.
2233. What men do you refer to? Mr. Humble and Jonathan May. I remember putting the question to Mr. Humble:—What would he think if a mining expert said it would cost so much per ton? and he said, "I should think the mining expert had never considered the question." I think there is something else we want to consider, and that is the health of the men to some extent. The very laws in our statute books tell the tale, and yet in this Colony where men have to work in an impure atmosphere, we are told that the Legislature cannot interfere in this matter because it is interfering with the liberty of the subject. I think the thing is absurd.
2234. Do you think a provision like that would ruin the industry? How could it. It would be an impossibility.
2235. Do you think that 3d. or 4d. per ton in some cases would cover the whole underground account in a colliery with regard to the payment of wheelers and other men employed? I am hardly in a position to

to answer that question, but I should say that it would. From what I have known in England, at the price men used to take the getting of the coal, and pay men underground, I should assume that 3d. or 4d. per ton would cover it. A. Edden,
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2236. In the event of a few more hands having to be employed in a limited way would that come to anything like 3d. or 4d. per ton? No, it would not.

2237. Do you think that the managers as a whole object to the men working eight hours at the present time? I cannot say. I know of no cases only the one I referred to where a manager politely told the men they must not leave the face until a certain time.

2238. Is it not one of their contentions that they have no objection to the men working eight hours? Undoubtedly.

2239. Should that be kept up in a mutual way? Yes; if they are in favour of it.

2240. Without legislation? Yes, without legislation. I never saw a man yet but deems that it is long enough for men to work.

2241. You consider that while that contention is put forward, in some cases the employers do not give very much assistance to see it carried out? If a man felt disposed to work twelve hours, in many cases they would do it. It is, however, a mistaken idea, and it is of no benefit to the company.

2242. Is the contention that is put forward by some of the proprietors, that the men, being contractors, can come out of the mine any time they like, correct? No; it is not correct. I was told that at the Lambton Colliery, where there is a tunnel, a man could leave his work when he liked, but now I am told there is a man stationed at the entrance to the tunnel to put the names of the men down and the times they go in, and the times they come out.

2243. If the men were to come out in anything like any numbers at any time they pleased, what would be the result as far as their occupation was concerned? They would get their walking-order—they would have to go. Another thing, I go as far as to say that I do not think men ought to come out after they have worked two or three hours if they are going to stop the mine. If there are two men in a bord, and they have plenty of coal, and by mutual arrangement one of these men comes out, I do not think anybody has anything to do with it.

2244. In such a case as that, would that man get up where there is a shaft? He could not get up without the consent of the manager.

2245. Unless he came out through sickness, or accident, or something of that kind? Exactly.

2246. Have you thought over the clause in the Bill that provides for a minimum quantity of air—the section in the Bill is [50] 47, on page 23 (see Appendix A)? Yes; I have. The Bill as it left the Legislative Assembly provides for a minimum quantity of air, to be not less than 150 cubic feet, and I look upon that as a wise provision. I know that in the English Act the word “adequate” is used, and, if our mines were like the English mines, no doubt the same provision would do here; but they are different. When I went to Victoria a short time ago, I had a conversation with some men in connection with gold-mining that impressed me very much. The Victorian Act contains these very words, “an adequate amount of ventilation,” &c. I asked how this provision in the Act worked, and they contended that it was one of the worst provisions in the Act. Who is to define what is an adequate amount of ventilation? One authority says one thing, and another authority says another. There is nobody to define what should be an adequate amount. None of the authorities say under 100 feet where there is no gas, some of them put it as high as 500 feet, and some 250 feet, but they are all above 100 cubic feet. The question is, who is to define what is an adequate amount of air, if it is to be in the Act in that way.

2247. Do you believe in a minimum quantity being stipulated? I do.

2248. *President.*] Under the proposed Bill, suppose that you put in an adequate amount of ventilation to be not less than 150 cubic feet, would they not have to give enough air? That could only occur in my opinion in a mine where gas was accumulating, and if the inspector found there was 150 feet in a heading where there was gas, and this was not enough air, they would be compelled to get more air to drive the gas away.

2249. Would 150 cubic feet of air be enough in a mine where there were no gases? Yes, I should say so. We have in the present Act 100 cubic feet.

2250. It has been said that the reading of the present Act is, that if 100 feet of air passes along the airway, the inspector's hands are tied? Yes, that is the trouble, but I do not know whether the inspector's hands are tied. We have, I think, a precedent to go by. I believe an inspector went into a colliery and found that there was not sufficient ventilation, that gas was accumulating. The inspector took the manager to court, and the result was that he had to supply more air. The manager was fined. The question is, what amount of ventilation is necessary for a man to breathe, and be, as he ought to be, at his work. I think that we ought to take the best authorities on the subject, and frame a Bill on what they think. I would be sorry for a Bill to be framed on what I say. The question to decide in the present Bill is, whether the air should pass each working place, or be taken into the working face.

2251. It appears to me that the meaning of the present Act is, that the air should be taken to where the men are working? I believe that was the intention of the framers of the Act, but still the fact remains that the men do not get the air.

2252. The Act does not say that the minimum is not to be taken to the working places? I was working in a mine, and where the heading rose, the ventilation followed us up till it got to the cut-through, and went into the cut-through and down the return. I said to the manager, “If you send me a few chaff-bags, I will soon alter this”; but he said that would never do, the Act does not specify it, and if you are allowed to do this we will have to allow it to be done all over the pit.” I think the framers of the Act meant that the air was to go into the working place, but the worst of it is that the air sweeps by the working place, and cannot get into it unless it is taken there.

2253. If you provide that there is to be an adequate amount of air in the working place, it must get there, and that is a matter for the manager;—Will you look at section 12, sub-sections 2 and 3, of the present Act (see Appendix B)? I believe that was the meaning of the Act, but the trouble is that we cannot get it.

2254. If it is a fact that men have been deprived of the necessary quantity of air because of the construction put on the Act, I think a case should have been tried, because, looking at the Act, as I read it, the interpretation does not seem to me to be correct? I hope it is not.

2255. *Mr. Curley.*] In that particular case you cited, did you point out to the manager that that was seriously

A. Elden, seriously affecting you as a miner? I did; I left the place—I would not work in it. I absolutely refused to work there. I was breaking a board away just past the cut-through, and I would not stop it out.

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2256. Did the manager find you another place? Yes, he did.

2257. Do you think that the section in the Bill dealing with the ventilation of mines should stand as it was originally drafted? I do.

2258. *President.*] No one wants to do anything that is not right; therefore, if there is a proper manager and a clause in the Bill which says that an adequate amount of ventilation shall be given to the miners working in the face, is it not better to have it that way than to bind a manager down by any hard and fast rules; is it not better to say you have to provide an adequate amount of ventilation, never mind how you do it, of course, with the powers of inspectors under this new Bill? I thoroughly believe in a minimum quantity being stated, and that would not debar a manager from giving more if necessary. In the amendment I moved in the Legislative Assembly, I put it that an adequate amount of ventilation shall be carried to within 15 yards of each working face where gas does not exist, and to within 3 yards of each working face where gas does exist, by brattice or otherwise. He can take it by brattice, or anything else he likes.

2259. Suppose you have an adequate amount of ventilation, being not less in any case than 150 cubic feet of pure air per minute, would it not be well to leave it to the manager as to how he shall get it to the working face;—is not the less you tie him down the better? I think sub-section 3 of section [49] 46 in the Bill, which I put in, is the best way of putting it.

2260. What do you want that section for if you have the next section [50] 47. If you have it that a man is to be supplied with an adequate amount of ventilation you do not want the section that you have referred to that you moved? In my opinion the Bill requires that section because it distinctly says where the air shall be taken to. At the present time, as long as they can get the measurement, it is all right, and they never measure the air where the men are working.

2261. That is not so in England because in England they read the Act properly. The words in the English Act of 1872 are exactly the same as the words in our present Act, sub-sections 2 and 3 of section 12? I admit that an adequate amount is mentioned there, and that is the stumbling-block. Mining authorities state what amount of air is sufficient, and what should be there; and if our managers know what is required, what objection can there be to fix a minimum amount. Although the English Act is good, that does not say that it is perfect.

2262. The objection to put in a minimum is for fear that they should give it some narrow construction? I think that all the trouble is the 50 extra feet.

2263. The fear is that these inspectors, if you put in a minimum, may still be saying he has got his minimum—the anemometer shows he has it—and that is enough? That is what the managers say. They seem troubled in their hearts that they would not be able to give more if this minimum was fixed. I am sorry to have to state what I know to be a fact, that in this Colony the biggest interest is not in men's health, but in dividends. That is what the manager bothers his head about, and the men's health is quite a secondary matter. If companies cannot pay 7, 8, or 10 per cent. they are not satisfied, while at home, in the old country, they are satisfied with 2 or 3 per cent. Their objection here is of really no value, because, as an experienced man, I have had to leave my work and come out to get a little bit of fresh air. I know that in many cases this is so, and there is not that care and anxiety to see to the ventilation in this Colony that there is in England.

2264. If you put it that an adequate supply of air is to be given, does it not put the inspector on the alert, and make him see that the air is given? The same question was put to Mr. Humble, and I look upon him as a clever man, and he is in favour of the minimum quantity. He says there is no impediment, and he considers that 150 feet is quite little enough, and that it does not prevent them from providing more.

2265. Is there no fear that they may be satisfied with only giving 150 feet, while, with an adequate supply, there ought to be more? I do not think so. I think the minimum should be fixed, because it is best to define what is an adequate amount. Take a man like Mr. Croudace, or Mr. Alexander Ross, or any other man who is looked upon as an authority, and suppose that Mr. Humble says, I went in so and so, and found there was not an adequate amount of ventilation, and the case goes to Court. Mr. Croudace gets into the box and says, "I consider there was an adequate amount of ventilation," who is to decide between those two, or what standard are they going to have. It is simply one man's word against the other.

2266. *Mr. Gregson.*] In that case, suppose the inspector says there is not an adequate quantity, and the manager says there is, how is that to be settled? You see there the difficulty about the word adequate.

2267. By the Bill, it is to be settled by arbitration? Exactly; but looking at it from a practical standpoint, it is straining at things. I think the minimum provides for it all.

2268. You seem to look upon the inspector as being a man without any authority? Undoubtedly he is to-day.

2269. But the Bill alters that, and gives him authority, and what is wanted is that the inspector shall say whether the thing is right or wrong. If an authority, call him an inspector, is to say whether there is an adequate quantity of ventilation in the pit, what more do you want? A minimum quantity.

2270. But why? Because you may get some men before this Commission who might say that 50 feet is enough.

2271. But it is for the inspector to say what is adequate or inadequate. The inspector says this is not adequate? Yes; then the manager says it is adequate, and he reports it, and we go to arbitration, which may take weeks.

2272. Will you look at section [22] 20 on page 9 of the Bill, "Notice by inspector of causes of danger," &c. (*see Appendix A*)? Yes, but this is a very round-about way.

2273. *Mr. Curley.*] If a man has to work in the same position as you have instanced, would this mode of procedure meet such circumstances? No, certainly not; a man has to go home and wait this arbitration.

2274. *President.*] Suppose you make 150 cubic feet the minimum, and the inspector says there ought to be more, and the manager says I do not think so, would they not still have to go to arbitration? Yes. If there is not gas to be seen to fire, or black damp, I think that amount of air is sufficient.

2275. Suppose there was black damp? I should say the manager would know it was there, and would shift it.

2276.

2276. But he has got his 150 cubic feet, and that is sufficient? Do you think he would stick at that?

2277. I am asking you to think? If he would stick at that, it is necessary for something else to be done.

2278. I want to do all I can for the men, but my belief is, that there might be some narrow construction put upon this Bill, such as has been put on the present Act. The Act says that an adequate amount of air, not less than 100 feet, shall sweep undiminished past the working place. I cannot understand men who are not getting this air putting up with it under this Act? It is because the theory has always been that the air should measure on the heading, not where the men are working. The inspectors come with their anemometer and fix it 100 yards from where the men are working, and get the measurement there, but where the men are working they may not be able to breathe. If I had the power to-morrow, to take you down to some of our mines, and say, we tumble in at 10 o'clock in the morning, I have not the slightest doubt you would be astonished at what you would find out. After a bord gets turned off the heading, 10 or 12 yards away, in nine cases out of ten, the men are without air.

2279. *Mr. Curley.*] Do you feel disposed to alter your opinion with regard to the minimum quantity of air? No, I do not.

2280. Do you approve of the question of splits in a mine? Yes, I do, and all scientific men are in favour of splits.

2281. Do you think that sub-section 3, of section [49] 46, should be retained in the Bill (*see Appendix A*)? I do.

2282. Do you see that in the heading of that section the word "parts" is substituted for the word "splits"? Yes, but I think the word "splits" is better understood—it is a mining term. Let us take a case, in one of our mines in the Northern district, say the A. A. Company. In that mine they have 300 or 400 men, a large number of horses, powder-smoke, and the heat from lamps, and such like. A current of air goes in, and sweeps all round that mine, it goes to the first, to the second, and so on, carrying with it all the noxious gases till it gets to the last lot of men.

2283. *Mr. Gregson.*] What is the cure for that? Splits.

2284. You are aware that the provision for the division of a mine into splits is not in the English Act. A mine is divided into splits here, but the objection is to tying the manager's hands hard and fast. In the English Act there is a rule, section 49 (*see Appendix C*) relating to these splits? The point for us to consider, or anybody else, is, are we to take any notice of men who have made this matter a study, and if we are to take notice of them, they say that this is the way a mine should be worked in case of fire, or in case of water, ventilation, and so forth; and believing these men to be right, I think the provision should be inserted in the Bill for the more efficient working of our collieries.

2285. *President.*] In England they do without putting this into their Act? Perhaps they may bring in another Act later on.

2286. Will not this be done under good management? The same argument will apply to the whole of the Bill. Why do we want a Bill at all. Why not leave everything to the managers?

2287. In the first place, a manager is to have his mine in proper order, and the inspector will see that it is, and that the men get their proper quantity of air? Mining experts say that this is the way a mine ought to be worked. If a manager sets himself higher than these authorities, and says they are wrong, then the question comes to this, has he a right to say, "I will not have the thing done in this way."

2288. *Mr. Curley.*] Do you feel disposed to alter your opinion on this matter? I have seen no reasons for altering my opinion. If we say that this is to be left to the inspector or the manager, I say I would not leave it to the inspector or the manager.

2289. *Mr. Gregson.*] Do you doubt the inspectors? This Bill is to guide them in their duties as to what they should do.

2290. This matter is left to the inspectors in England? They have different management in England to what we have here.

2291. *Mr. Curley.*] Do you know the clause in the Bill referring to the weighing, section [41] 38, on page 18 of the Bill (*see Appendix A*)? Yes.

2292. Was the standard weight in existence at the Newcastle Company's Colliery when you were there? Yes, and it is in existence there now.

2293. Do you consider that you lose much weight under that system? Yes, I believe so, but not at that colliery, as much as at others, I have seen 13 cwt. or 13 cwt. 2 qr. marked up on the board when you know that the miner was only to be paid for 12 cwt.

2294. *Mr. Fegan* during his evidence referred to some statement that had been handed to you by a check-weighman. Can you give us any information on this subject? I moved the adjournment of the House on the weighing question. One statement was in connection with the New Lambton Colliery. I think it was that 1,970 tons, or more, of coal had gone over the machine in four years that the men had not received payment for. The New Lambton Colliery does not work half-time on the average, and that was the amount of coal that went over that machine that the men never received a penny for. I showed the statement to Sir George Dibbs. The number of tons I have mentioned was the excess the men had got, and not been paid for. There was another paper also from the Hetton Colliery.

2295. What was the result of the Hetton business? The result was that I moved the adjournment of the House. *Mr. Slattery* was then Minister, and agreed that the Act made provision for the men to be paid. There were two men with a little more courage than the rest who were bested out of £1 8s. in one fortnight. One little fellow said, "I am not going to suffer this," and demanded the money. He summoned the Company to the Court, and the case was tried before Judge Backhouse, he, however, decided against the men. The manager of the colliery admitted the coal had gone over the screen, and although this was admitted, the case was given against the men, because it was the rule.

2296. With regard to the weighing, do you think the men are satisfied with an average, or do they want every skip weighed? I have heard some of the men ask for every skip to be weighed, but not many. I think the men would be satisfied with the average, provided the standard weight was abolished.

2297. That is if a fair number of skips was weighed every day? I think there ought to be a certain number of skips weighed every day. There are collieries in the Colony in the south, and in the west, that suffer more than they do up north. I think so many skips should be weighed.

2298. Do you think that if a fair number of skips was weighed, there would be any complaint about the average? If it was so that every skip could be weighed, I think they ought to be weighed.

2299. Would that increase the cost of the coal? I do not think that it would. Two men in England do

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A. Edden,
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it with a larger output than they have in the collieries here. At a mine I worked in, they put out from 1,400 to 1,600 tons a day, four skips at a time coming up the shaft, each skip weighed not more than 9 cwt., and every skip was weighed. As far as the north is concerned, I do not think there would be any trouble with the averaging system, as long as the standard weight is knocked in the head.

2300. You think that the standard weight ought to be abolished? I think it is nothing but a piece of robbery.

2301. *President.*] What proportion of skips do you think ought to be weighed? It would be rather difficult to fix the quantity.

2302. Suppose the check-weighman was given power to ask for a skip to be weighed when he thought fit? I think it would be better to get the opinion of somebody who is in the habit of weighing the coal. I went up to Lithgow several years ago and had a look at a colliery. I saw the skips come out of the tunnel and go right away into the waggon. I said, "Where is the weighman," they said "He is here," I said "Where," and they said "Over there, banking off." I said to him "When do you weigh," and he said, "When the manager tells me." That is a nice state of things, is it not. The manager might weigh a light skip, but if it is a heavy one let it go.

2303. *Mr. Gregson.*] Did you see this? I did with my own eyes.

2304. Were they pleased with that system? No, they were not. The fact of the matter is that when there are about three men looking for one man's job advantages are taken by some people. Up our way to-day, where the seat of unionism was, a man dare not say his life is his own to-day, in nine cases out of ten, for the sake of his bread and butter.

2305. *Mr. Curley.*] With regard to the powers of inspectors in this Bill;—do you think that the inspectors should have power to withdraw the men in case of danger? I certainly think they should. An inspector goes into a mine and sees men in a dangerous position, and yet he has to report on it, and then the case is to be referred to arbitration.

2306. *President.*] Do you think any manager would oppose an inspector's judgment? Managers are queer people, and do queer things.

2307. If anything happened would not that manager be practically ruined? I should think he would, but I do not think an inspector would wilfully stop a mine.

2308. Don't you see the tremendous power you are giving an inspector; if he had power to withdraw the men it could be made an engine of great harm; if an inspector was not a good man, and wanted to ruin a mine, don't you think he could? I do not think he could. We are taking extreme cases. Take the Stockton case. The inspectors to-day still hold that that mine is not safe. The manager would not take the responsibility of the mine, but made the men sign an agreement to take the responsibility off his shoulders.

2309. Under this Bill he would be liable to three months' imprisonment? He ought to be liable to three years. Those are the knotty questions.

2310. Will you look at sub-section 5, of section 21, on page 8 of the Bill, "Withdrawal of men in case of danger" (*see Appendix A*). Will you kindly read that section? Yes; but I really do not see anything in that section but what is right.

2311. An inspector could arbitrarily for some cause or other withdraw the men and ruin people by that. Don't you think you should legislate for practical things? I agree with you, but I do not see any danger of that kind, and I have never heard any arguments to show that there really is.

2312. Do you suppose that a manager would in any case resist an inspector who asked him to withdraw the men? We might have a bad manager, as well as a bad inspector.

2313. Then he would be liable to three months' imprisonment? Yes, but we would have to prove it. I cannot conceive of an inspector trying to ruin a mine, nor the manager allowing the men to work on if the mine was dangerous.

2314. *Mr. Gregson.*] What is your idea of the relations between inspectors and managers? I think they get on pretty well.

2315. Don't you think that they are always likely to do so? If so, there is no need for us to trouble about this Bill.

2316. Don't you think if the inspector is the man he ought to be, that a manager is likely to look up to him? I should say he would.

2317. Is that likely to be the case? I don't know all the managers.

2318. *Witness.*] I wish to point out that in the Northern District bratticing is used at Seaham, West Wallsend, Durham, Burwood Extended, Dudley, and part of Brown's Colliery at Minmi.

2319. *Mr. Curley.*] We have considered the question with regard to the powers of inspectors. Do you think that they should have the power to withdraw the men in case of danger? I do.

2320. With regard to the size of pillars, the minimum fixed under tidal waters, and not under tidal waters; do you believe in the provisions in the Bill as originally drafted, Rules 42-46, on pages 31 and 32 of the Bill (*see Appendix A*)? I do.

2321. Do you consider that managers and inspectors should have certificates for service as provided for in the Bill, that is, certificates for having served as either managers or inspectors. The section I refer to is [19] 17, on page 7 of the Bill (*see Appendix A*)? With reference to managers I think it would be rather hard for them to pass an examination at the present juncture. I think the clause was all right as it left the Assembly.

2322. Do you think the clause with regard to certificates for managers should be retained in the Bill as originally drafted? I do.

2323. *President.*] Would you be in favour of an alteration of this kind:—"Every inspector appointed under this Act shall, after the commencement of this Act, hold a first-class certificate of competency, or shall satisfy the Board appointed under section 5 of this Act, that he has exercised the duties of an inspector for at least five years, whereupon a certificate of service as inspector shall be granted by the Minister which shall qualify the holder thereof to be appointed an inspector under this section." Would you rather he should satisfy the Minister? No; the Board.

2324. Say we put it then "shall satisfy the Board" instead of the Minister? Yes; I think that will do.

[Witness withdrew.]

MONDAY, 23 SEPTEMBER, 1895.

[The Commission met in the Board Room, Chief Secretary's Office, at 2'30 p.m.]

Present:—

FRANCIS EDWARD ROGERS, Esq., Q.C. (PRESIDENT).

JAMES CURLEY, Esq.

JESSE GREGSON, Esq.

William Wilson sworn and examined:—

2325. *Mr. Curley*] What is your occupation, Mr. Wilson? I am a colliery manager.
2326. What is the name of the colliery you manage? The South Clifton Colliery, in the Illawarra district.
2327. Have you had very much experience in the management of mines? I have had twenty-two years' experience.
2328. What are the names of the collieries you have been connected with? I have managed the Vale of Clwydd and Zig-Zag Collieries at Lithgow, in the Western district, and the South Bulli, and the South Clifton Collieries in the Illawarra district, and the Ringwood Colliery in the south-west.
2329. I suppose you have given attention to almost every phase of mining? Yes, fairly well.
2330. Have you worked as a practical miner? No.
2331. How many years have elapsed from the time you started to manage these collieries up to the present time? Twenty-two years. I started in 1873. I was working in mines before I was manager.
2332. Have you any proprietary interest in the colliery you are now managing? No.
2333. What is the system of work pursued at the South Clifton Colliery? Bord and stall work.
2334. What is the width of your bords at that colliery? Some eight yards wide, some six yards, but eight yards generally.
2335. What is the width of your pillars? As a rule they are six yards, but some are 100 yards. The blocks that we have left in are 100 yards.
2336. Do you go in by a tunnel to your mine? We work the mine by a shaft. Some of the men may enter the mine by the shaft, but mostly all of them enter by the tunnel.
2337. What is the depth of the shaft at that colliery? 150 feet.
2338. Are your workings far from the shaft? They might be three quarters of a mile now.
2339. Have you much cover over head? We have, say an average of 100 or 120 feet outside of the mountain, but under the mountain we have about 1,000 feet.
2340. Are there any of the rolls in your colliery that are to be found in other mines in the district? No.
2341. Are you free from these rolls? Yes.
2342. Do they not sometimes come up on the floor about 15 or 18 inches? Yes.
2343. Are you entirely free from these rolls? Yes.
2344. Do you know what the composition of the rock is? It is a conglomerate rock.
2345. Is it proposed to carry your workings in there to any distance? Yes, at least a mile or a mile and a half.
2346. Do you take the pillars out afterwards? Yes.
2347. How will you work your pillars out? After we get to the boundary.
2348. In the event of your going under that thousand feet of conglomerate rock, do you propose to enlarge your pillars? No, I think it will be stronger there than where we are at present.
2349. Do you think that that rock will stand for ever, after that coal is taken away? The rock, as a rule, blocks itself before it gets to the surface.
2350. Do you not think that that cover will require some substantial pillar? Pillars are generally left. We do not take everything away.
2351. Do you think a 6 yard pillar would be quite ample under such circumstances? Oh, yes; because if it does break away it saves itself.
2352. What kind of stoppings have you on your intake? Stone stoppings.
2353. Is that in your main intake? We have stone stoppings in all cases, unless it may be in temporary stoppings.
2354. Is that stone for these stoppings found in the mine? Yes, when we brush off the roof there is about 18 inches of it.
2355. What is the height of your seam? From 4 ft. 6 in. to 6 feet high.
2356. Do you plaster these stoppings? No; we pack them up with small coal.
2357. Do you notice that the stoppings occasionally shrink? Yes, sometimes; but you have to keep them full, and in some cases to plaster them up with mullock. We do not use lime, except in the bottom of the shaft.
2358. How many yards of slack do you put behind these stoppings? About 6 or 7 yards. We use these places for stowing small coal.
2359. Do you pay particular attention to the stoppings in the intake? Oh, yes; we must do so to keep the air tight.
2360. Is your mine fairly well ventilated? Yes; very well ventilated. We have a fan, which averages about 60,000 cubic feet of air.
2361. Have you ever had any complaints about ventilation? None whatever.
2362. How are the men paid at that colliery? At so much per ton.
2363. Have you a weighman at the colliery on behalf of the company? Yes.
2364. What are the duties of this weighman? To weigh the coal for the miners, when it suits him.
2365. Has he any other duties? Yes.
2366. What are his other duties? He weighs all the coal that goes away in the trucks.
2367. Where is the weighbridge for that situated? On the mine.
2368. Whereabouts is the weighbridge situated that weighs the miners coal? Underneath the screens at the top of the pit. The weighbridge for the coal in waggons is on the railway line.
2369. Is that weighbridge far away from the pit? It might be 60 or 70 yards away, perhaps 100 yards.
2370. Do you weigh very many skips at that colliery? We do not weigh an extraordinary number.
2371. What do you call an extraordinary number? We weigh when we think it suits us to weigh.

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2372. You weigh when you think it suits you? Yes.
2373. Do you give instructions to the weighman, how to weigh, or when to weigh? No, I tell him to use his own discretion. There is a check weighman there.
2374. Has the check weighman anything to do with the number of skips to be weighed? No.
2375. Has he any power to dictate to the company's weighman on that matter? No.
2376. Have you ever had any complaints from the miners about not weighing a sufficient number of skips? We have had complaints sometimes.
2377. What do you do when these complaints are made? We generally weigh.
2378. *President.*] How many skips do you weigh on an average? Sometimes six, sometimes twelve a day; sometimes not a dozen in the fortnight. It just depends whether we think it is necessary to weigh. Sometimes it stops the pit to weigh coal when we are busy.
2379. How many skips come out of the mine in a day? If we are working a whole day, I suppose we would send about 300 or 400 skips in all.
2380. And out of that number of skips would the most number you would weigh be twelve? Yes.
2381. *Mr. Curley.*] How many men have you employed at the South Clifton Colliery? About 100.
2382. Have you 100 men there getting coal? About that number.
2383. If you only weigh that number of skips in a day, is it not possible that some men may go for a very long time between the periods of weighing without being weighed? Oh, yes, some time elapses.
2384. How is a man going to get anything like a fair average of his weight if you proceed in that way? He is bound to get a fair average, because we do not get anything from them.
2385. Does he get anything from you? He gets his weight.
2386. In this periodic fashion that you adopt for weighing, would it not be difficult for a man to get a fair weight? I think they all get a fair average; in fact I am sure they do.
2387. *President.*] Do you really think that is a fair average? I think so. The way it works, they all get their weight, and they are satisfied. If a man fills a light weight, he gets his average on that weight; every skip he fills is counted the same weight.
2388. If a light skip is the only skip weighed, do you mean to say that he gets his average? He may have half-a-dozen light skips one day and half-a-dozen heavy ones next day. He gets his average for the fortnight. He gets the average of his eight or ten skips every fortnight.
2389. *Mr. Curley.*] With this limited number of skips that you weigh, is it not possible that a man might go for a matter of months without being weighed? Yes; they do.
2390. Don't you think it is a serious matter to a man with a light weight to carry that weight so long? Oh, yes; but they are not supposed to fill light skips. The man that fills the heaviest weight is the man we want.
2391. Does not coal vary in weight, and might not a man do his best and still suffer through light coal? Oh, yes; but the coal does not vary in one particular pit, to make this noticeable.
2392. Take it in your pit? I do not think it does.
2393. Do not some portions of your pit vary when you get on tender coal? It is in the screening where the weight comes off; more screenings come out of this coal, and therefore it weighs lighter.
2394. Do you think that one skip in a hundred is enough to be weighed? I think so.
2395. *President.*] Do you know what the custom is in Newcastle? I think they have one screen for the purpose there. We send very little coal away—about 150 tons a day, an an average. I do not think we average more than 1,000 tons a fortnight—it might be, perhaps, 1,100 tons.
2396. *Mr. Curley.*] Did this system of weighing prevail at other collieries that you have been managing? Yes, it is the same system as at Newcastle.
2397. It may be the same system, but is the system of ascertaining the average as efficacious? There may be a few more skips weighed in Newcastle, because they do more work.
2398. What other collieries has this system been carried out in, where you have been managing? At South Bulli.
2399. Did they weigh there in that proportion? I think they weighed more than we do at South Clifton.
2400. How much more would they weigh than you do? They had a man doing nothing else.
2401. Was this man under your instructions? Yes.
2402. Did you limit him in any way with regard to the weighing? No; but I expect the weighman to look after the interest of the colliery.
2403. If there were any complaints, would he complain to you about the matter? Oh, yes.
2404. Do you think this number of skips is quite sufficient to meet the case? Yes; as long as you can get a fair average.
2405. How can you get a fair average? You can always tell how the skips are running, whether they are running light or not.
2406. How is a man to get a fair average? He should not fill light weight.
2407. Has he not a right to be paid for the weight that he does fill? So he is. We do not get any of his weight.
2408. *President.*] You say that you weigh about four skips in every hundred? Yes; but sometimes a great many more.
2409. Take it at four skips in a hundred;—does that four skips give a fair average of the hundred? Yes; we do not pick them; the weighman lets him know.
2410. Not the check weighman? Yes; the check weighman.
2411. Can the check weighman weigh any skip he likes? Yes.
2412. Does the weighman see the skip? They are both on the machine, but they do not see the skip.
2413. Is there any number on the skip? There is a token hanging on the inside of the skip, and you cannot get the token until the skip is empty. Nobody can see whose skip it is.
2414. *Mr. Curley.*] Have the men ever represented to you that they would like a higher average of skips weighed each day? Oh, yes; they have said they would like more skips weighed than I did weigh, and I have done it; but it does not make much difference. If they asked me to do it on the same day as they made the request, I would not, because they might start filling full, and I might lose weight. I believe they think what I do is fair.
2415. *President.*] Don't you think it would be better to have it, so that one skip in every twenty should be weighed? I do not think so. We lose sometimes, and gain sometimes, and when we see we are losing we weigh.

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2416. *Mr. Curley.*] How do you weigh the coal that you send away? We weigh every waggon.
2417. Why do you do that? Because we have to send the weight to the customers.
2418. Do you think that is the true way to get at the exact weight? Yes.
2419. That is, to weigh every waggon? Yes.
2420. Don't you think that the miner would get his due if every skip was weighed? Yes; but it would be a great deal of expense to the company, and a stoppage of work besides. It would be a large expense to the company.
2421. Have you not a weigh-bridge there? Yes.
2422. You have not, therefore, that expense to provide for? No.
2423. Is it not only a matter of running a few more skips there? Yes.
2424. How would that unduly increase the expense? It stops the pit while we are weighing coal, and when we are turning out 500 tons of coal a day we cannot afford to stop long.
2425. Is that any reason why the men should not have an opportunity of getting a sufficient number of skips weighed? If they want more skips weighed they can get them weighed.
2426. If they were to ask you to have a certain number of skips weighed every day, would you agree to it? No, I would not; it might not suit me to weigh every day, and I do not think it would be any benefit to them.
2427. Do you think that you are complying with the 20th section of the Act of 1876 (*see Appendix B*). Do you give the check-weigher there an opportunity to take a record of the weight if you will not weigh the skips? I weigh when it is necessary.
2428. *President.*] When it suits you? Yes; I do not trouble about that, because if it suits them, they can get weighed at any time. If they were to ask me to weigh twelve skips to-morrow I would do so, but not if the men underground were to know that I was going to weigh.
2429. *Mr. Curley.*] Have you looked at section 19 of the Act of 1876 (*see Appendix B*)? Yes; I have read the whole of that Act.
2430. Do you see there that they are to be paid according to the weight of the mineral gotten by them? Yes; but to do that you would have to weigh every skip of coal.
2431. Could not you weigh a reasonable number of skips? If they want me to weigh more, I will do so.
2432. Did you not say just now, that you will weigh as you please? I do not say I will weigh when they like. If they ask me to weigh to-day, I may not do so, but I will weigh later on, but they must know nothing about it.
2433. *Mr. Gregson.*] You say that complaints have been made to you about weighing? Yes.
2434. What answer have you made to these complaints? I always weigh.
2435. Do you go on weighing? No; because we have not the time always.
2436. Do you think it is any use to weigh for a day, and then go back to the old practice again? It keeps them up to the mark. If they were weighed every day, they might be worse off sometimes than they are now, and so might we ourselves.
2437. Does it matter who is worse off, as long as justice is done? It is only the trouble and the expense. In a big colliery, they can weigh one skip out of every truck, and that is what they do at South Bulli. As often as they could weigh, they did weigh. I think we are just as even as most of them up there, taking the average of the work we do.
2438. *Mr. Curley.*] Do you think that your method of weighing carries out the intention of the section of the Act I have drawn your attention to? I do not think that that section means that you are to weigh every skip, but that you shall take an average weight.
2439. The Act says that they shall be paid according to the weight of the mineral gotten by them? Then, if that is the case, every skip would have to be weighed.
2440. How many screens have you at the South Clifton Colliery altogether? Three.
2441. That is two besides the weigh-screen? Yes.
2442. What is the cost of the erection of a screen similar to the ones you have now in operation in your colliery? About £100.
2443. Do you think it would cost as much as £100 to put an additional screen up? Very nearly that amount. You would require kick-ups, and everything else with it to make it complete.
2444. How long would such a screen last? About twenty years, I suppose.
2445. Don't you think it would be better to erect another screen, in order that you might have the weigh-screen operating as a weigh-screen proper only? We have a weigh-screen.
2446. Did not you say that you could not afford to weigh a larger number of skips, because you would lose time? It is not the screen, it is the man who has to be there.
2447. Is it then only the expense of the man? We do not work more than three or four quarters during the week, and we could not afford to keep a man there constantly.
2448. What quantity do your skips hold? 10, 11, or 12 cwt.
2449. How large is your output? If we work all day we can turn out 500 or 600 tons.
2450. Do you only weigh four skips a day? If we start we may weigh half-a-dozen; we may weigh three or four in the morning, and three or four in the afternoon, but we do not weigh every day.
2451. You do not attempt to weigh every day? Sometimes we do, but we do not make it a rule.
2452. I suppose when you do not weigh the weighman will have instructions not to go to the weigh-bridge that day? No; he is on the top all the time, but we never tell their weighman.
2453. Does the weighman hold a dual position at your colliery? Yes.
2454. How many offices does he fill? He goes away on the trucks or waggons, and weighs that coal, also the miners' coal, and anything else that requires doing; he also does all the clerical work.
2455. Is your seam a clean seam? Yes, very clean.
2456. When the coal is tipped, does it require much cleaning? It requires no cleaning at all.
2457. It can soon be got rid of? Yes, with only just the screening.
2458. Is that not a reason why a certain number of skips should be weighed—I refer to the rapid way in which you can get rid of your coal? It can be done quickly enough. All that it has to do is to go over the screen.
2459. Have you seen the clause with regard to weighing in the proposed Bill;—it is clause [41] 38, on page 18 of the Bill (*see Appendix A*);—what is your opinion of that provision in the Bill? I do not see anything wrong with it. It is something similar to the provision in the present Act.

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2460. Only a little different;—have you looked at it very carefully? I was up at Lithgow when I received the subpoena to attend here to-day, and I have had very little time to look at it carefully.
2461. Have you anything to do with any of the collieries up at Lithgow? Yes.
2462. What colliery have you to do with in the Western district? The Zig-zag Colliery.
2463. Is the method of weighing at that colliery carried out in a similar way to what you have described? Yes.
2464. Does the weighman for the company there hold a dual position? We allow the miners' weighman to weigh the coal there himself. Sometimes the manager may see the weights now and again.
2465. How do you arrange about the selection of the number of skips there? It is left solely to the weighman to call for skips when he likes. There are, however, only twenty-three miners employed in that pit.
2466. Who is the manager of that colliery? Mr. John Wilson, a son of mine.
2467. In the event of your wanting a certain quantity of coal away that day, do you bother the weigh-screen at all? I do not know how they weigh there. I cannot speak definitely of the system there.
2468. Have you been managing there yourself? Yes.
2469. What was the method of weighing when you were there? I used to see the coal weighed myself.
2470. Did you weigh many skips in a fortnight? Just the same number as I do now at South Clifton. If they wanted coal weighed they got it weighed. It is a heavy coal there, and does not vary very much. There is not much slack in it.
2471. Are you sure you have looked at the clause in the proposed Bill about weighing? Well, I cannot say that I have looked at it particularly.
2472. Well, just look at the new clause [41] 38, on page 18 of the Bill (*see Appendix A*). I will read the section as it was originally drawn, and passed by the Assembly, and then as it has been amended by the Legislative Council. Do you believe in that section as it left the Legislative Assembly? No, I do not.
2473. What do you suggest? Under that section you would have to weigh all the coal of course.
2474. Seeing that you weigh all the coal you send away to market, don't you think the miner should have a similar advantage? Yes, but the trouble is in doing it. It would be more expensive to work a mine, and it is expensive enough now.
2475. Is it not a matter of competition rather than a matter of expense? Competition brings it down, no doubt. It has also brought the miners' wages down, and the profits of the mine-owners.
2476. Are you aware that there are differences of opinion as to the cause of this competition, and the origin of it? Yes, and there always will be.
2477. Is not this a very big question? Yes.
2478. In the event of that clause being amended in any shape or form, would you be favourable to having a fair number of skips weighed at every mine every day? That can be done.
2479. Do you think that is reasonable? I do not think it is unreasonable; but I do not see why it should be forced to be done, because I do not think the miner wants it any more than the manager. They are satisfied, as far as I can see.
2480. Don't you think that an arrangement like that would give more satisfaction? It might give more satisfaction. They were satisfied in Newcastle when I was there.
2481. Have you managed any mines in Newcastle? No.
2482. How do you come to speak about Newcastle? I have been working there.
2483. At what colliery did you work there? At the Lambton Colliery.
2484. What were you doing at the Lambton Colliery? I was carpenter and engineer there. I took Mr. Shott's place when he went to England.
2485. How long were you at the Lambton Colliery? I was there for eight or nine years.
2486. What was the method of weighing there? The weighman was there all day. He had to look after the screen. They were filling five or six waggons at a time, and he was in charge of the screens, as well as looking after the weighing. He weighed perhaps half of the day.
2487. Are you sure he did not weigh the whole of the day? I am sure he did not.
2488. Would you be surprised to hear that the weighman has to weigh the whole of the day? I believe they do now. The quantity they send away now requires that.
2489. Do you know that they have a foreman that looks after the screenmen? Yes; I suppose so. The average is not more than I am doing now when you compare the quantities that come out.
2490. *Mr. Gregson.*] Have you the standard weight system in force at your colliery? No.
2491. Do you know of any colliery in your district where this is in force? I do not know of any. I never had the standard weight. They have it at Newcastle, I believe, at some places.
2492. Have you any bar to regulate the height to which a skip can be filled? No.
2493. Can the men fill the skip to any height they like? Yes; to any height they like. Some of the skips weigh 15 cwt. We sometimes offer a prize for sending heavy skips.
2494. Do the miners generally fill to the same height? Yes; we have an endless rope at our colliery, and they fill to clear that rope.
2495. *Mr. Curley.*] What weight will your weigh-bridge register? A ton, I think.
2496. You say you have no standard weight? No; I can give you a plan of the mine, and also the colliery rules, if you think they will be of any use to you.
2497. Probably they might give some information to the Commission. Will you please send your plan and the colliery rules? I will.
2498. *Mr. Gregson.*] Have you looked through the proposed Bill? I only got it this morning.
2499. You know very little of its provisions then? Very little.
2500. Have you heard the Bill spoken about? Yes.
2501. Have you heard that it is proposed to make an alteration in the ventilation clause? Yes, the provisions are rather strict.
2502. In what respect? I understand they want more than 100 cubic feet of air, and I think that 100 cubic feet is enough. I think that there are plenty of mines that can do without brick stoppings, and in that Bill I believe they will be forced.
2503. Do you consider that your mine is sufficiently ventilated? Yes.
2504. Do the men ever complain to you about ventilation? No, they never have.

2505. Did you ever know of any case where they have suffered from want of air without complaining? No, not in our place. We have any amount of air. We could give them double the quantity if they wanted it.
2506. How do you ventilate your pit? By a fan.
2507. Have you ever heard of the men being anxious that more air should be given to them? Never.
2508. Have you read enough of the Bill to see that it ties the manager down to hard and fast lines in many respects? Yes.
2509. What is your general opinion about that? That it is too stringent.
2510. Do you think that more discretion should be left to the manager? I think so. I think the Bill adds a great deal to the expense of the mine as well. I think that inspectors of coal-mines have had it in their power to say what is to be done, and it has been done.
2511. You think that an inspector has sufficient power under the present Act? Yes.
2512. In carrying out his duties, does he do all that is necessary in the interests of the men? I think so.
2513. Does the inspector in your district visit you frequently? Yes.
2514. Does he give you any notice of his visits? No.
2515. Have you heard of his being there, without your knowing that he was there? Yes.
2516. Has he ever been called there to your knowledge by an anonymous letter from one of the miners? No, not to my knowledge.
2517. Have you ever heard him mention that there have been any complaints made to him at all? He has never mentioned such a thing as complaints to me.
2518. Generally speaking, according to your experience, do you look upon the provisions of this Bill, as being altogether beyond what is necessary? I think so.
2519. Have you any remarks you would like to make about any part of the Bill in particular? I consider that the section dealing with the weighing of coal is very strict.
2520. Do you consider that the alterations made by the Legislative Council are in any way objectionable? No, I do not think so.
2521. Would you be quite content with that section as the Legislative Council has left it? Yes.
2522. How many splits have you in your mine? Only one.
2523. Have you any signs of gas? No.
2524. Did you ever hear of gas in your colliery? No; and we examine every place every morning.
2525. Have you ever heard of gas having been seen? No, never.
2526. *Mr. Curley.*] What is the name of the makers of the fan you have at your colliery? Guibal; it is a Walker's.
2527. What is the diameter of the fan? 20 feet.
2528. Do you know what was the cost of this fan? It cost £1,500.
2529. Was that for the fan itself alone? No, with the fixing of it as well—the whole erection of it. With the fixing up, I should think it cost nearly £2,000 altogether, shaft, bricking, and everything else.
2530. Do you think that the air should be conveyed up to the working face? I do not think that is necessary.
2531. Where would you convey it then? I think 35 yards is near enough.
2532. Do you think that that is sufficient? I think so. I have never seen it fail as long as the cut-throughs were a proper distance.
2533. Does not the air get rather sluggish when the workman gets that far in advance of it? No, I think it is more comfortable.
2534. Is there any shot-firing in your colliery? No.
2535. Can they get coal without shooting? Yes; we only do shooting when brushing the roof.
2536. Have you been in the mine when a shot has been fired? Yes.
2537. Have you noticed the smoke hang? No, not for long. We only do brushing where the air is travelling.
2538. If a man had to get his coal with shots 35 yards up the bord, would not the smoke hang a good deal? If the places were close together, it might hang a little, but not for long.
2539. Don't you think, therefore, on that account, there should be some provision for ventilation? I have never seen it done. I have driven a place 100 yards before the air, where there was water, with a V drain of water going backwards.
2540. Where was this water coming from? From the roof. A large vein of water until you got into this place where the break was in the roof.
2541. Where was that? At Lithgow.
2542. Was there any brattice in this place? No, only this drain of water.
2543. What colliery was that in? In the Vale of Clwydd Colliery.
2544. Do you know the year when that occurred? I think it was about 1873 or 1874.
2545. Who was the manager of that colliery at that time? I was.
2546. Were you the manager of that colliery in 1878? Yes, I think I was.
2547. Did the inspector ever complain to you about deficient ventilation? I do not think so.
2548. If it is to be found in his report, would you believe he did? Yes, of course.
2549. Would you look at the report of the Department of Mines for the year 1878, and see what the inspector says there about the Vale of Clwydd Colliery, on page 147. What does he say? "Ventilation still very defective, notwithstanding repeated complaints made by myself to the manager of the matter. The fire-lamp having lately been removed from under the upcast shaft, there was no artificial means used for creating ventilation when I visited the mine in December last. The miners are not yet paid by weight for the coal they get."
2550. Are you satisfied that the inspector did complain at that time? Yes; but I do not know whether I was there then.
2551. Do you notice that the inspector points out that he had repeatedly drawn attention to this matter? Yes; but I do not think I was there then. I do not remember the circumstance.
2552. With regard to the provision in the Bill for splits (*see Appendix A*), did you say that you have only one split in your colliery? Yes.
2553. How many men have you in your mine? 100 men.
2554. Does not the Act say that not more than seventy-five men shall be in each split? Well, I have only fifty in each split. We have two districts, but only one split.

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2555. Do you consider that efficient ventilation in a mine is one of the prime objects to have in view? Yes, I do.
2556. That should be aimed at in every instance? Yes.
2557. Do you believe in the splitting of the air? I do; dividing it into splits.
2558. What do you think your fan is capable of producing? 300,000 cubic feet of air; and we work it up to 60,000.
2559. What time do you start work in the morning? 7 o'clock.
2560. What time do you knock off work at night? 5 o'clock.
2561. Do you ever ask the men to work any longer hours? I may have asked them, when busy, to stop a quarter extra to complete the shipping.
2562. Do you make a practice of doing this? No, we do not require it I am sorry to say.
2563. Do you ever call the men when there is no work? No.
2564. *President.*] Do you ever call them needlessly? No. One lot of men go in at 7 o'clock and come out at 2 o'clock, and another lot of men go in at 9 o'clock and come out at 5 o'clock.
2565. Have you ever known of any case in which the men have been underground sixteen hours? I do not think the miners would stop underground sixteen hours. There may be daymen who might work that number of hours at a job they have to get done.
2566. I am referring to miners getting coal, and working that number of hours? None of the miners work more than eight hours. I do not believe there is a miner in the country works more than eight hours, and some of them only work six hours.
2567. *Mr. Curley.*] How long would the miners be in that day that you wished them to stop an extra quarter? That would be the back shift, and it would not be really more than eight hours.
2568. *President.*] Do you know Mr. Henderson? Yes.
2569. Do you know anything about the Helensburgh Mine? No; I do not know much about the Helensburgh Mine.
2570. Is it true that the prevailing custom in your district is that the colliery shall draw coal from 7 o'clock in the morning until 5 o'clock at night? Yes; when they work all day.
2571. Does that mean two shifts? Yes.
2572. *Mr. Curley.*] Have you ever made an average of the number of skips you weigh, say for three or six months in each day? I have never made such an average.
2573. Can you tell us what the average would be? No; I cannot.
2574. *President.*] Are the Clifton and South Clifton Collieries two distinct collieries? Yes.
2575. Do you know how long the men work at the Clifton Colliery? I cannot say.
2576. How far is the Clifton Colliery from the South Clifton Colliery? About a mile. I think they work at the Clifton Colliery somewhat similar to us.
2577. Have they ever been working, to your knowledge, sixteen hours at the Clifton Colliery? Not to my knowledge.
2578. *Mr. Gregson.*] Have you ever heard of men being informed that if they did not remain in the face all that time they would be discharged? No.
2579. *Mr. Curley.*] Assuming that you had a very busy day, or were busy for a day, that you had a lot of orders to fill up, would you like to see the back shift come out without completing their day's work? No; I would like them to keep in their full time; but a remedy for that is to put more men on.
2580. Can the men do that in any pit? No.
2581. Would you allow that to go on as a manager? No; two, or three, or half-a-dozen men coming out would not make any difference.
2582. Is it a usual practice for men to do this? No, it is not. They are anxious to get all the work they can.

[Witness withdrew.]

Elias Arthur Jones sworn and examined:—

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2583. *Mr. Curley.*] What is your occupation, Mr. Jones? I am the Manager of the Corrimal Colliery.
2584. What is the name of the company that the colliery belongs to? The Southern Coal Company.
2585. How long have you been manager at that colliery? Three years next February.
2586. Have you managed any other collieries? Yes; I was at Woonona.
2587. How long did you manage at Woonona? For about two years and three months.
2588. Have you been connected with any other colliery? Yes; I was underground manager at Austinmer.
2589. Have you been connected with collieries for any lengthened period of years? Yes; since I was 13 years of age.
2590. Is Corrimal situated south of the Bulli Colliery? Yes.
2591. Do you enter the mine by a shaft, or do you enter by a tunnel? The entrance to the pit is in the mountain side.
2592. What distance is your mine in underground? I think we are in a little over three-quarters of a mile.
2593. What is your system of working? Pillar and stall.
2594. What is the width of your bords? Some are 8 yards, and some less.
2595. What is the width of your pillars? The pillars vary considerably. We work according to the rolls. We generally take out as much as we can between the rolls.
2596. Do you not leave a pillar of some description? The rolls constitute the pillar, but where there are no rolls pillars of coal are left.
2597. Do the rolls in that colliery go up to the roof? They go from 2 feet right up to the roof.
2598. Do they go right through the seam? Yes.
2599. Do they become a stone dyke? No; in many cases they cut the seam clean out.
2600. Are the rolls in your colliery similar to the rolls in some of the other collieries in your district? Yes; they run just about the same in South Bulli, Mount Pleasant, and Mount Keira.
2601. Are you sure these rolls appear in the Mount Keira Mine? Yes; I have seen them there myself.
2602. Have you seen them in Mount Keira lately? No; before I came to Corrimal.
2603. What are the sizes of the pillars? They vary considerably. I can hardly give the size. I have a plan here on which they are shown [*plan produced.*]

2604. Can you say what the sizes of the pillars are? From 3 yards up to 13 yards, and some of them larger where there are these big rolls. E. A. Jones, Esq.
2605. They vary? Yes.
2606. What system of ventilation have you? Furnace ventilation.
2607. Is your mine divided into splits? Yes; we have three splits.
2608. What number of men have you in the mine? About 140 miners. That was the number at the last caving.
2609. What are the hours of working at your mine? From 7 o'clock until 5 o'clock. Those are the recognised hours we work.
2610. Have you two shifts of men? Yes; a front shift and a back shift. The front shift starts work at 7 o'clock in the morning, and the back shift at 9 o'clock.
2611. Have you good ventilation at that colliery? Yes.
2612. Have you ever known the men to complain of the ventilation? No.
2613. Have you ever known the inspector of collieries to complain about not having the required quantity of air? No; every time he has been there he has said that things were in good order, and well secured as far as timber was concerned.
2614. Do you use much timber? Yes.
2615. Is it a bad roof? It is a shaley roof.
2616. Do the men set their own timber? Yes.
2617. Does the company provide the timber? Yes; we put it on the spot.
2618. Do you cut the timbers to the proper lengths? Yes.
2619. Do you find the miners with suitable lids? Yes.
2620. What kind of timber do you use? Flat and round timber mixed. Of course they set a lot of slabs—cap-pieces, in the headings especially, and we pay for these.
2621. What do you pay for this timber? One shilling, and 1s. 6d. a set for the 7-foot lengths, but we pay 4s. for the long sets.
2622. What do you call long sets? Eleven-foot lengths. We drive our main heading 11 feet wide.
2623. Do you always keep your return airway in a satisfactory condition? Yes.
2624. Do you always keep your return clear? Yes.
2625. What is the method of weighing at your colliery;—have you standard weight? No; we have an average.
2626. Do you pay the men by the average weight? Yes; by the weight they get. A miner may be weighed two or three times during a fortnight, and he is paid by the average weight he gets during that fortnight. A man may get weighed two or three times in a week, or two or three times in a month.
2627. Have you a weighman stationed at the screens on behalf of the company? Yes.
2628. What are that weighman's duties? To look after the waggons, put them under the screen, and to weigh coal. He also looks after the people at the screen to see that they do their duty.
2629. Is he foreman of the men? Yes; foreman of the screenmen.
2630. Does he do anything else besides what you have stated? No; that is all.
2631. He cannot be at the weighbridge all the time, then? No.
2632. How many skips do you put out in a day when you are working full time? About 900 or 1,000—something like that.
2633. Out of that number of skips, how many do you weigh? According to the check-weighman's account, posted up at the pit's mouth, the average lately has been about one in sixty or seventy.
2634. Is that number of skips satisfactory to the men? I have heard some of them complaining, and saying they would like to be weighed oftener. I have noticed that they complain when they stand at a low weight, but when they stand at a high weight there is no complaint at all.
2635. Do you think that the sixtieth or seventieth part of the weighing of the production of a miner is anything like a reasonable quantity to weigh? Yes, I do. If a man fills his coal honestly he need not be afraid to be weighed at any time.
2636. *President.*] Suppose he has the luck to have a light weight;—has not the manager the right] to weigh when he likes? Yes.
2637. What is to prevent his weighing whenever the miner likes;—I suppose a man can ask to be weighed whenever he likes? There are such a lot of skips with big pieces of stuff knocked off, and if a skip is broken the miners say that you have no right to weigh that skip. I am sure that there are many of the skips broken before they leave the bord so that they shall not be weighed, and that lumps are pulled off for that very purpose. We have found that out time after time. When they are rushed with skips, as fast as they can fill them, they pull one lump off the corner and say they will not weigh that skip, thinking to get the same average for that as the big skips before. If the skip does not come packed properly it will not be weighed, so that if they pull a lump off it will not be weighed.
2638. *Mr. Curley.*] Is it not the practice to mark a skip with chalk when it is broken? Yes; that is supposed to be the practice.
2639. Has the wheeler who has to do with it to chalk it? Yes; but the excuse is very often that he has not a bit of chalk.
2640. Cannot you supply the wheeler with chalk? I am afraid it would take a lot of chalk.
2641. Is chalk a costly matter? No; but they would not do it.
2642. Are they supposed to do it? Certainly; but they do not do it nevertheless.
2643. Whose look-out is it that they do not do it;—who has the discipline of the mine? You cannot have some one watching every wheeler.
2644. Have you taxed them with this breach of discipline? Yes; and I have discharged one or two men for the same thing.
2645. When was this? About five or six months ago.
2646. You say you have been manager of that colliery for three years? Yes; next February.
2647. How many men have you discharged for that sort of thing during that time? Two wheelers.
2648. Have you discharged any miners? No.
2649. Why did you discharge these wheelers? Because they did not mark the skips. The deputy on one occasion caught one of them coming out of the bord with the front of the skip all out.
2650. Did the deputy not stop him? It was coming out of the heading.
2651. Did he follow him out with the skip? He reported the matter to me. 2652.

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2652. Is this a very frequent occurrence? I know that when the skips are coming down the incline you cannot sit at the office door without seeing some of the coal falling off the front of the skip on account of bad packing.
2653. Do you not insist on weighing for your own protection? No; I tell the weighman to be very careful, and to weigh as often as he gets a chance.
2654. What is the system of weighing;—how many hours a day do you weigh? The weighman has to look after the placing of the waggons. When the locomotive comes up with the empty waggons, he has to look after the shunting, and when he has the opportunity after doing that, he is supposed to weigh.
2655. How long will it take the weighman to look after the waggons? About three-quarters of an hour each time they shunt.
2656. Are there any days on which you never weigh any skips at all? No certain days.
2657. Are there certain days when there is no coal weighed at all? I cannot tell you.
2658. Does not the weighman give his book into you? There are fortnightly weights.
2659. If the weighman missed weighing one day, would you have any knowledge about it? No.
2660. They might weigh, or they might not weigh? Just so.
2661. How many skips does the weighman weigh in a day? I cannot tell you without looking over the books, but from thirty to fifty, or sixty to seventy, is a rough estimate.
2662. You state that the average is one in about sixty or seventy? The check-weighman places it up one in sixty or seventy.
2663. How many skips a day will you draw out of the mine? Between 900 and 1,000.
2664. Do you think it would be a better plan to weigh more skips? I did not know they were not satisfied. Occasionally I have heard one of them say that he has a low weight, and he has wished me to weigh him when he got into a good place. He may ask then to be weighed.
2665. Have you looked into the present Coal Mines Act of 1876? Yes.
2666. Will you look at the 19th section of that Act, on page 7 (*see Appendix B*). Do you think you are complying with that section of the Act, by weighing one skip in every sixty or seventy? Yes, I do. The miner is paid by the weight he gets of the mineral gotten.
2667. How can he be paid for the weight of the mineral gotten if you do not weigh it for him? He is weighed and paid according to the average.
2668. Do you weigh you waggons before you send them away? They are all weighed at the Wollongong railway station.
2669. Do you take the Government record? Yes.
2670. Do the Government weigh every waggon? They are supposed to weigh every waggon.
2671. Do you think they do weigh every waggon? I think they do.
2672. Have you the total weight at the colliery, represented by the weighman, *i.e.*, the weight paid for on the part of the miners? Yes.
2673. Do you know the weight of the miners' production? Yes.
2674. Do you know the quantity that goes over the Government weighbridge;—is that weight returned to you? No.
2675. Can you get it when you want it? Yes.
2676. Do you not want it now and again—occasionally? I only want it to work out the costs.
2677. Do you ever check the weight that has gone away with the average weight taken at the colliery? It is only occasionally that I get the weight of the coal in waggons.
2678. How often do you get it? Every two or three pays.
2679. Would you get it every six weeks or two months? Yes.
2680. Have you ever noticed any discrepancy between the Government weight, and the weight of the coal that the miners have been paid for;—if you had a given weight for your waggons, and a given weight from your weighman, would you not put the two together to see if there was any discrepancy;—have you done that? Yes.
2681. Which side was the discrepancy on? On the side of the mine. There has been a discrepancy of 80 to 100 tons.
2682. In favour of whom? In favour of the company.
2683. *Mr. Gregson.*] In what time was that? I could not tell you what time. It may be in a fortnight's pay.
2684. Would it be 80 or 100 tons to the good? Yes; I have noticed it from 60 to 70 tons.
2685. What is your idea of the general results of the year's working;—does the colliery gain, or the men gain? I think the colliery gains a little.
2686. Have you any idea how much? I cannot tell you how much? It fluctuates backwards and forwards. There is nothing to speak of.
2687. *Mr. Curley.*] Do you think the men should have something like justice and fair play in this weighing business? I think they have.
2688. Do you think you are carrying out the provisions of the present Act in the way you are weighing? I do.
2689. If the men were to appeal to you to-morrow, or any day hence, and ask you to weigh a certain number of skips each day, would you do it? The only thing that would prevent us is the cost; the man is too busy with other work.
2690. What is that work? Shunting, and giving a general hand at the screens.
2691. Should that be any reason for the men not getting weighed? The check-weighman would not allow us.
2692. Do you mean to say it is the cost of keeping a man at the weighbridge that prevents you from weighing more skips? Yes; we would have to get another man if we had to do this.
2693. Have you any standard weight at your colliery? No.
2694. Do the men get all they fill? Yes.
2695. Is the only contention about the number of skips that are weighed? I have heard no contention.
2696. Have the men ever made any complaints? No; only when a man gets on to good coal, he says, now is the time you ought to weigh me.
2697. *President.*] Would it not be better for both parties if coal was weighed more often? I suppose so.
2698. *Mr. Curley.*] Have you the sole control of the weighman? Yes.
2699. Could you order him to weigh more coal? Yes; but, as I have pointed out, there are so many skips coming down with the tops off, that they cannot be weighed.

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2700. Where is your weighbridge situated? At the screens, at the foot of the incline.
2701. How far are they away from the pit? They are 37 chains down from the pit. It is an endless rope, and they come straight from the mine to the screens.
2702. Do you weigh the skips before they are tipped? They come down the screen into the weigh-box.
2703. Who gets the benefit of that coal that tumbles off the skips when going down the incline? The company has to pay for cleaning that up.
2704. Do you get the benefit of that coal? Yes; we pay twice for it. We pay the miner first, and then the shiftmen for filling it up again.
2705. Have you ever worked the colliery for more than the usual hours? Yes.
2706. When have you done this? During this last week.
2707. What hours did you work? We started at half-past 10 and half-past 11 at night to run the incline to get enough skips for the men to work in the pit at night.
2708. Do you work a night-shift? Half a shift for outside hands, six; full shift for miners.
2709. Who are the men that work the half shift at night;—are they the men that have been at work in the daytime? Yes, when they chose. They simply ask to go.
2710. Do you request them to go? I simply ask them if they would like to go. They work from 11 o'clock at night till 3 o'clock in the morning.
2711. Do they then go to work on the following day, if there is work to do? Yes.
2712. *Mr. Gregson.*] Is this done by the men voluntarily? Yes.
2713. If the men did not come back to work the next day, would you dismiss them? Oh, no; there are several men only too glad to come back. The night-shift of miners come on every night at 8 o'clock, and they complain they do not get enough skips to keep them going, and it is on this account that we try to run the incline at night to keep them supplied with skips. There are about thirty-five or forty miners in the headings, and some of them are in the bords.
2714. Are the miners paid by the ton? Yes, by the ton, and yardage.
2715. Have you three shifts of men? No, only two shifts—a back shift and a front shift. One man goes in at 7 o'clock, and stops till 3 o'clock, and his mate goes on at 9 o'clock, and knocks off at 5 o'clock.
2716. Have the men who go on at 8 o'clock been employed during the day? It is a separate shift.
2717. How many men have you at work in the day time? One hundred and forty men.
2718. Have you thirty or forty additional men employed at night? Yes.
2719. *Mr. Curley.*] Are these thirty-five or forty men on the night shift part and parcel of the men who go back to work in the day time? No; they are a distinct lot of men.
2720. How many men go back at night that are working in the day time? Six.
2721. Are these the men working the incline? Yes; not miners.
2722. Do the miners occasionally come home and go back to work at night again? The miners are always willing to come back at night to do the work these six men are doing. If these men do not want to come back we can always get miners to do the work.
2723. If you have these men specially engaged in this particular work what need have you for miners? These six men are working in the day time.
2724. What are these men doing in the day time? Screening, and tipping; working outside the mine.
2725. Do you think that men can sustain that kind of thing for any length of time? That is not for me to judge.
2726. Is not that putting in sixteen hours of the twenty-four hours in some cases? No.
2727. How many hours is it? From thirteen to fourteen hours.
2728. Have you ever requested the whole body of men to come back and work at night? No.
2729. You have not worked the full colliery at night? No; we have asked them to work later, or start an hour earlier in the morning, but never an hour over the eight hours.
2730. Do you make that a practice? No; if they start at 6 o'clock in the morning they knock off an hour earlier. If they start at 6 o'clock they knock off at 2 o'clock.
2731. If you do not work on both shifts you do not work at all? Sometimes both shifts go in together.
2732. In this case do you request them to work longer? No.
2733. Have you looked over the proposed Bill? Yes; but I have not paid much attention to it. I have just glanced over it.
2734. Do you wish to say anything about any of the provisions in the Bill? No.
2735. *President.*] Do you agree with all its provisions as it left the Legislative Assembly? I have not looked over the Bill enough to say that.
2736. You think you will have to know it when it becomes an Act, but you do not care about it as a Bill? Yes.
2737. *Mr. Curley.*] Is your colliery a very dry colliery? No; very wet.
2738. Does the water come into the face of the workings occasionally? Yes.
2739. Have you to bail water? Yes.
2740. Are the men occasionally troubled with water? They are.
2741. Do you consider that it is pleasant to work in water? No; we keep water-bailers on constantly.
2742. Would it not still be uncomfortable for the men? I know it is wet in the face.
2743. Is that mostly the case throughout the mine? No; only in the dip workings.
2744. Do you propose to go far in under the mountain with your workings? Yes.
2745. With regard to pillar working, have you that matter fully in view—have you in view the additional weight your mine will have to carry? Yes.
2746. Have you had any gas at all to contend with? No; not the slightest trace of gas.
2747. Do you say that you have had no complaints about ventilation? None whatever.
2748. Has the inspector ever drawn your attention to anything in that respect? He has said that the mine is excellently well timbered, and well provided for in other respects.
2749. *President.*] Have the men ever complained about ventilation? No, sir.
2750. How is your mine ventilated? By furnace.
2751. Do you use any brattice? Yes; we use it occasionally when we put up a stenton or cut-through across. When we get up to the 35 yards we brattice the heading up to that distance. We brattice while we are putting the cut-throughs across.
2752. *Mr. Curley.*] Are some of your cut-throughs very thick? From 12 to 14 yards.

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2753. Would you have to brattice your heading to get your bord in? Yes, occasionally.
2754. Would you have to carry the brattice up into the stenton? Yes, if necessary.
2755. What is the length of your bords? The bords run from 35 yards to 70 yards, but it is in the headings when we use the brattice.
2756. Do you put your stentons through before you go the 35 yards? Yes.
2757. *President.*] What for? To keep the ventilation up.
2758. How far do you go at the most? Seldom more than 32 yards.
2759. Do you then put your cut-through over? Yes.
2760. Do you go 30 yards and then a little further to put your cut-through through? You go on till where you have a solid pillar, and then go across.
2761. How wide is your cut-through? From 7 feet to 12 feet. This is done for cheapness more than anything else.
2762. *Mr. Curley.*] What kind of brattice do you use? Cloth brattice.
2763. Do you find that it lasts fairly well? It does not last very well with us. On account of the water and skips we have to get it renewed very often.
2764. What width do you drive your cut-throughs? Heading cut-throughs 7 feet, and 7 ft. 6 in.
2765. Have you the usual code of special rules at your colliery? Yes.
2766. Will you kindly send a copy of yours to the Commission? Yes; I can.
- [Witness withdrew.]

TUESDAY, 24 SEPTEMBER, 1895.

[The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.]

Present:—

FRANCIS EDWARD ROGERS, Esq., Q.C. (PRESIDENT).

JAMES CURLEY, Esq. | JESSE GREGSON, Esq.

Daniel Alexander Wilberforce Robertson sworn and examined:—

- D. A. W. Robertson, Esq.**
24 Sept., 1895.
2767. *President.*] Have you given evidence before, Mr. Robertson, on the proposed Coal Mines Regulation Bill? I have.
2768. What Committee did you give your evidence before? A Select Committee appointed by the Legislative Council, of which Dr. Creed, M.L.C., was chairman.
2769. *Mr. Curley.*] What is your profession, Mr. Robertson? I am a mining manager.
2770. What mine are you the manager of? The Metropolitan Colliery.
2771. That mine is situated at Helensburgh is it not? Yes.
2772. Have you managed any other collieries in this Colony? Yes.
2773. What other collieries have you managed? The Greta Colliery.
2774. Have you managed any other collieries anywhere else? Yes; the Carron Iron Company's mines in Scotland, and the Brymbo Iron Companies' Collieries in North Wales.
2775. Have you been connected with collieries for a considerable number of years? Yes; since boyhood.
2776. Are you acquainted with the various systems of mining? I am.
2777. Both the long wall, and pillar and stall systems? Yes.
2778. What was the system of mining pursued in the mines you have referred to in England? There were practically only two systems, long wall, and pillar and stall.
2779. Will you give us your experience of the method pursued in the first mine with which you were identified? Briefly speaking it was long wall, and pillar and stall, with, of course, modifications of each system.
2780. Take first pillar and stall;—what was the length of the bord? The bords varied very much in size, from 8 feet to 20 yards.
2781. Was 20 yards the usual distance? The usual distance was about 18 or 20 yards in North Wales.
2782. What was the distance of the bords in Scotland? The system of working pillar and stall was not the same as in North Wales. It was more in the nature of headings than bords there. It might be anything from 8 or 9 feet, to 5 or 6 yards.
2783. Are you speaking of the headings? We used to call them headings there.
2784. What length did the headings run;—were they similar to what we call bords here;—there is a certain stipulated distance that we call the length? They would vary according to the rise of the seam. In a flat seam they would run very long distances. In other cases the cross levels would be longer, it might be from 50 yards up to 300 yards.
2785. Would they not go across before they would be driven anything like 300 yards? Certainly.
2786. How far would they go without putting a cross drive over? I should say about 40 or 50 yards. That would depend upon the strength of the ventilation, or a dip, or rising place.
2787. How did you conduct the ventilation? Sometimes by brattice, cloth brattice or boards, and sometimes with bricks, but that was in a stone heading.
2788. Did you use much brattice in these mines? Yes.
2789. What was the height of the seams? From 10 inches up to 12 feet.
2790. Did you work the 10-inch seams? Oh, yes.
2791. How did you manage to work those seams? The working face was not more than 14 or 15 inches, but of course that is quite exceptional.
2792. What was the usual height of the seam apart from those thin seams? You found 2 feet seams and 8 feet seams in the same district.
2793. Was the same method of working pursued in each district where the seams were thick and thin? In the thin seams the only practicable method was longwall.
2794. Where you have referred to bratticing, was that in the thin or thick seams? In the thicker seams.
2795. Were there gases in any of these mines? Yes.
2796. Was there any fire-damp? Yes.
2797. Would the same thing apply to the seams in North Wales? Yes.
- 2798.

D. A. W.
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2798. Had you any accidents of a serious character during the time you managed at these mines? Only the usual accidents from falls of roof and coal, but I am happy to say I have never had anybody injured by an explosion.

2799. Where you worked the bord and stall system what was the width of the pillar that you usually left? That depended very much on the conditions—upon the depth from the surface. According to the depth, anything from perhaps one dozen yards up to large blocks.

2800. Were the mines very deep? I have worked them up to 1,200 and 1,300 feet deep.

2801. What depth were the shallowest mines you have worked? Nearly on the surface.

2802. Did you ever work a mine ranging from 200 or 300 to 400 feet deep? Yes.

2803. What pillars did you leave in that mine? They would probably be about 40 or 50 per cent. of the coal.

2804. Would 40 or 50 per cent. of the coal be left as pillars? Yes; something like that.

2805. When you worked up to the boundary would you bring your pillars back? Sometimes in their reverse order pillaring would be going on in the interior part of the workings. We did not always wait till we got to the boundary.

2806. After you worked these pillars out in the interior part of the mine, had you to put packs up to prevent the roof from coming down? The main roads were always maintained; sufficient pillars were always left there.

2807. You might take some of the back pillars out? Exactly so.

2808. What were the sizes of the pillars you left near your main roads? That would depend on the depth.

2809. Were your main-road pillars left larger than your ordinary pillars as a rule? Yes; as a rule—certainly.

2810. Did you always have substantial pillars near your roadway? Undoubtedly.

2811. In the extraction of pillars, in the event of a large fall coming away, do the men not always look to the main road as a place of safety to flee for refuge? If a danger was apprehended, they would look for the nearest road to the pit.

2812. Should not that always be maintained? Yes.

2813. There should be no doubt about its security? The main roads ought to be above suspicion.

2814. Should they not be above suspicion at all times? I think so.

2815. In your practice of mining has not this been always one of the ideal things? Well, it was.

2816. What is the depth of the Helensburgh Colliery? The shaft is 1,100 feet deep, but we are working about 1,500 feet deep, speaking roughly. The shaft is sunk in a valley, and we are working under the hills.

2817. In your estimate, with regard to your working under the hills, do you consider the depth of your pit much deeper than where the shaft is? I do.

2818. Do you consider it about 400 or 500 feet more? About that.

2819. Do you work bord and stall system? Yes; we work what we call the Welsh bord system, 10-yard places with two roads, and the *debris* thrown in the middle. All throughout I am now leaving 50-yard pillars between the bords.

2820. Does your mine dip or rise very much? It undulates very much from flat, to one in seven.

2821. Have you much area where the dip working is? Yes, a considerable area.

2822. Do you work to the dip, or from the dip to the rise? The dip varies so much in different directions that it would be hard to answer that question. Generally speaking we get to the dip, and work upwards, but that has to be modified according to the varying circumstances.

2823. Have you extracted any pillars yet? Yes, a considerable area.

2824. Is that area in the dip section of your workings? It is all over the pit.

2825. Have you reached the boundary in some places? Yes; but it happens that the boundary is very near to the pit. We can go 13 miles in another direction and not reach our boundary.

2826. Have you had any falls where you have worked these pillars out? Yes; the roof has all caved in, of course.

2827. Is fire-damp given off in your colliery? Yes.

2828. Is it given off in quantities? Yes; there is a considerable quantity given off, but not in such large volumes, perhaps, as in some of the homo mines.

2829. In the places where you have extracted the pillars, and you have had falls, do you find much gas coming from these districts, *i.e.*, escaping from the old workings? I may mention that all the districts where we have extracted pillars are supplied with abundance of air. I do not bottle up the old workings. Some believe in bottling them up; they do not leave them open and supply them with air, but that is my system. I believe in leaving them open and supplying them with air as far as practicable.

2830. Is that the best way to keep the gas out—to sweep it clear? I think so; but of course you require an enormous amount of ventilation at your disposal. Under circumstances where a manager had not command of large ventilation the other system might be adopted with advantage.

2831. Is there not a danger if the other system was adopted of some imperceptible leak happening and forcing gas out of the goaf into the main ways? I think so, and that is the main reason why I leave them open.

2832. Is that not more particularly so where they are dip-workings, because you know that gas will go to the rise if it is forced out by any contingencies such as a fall? Certainly.

2833. Have you read of instances where that has taken place in connection with a colliery explosion? Yes, there are instances I believe.

2834. In your workings, at the present time, where do you discover this fire-damp giving off most? At the working faces.

2835. *President.*] Are the working faces the same as the working places? Yes; places and faces are synonymous terms.

2836. *Mr. Ourley.*] Does this fire-damp come from the coal, from the floor, or from the roof. Where does it come from? From the coal.

2837. Has it ever been noticed to come from the floor, or from the roof? I have never noticed it.

2838. Have you had instances where there has been a large fall in your mine at any particular time? Yes, in pillar working, where we have been extracting pillars, and the roof not breaking. When we start a district first the roof will not break very readily, and there is a considerable area left on props.

- D. A. W. Robertson, Esq.
24 Sept., 1896.
2839. At such times as these have you made a special inspection to find out whether any gas was given off more than in the usual way from these waste places? Yes, we are constantly inspecting.
2840. Have you come across any faults of any consequence in the working of your colliery? It is rather a faulty field.
2841. Do you notice any unusual quantity of gas when you approach these faults? Yes, but it is not a regular thing. It is not certain that we will find gas when we find a fault. At present we have a fault giving off a considerable quantity of gas with a peculiar odour.
2842. Is it a large blower, or a small blower? We have not large blowers in the ordinary acceptance of the term. The coal is very open jointed, and you can scarcely tell where the gas is coming from.
2843. Has this fire-damp been peculiar to the colliery since the opening of it? Yes, since the first.
2844. What kind of gas would you term that? At the first opening we had a most peculiar gas, having all the properties of fire-damp, and yet lying on the floor. It has been proved beyond a doubt that such was the case. That only refers to the immediate neighbourhood of the shaft, but since we have got out from the shaft we get the ordinary fire-damp. The gas at first consisted of fire-damp (carburetted hydrogen), carbonic acid, and carbonic oxide. Carbonic oxide is supposed to have never been given off in a mine, but it was given off here.
2845. Have you read Atkinson's work;—does he not refer to it? I think he does; but carbonic oxide is not known to be given off in a free condition. If it is, it is a rare occurrence.
2846. Is carbonic oxide an inflammable gas? Yes.
2847. Do you think that carbonic oxide is as deleterious to health as it is said by scientific men to be? Not quite as much. You can breathe a great deal more of it than scientific men assert.
2848. Do you regard it as a dangerous gas seeing that it is inflammable and deleterious to the health of the men? I regard it in the same light as fire-damp—that is, that all possible precautions must be taken to render it harmless. As far as we are concerned that only refers to the past. We have nothing but fire-damp now.
2849. Seeing that you have had this other gas, is it not possible that you may meet with it again? Quite possible.
2850. What is the height of your seam? From 11 to 12 feet; but we only work practically about 7 feet.
2851. Do you leave the other 4 or 5 feet? Yes; in some of the main roads we lift the lower part of the seam.
2852. Do you leave this part down in the seam, or as tops? We leave it down in the bottom.
2853. What is the length of your bords;—what length do you drive your bords? Various lengths. I have had some driven nearly 300 yards.
2854. In the ordinary way how far do you drive them? Perhaps 100 or 150 yards.
2855. What distance do you drive them before you put a cut-through over? We seldom drive over 100 yards without a cut-through. I refer to the bords, not to the headings.
2856. I am speaking of the ordinary working bords—the 10-yard bords that you have spoken about? Through having the partition in the middle, they are ventilated up to the end.
2857. Do you build that wall solid up to the roof? In some places it is not a wall; it is the slack and *débris*, thrown together as a pyramid.
2858. Do you build it up to the roof? Yes.
2859. Do you use any bratticing? In some places we put a little on the top of the slack.
2860. You utilise the refuse, which acts partly as a conductor for the air? Quite so.
2861. Have you a door on the heading to force the air into these places? We have an ordinary flying screen, and occasionally a door.
2862. Do you mean a canvas screen? Yes.
2863. One part of the bord acts as an intake, and the other acts as a return? Exactly. We could not go these long distances with our bords except through having such a command of ventilation. By having this great ventilation, we can do things which could not be done at other collieries. We are far in excess of what is required for safety, and we have, I think, double the ventilation of the ten mines down below us.
2864. What kind of a fan have you there? The Schiele type.
2865. What is the diameter of your fan? 20 feet. A Schiele fan of 20 feet is equivalent to a Guibal of 60 feet.
2866. Did it cost you much to erect the fan you have? Yes; our ventilation plant must have cost at least £10,000.
2867. That is the erection of it—to put it in an effective condition? Yes, I think it cost every penny of that sum, not to speak of the underground arrangements in connection with it. You cannot get a large ventilation by a fan alone; your arrangements underground must be on a correspondingly large scale. You cannot get ventilation by a fan alone except your arrangements underground are of a corresponding size.
2868. Have you any splits in your mine? Yes.
2869. How many splits have you in your mine? Five main splits, but these are again subdivided (*a plan showing the number of splits in the Helensburgh colliery was produced by Mr. Robertson, and explained to the Commission, and the plan ordered to be embodied in the Appendix to Commission's report. See Appendix S*).
2870. What is the number of men you employ in your colliery? About 300 altogether underground.
2871. Can you send the Commission a copy of your special rules? Yes, certainly.
2872. What is your system of inspection at this colliery in the morning before the men resume work? The deputies go down the mine about half-past 4 o'clock in the morning.
2873. How many deputies have you? We have four deputies in the day shift, and one at night. These men are kept simply for inspection, and are not troubled with any other work.
2874. Will you please detail their duties? They go round the mine and examine the different places as regards the condition of the roof, the sides, the ventilation, and gas. They make take up brattice cloth, or some other little thing, but generally speaking they are simply inspectors. In addition to the deputies we have men under them—roadsmen and bratticemen.
2875. How many roadsmen have you? Each deputy has at least one roadsman under him, sometimes two.
2876. That would make about twelve or fourteen men, for both night and day? Yes, I think there would be that number.
- 2877.

2877. Do you work with safety-lamps at that colliery? Yes, entirely with safety-lamps throughout the whole of the mine.

2878. What safety-lamps do you use? The Thomas Griffith shielded lamp.

2879. Is that one of the latest lamps? Yes, they have lead locks. The old type of lock, a man could undo, but they cannot do it with a lead lock, because detection is certain. We place on each lead lock a small stamp with the Company's name on it, and they must cut that to get at the light, and if they do that detection would be certain.

2880. Do you regard these lamps yourself as of a very high type? Undoubtedly; we would not have them unless they were the best. I always like to have a lamp that I can put into the hands of a fool.

2881. Have you a rule that if a lamp receives any damage the matter is to be reported to you? Yes; that is the rule. No matter what the extent of the damage is, the man in such a case must appear before me.

2882. Where are these lamps examined? They are handed to the miners at pit-top, and they take them to the deputies down below, where they are examined a second time, and after this examination the men are allowed to pass into their places.

2883. Who cleans these lamps? The company's men. They are brought up at night to be cleaned.

2884. Have you a man appointed on the pit-top specially to look after these lamps? We have our lamp staff; a lamp-man and his assistants.

2885. Is your lamp-man a man with much experience in mines? Yes, they are all experienced men; but a man does not need to be experienced in a mine to be a good lamp inspector. In the matter of lamps we are extremely strict, and it takes some time before the men take kindly to the discipline in that respect. Besides this, we search the men regularly for matches.

2886. Is it one of your rules to allow no matches or pipes in the mine? Not if I know it. The men are regularly searched, and if they are found with matches it means a visit to the court.

2887. Have you any rules to that effect in your special rules? Yes; I have occasionally found a few matches, or a single match, but I have a great deal less trouble with the men in this Colony. I do not think that any man would take down a box of matches, or a single match, knowingly.

2888. Do the men go down the mine at a uniform time? We have several shifts. The winding shift, starts to go down at 8 o'clock in the morning, and come up about half past 4 o'clock in the afternoon.

2889. When do the miners go down the pit? At half past 7 o'clock in the morning.

2890. And when do they come out of the pit again? They start to come up again at half past 4 o'clock in the afternoon.

2891. Are the men allowed to go into their places in the mine before they see the deputy? No; none of them are allowed to go to their places before they see the deputy.

2892. Is it one of your rules that they must see the deputy? Yes.

2893. Does the deputy see them all come out? No; the deputies do not see them all coming out.

2894. How do you know they have all left the mine? By the number of lamps that are in the cabin.

2895. How are the miners advised about knocking off time? They are usually out before knocking off time. There is no trouble about that.

2896. Can the men come out of the mine when they like? No; they are not allowed to ascend the shaft before the usual time without an order.

2897. Throughout the day can they come when they like? No; not without an order.

2898. Would you look upon it as a breach of discipline if they did so? I would.

2899. Could they do it? No, they could not.

2900. Would a man be allowed to come out in case of sickness, or suppose he met with an accident? If they have any reasonable excuse we never refuse.

2901. Do men meet with many accidents in your mine? At one time we had a considerable number of broken legs; but lately we have been very free from accidents, I am glad to say.

2902. How did these accidents occur? Simply through the coal tumbling over. They are mostly confined to broken limbs at the face. The coal is very jointed, and, with the gas, rolls over on their feet; but in most cases the men are greatly to blame.

2903. Do you know anything of an accident that happened at your colliery in 1893, when a piece of coal fell down the shaft;—how did that accident occur, and what was the character of it? A piece of coal fell off one of the skips when the cage was going up the shaft. We have the pit bottom arched, and a safety scaffold over the onsetter's head. This piece of coal went away like a bullet, and the unfortunate fellow happened to be looking up at the time, and it caught him.

2904. Do you say that this piece of coal went through the protection board? Yes.

2905. Is the protection board you have there made of wood? It is iron with wood planking. It was never meant to prevent a bullet coming down. You can imagine the velocity with which a heavy lump of coal would go down 1,000 feet. There is nothing in the Act to compel me to put up a safety scaffold, and an accident like this might not occur in thirty years again. After that accident I put a steel plate under the wood, and we have a quantity of debris to cushion the blow.

2906. What is the thickness of the wood? Two-inch hardwood.

2907. Do you work a night shift at your colliery? We do not wind a night shift, but we have men working in special places.

2908. Do you ever ask the men to work longer than the times you have referred to? We managed to get them once to do it as a special favour, but I have never succeeded in doing it again.

2909. Would you like the men to work these longer hours? Yes, I would like to see the men take a little interest in the trade. I think if the men have only been working three or four days, and we have a ship to load, that it is hard that we cannot get them to work a little extra to finish that ship. If they were working ten or twelve days a fortnight, I should not ask them to do such a thing, but I would like them to work to meet the exigencies of the trade.

2910. When you have nothing for them to do, do you consider a man's time is his own, and that he should utilise it to his own advantage? Certainly.

2911. Do not some of the men utilise their time when they are not mining? I am sorry to say not many of them.

2912. What do they generally do? We keep two very large public-houses, and the proprietors of them are making fortunes there. The men might make their conditions very much more comfortable if they chose.

D. A. W.
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Esq.

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- D. A. W. Robertson, Esq.
24 Sept., 1895.
2913. Do you suppose that the miners keep these public-houses? There are no other persons there that I know of. It is entirely a mining community.
2914. In a mining community do you not have other people besides miners? Not many.
2915. Do you mean to say that the miners are the only people who sustain these hotels? They are the only people who come before me when I am on the bench.
2916. Do you think the miners lose much work through this? Yes, a good deal, I think.
2917. Have you any regulations in connection with such matters? Yes, we are not supposed to sanction that sort of thing. We sometimes caution them, and at other times discharge them. They wander about the country and come back again in rags, and we have pity on them and take them on again.
2918. Have they any advantages for securing pieces of land in the locality? Yes.
2919. Who can they secure this land from? The Government. They can buy allotments of land very cheap there, as low as from four to five pounds.
2920. Is your mine a very dry mine? Yes, a very dry mine.
2921. Would it be known as a dusty mine? Yes.
2922. Do you attach any importance to the coal dust theory? Undoubtedly I do.
2923. You attach importance to the theory of its being an explosive? Yes.
2924. Do you think it is explosive to any serious extent? I am not prepared to say that it would not explode of itself with a light. I have made experiments with our own dust, and I have not been able to explode it by any means I have tried.
2925. Do you think that coal dust might aggravate an explosion? Yes.
2926. Do the men set their own timber in your colliery? Yes.
2927. Do they lay their own roads? Yes.
2928. Do they wheel? No.
2929. Have you wheelers at your colliery? Yes.
2930. Do you weigh the coal? Yes.
2931. Do you pay the miners by weight? Yes, by weight.
2932. How are the miners paid;—do you weigh every skip? No; we pay on an average weight.
2933. What is your method of weighing? We have our own weighmen and the miners have their own weighmen, and when they have finished weighing one skip they ring a bell, and the banksman takes off the first skip that comes up the shaft.
2934. Has your weighman any other duties besides weighing the coal? He has the examining of the ropes, but you can hardly say that he has anything else to do but look after the weighing.
2935. How many skips do you weigh, on an average, per day? About twenty-five skips a day.
2936. *President.*] How many skips come out of the mine in a day? About 1,000 skips.
2937. *Mr. Curley.*] Do you think that gives anything like a fair average for the miners? I think any number of skips is a fair average, so long as it is the same system for both sides. We have a weighman, and they have a weighman.
2938. Have you ever made a calculation to show whether the weighing is in favour of the mine or the men? That is hardly a fair question to ask me. There is one weigh-screen for the miners, and another weigh-screen for the customers, and the miners' weigh-screen may have a different width between the bars, and be a different length. You cannot, therefore, argue on one side or the other, that either side is suffering an injury.
2939. Do you not pay for a certain quantity of weight each fortnight, and are not the miners supposed to be paid according to weight? Yes.
2940. Do you not send a certain amount of weight away every day for which the company is paid? Yes.
2941. Do you not know, from your own experience, whether that weight is against or in favour of the company? I do not think that is a fair question to ask me. It is on a wrong basis altogether. You assume that the employers may make a gain—that the railway weight may be more than the pit weight.
2942. *President.*] Can you give us any idea whether the system of average weight, as it obtains at your mine, is more in favour of the men or the mine-owner? I cannot answer that question, because the conditions are not the same.
2943. Can you give us any idea of these weights? I would be inclined to say that the railway weight was more than the miners' weight.
2944. That is, that it is in favour of the management? We sell a great deal of unscreened coal, and the weight of unscreened coal would be more than the weight of the screened coal, therefore the difference is in favour of the proprietors.
2945. Making all allowance for these things, which side do you think benefits by the present system of weighing? I do not think there is any difference at all. If your screen is the same mesh and the same length there cannot be any difference at all.
2946. Do you think that weighing a larger amount of coal would give the miner better results? I do not think so. It is a knife with two edges, that cuts both ways.
2947. *Mr. Curley.*] Do you think that one skip in forty is a fair average? Yes.
2948. Or one skip in sixty, or one skip in 100? Yes; as long as you get anything to represent a fair average.
2949. *Mr. Gregson.*] Is the weigh-screen kept going all day when weighing twenty-five skips? It is.
2950. Is that all they can manage to weigh in one day? Yes, they might weigh more; but I cannot get the miners' check-weighman, to work eight hours? It takes him, roughly speaking, an hour to make up his weights at the end of the day, and that time is calculated in the day's work. They start to knock off weighing at half-past 3 in the afternoon, but the mine stops at half-past 4, and I cannot get them to keep on weighing till half-past 4.
2951. *Mr. Curley.*] Would you like to insist on a man working longer than his usual hours;—has not the weighman the right to stop working as well as anybody else? Certainly, if they would go on till the pit knocks off; but the weighman objects to weigh after half-past 3, and so do the miners, because that would cause their check-weighman to work nine hours instead of eight hours.
2952. If you weighed up to half-past 4, would not your weighman and check-weighman have to tally their work after that? Certainly.
2953. Would not that be increasing the hours of employment? Yes.
2954. Cannot you weigh more skips within the time that is stipulated? No.

2955. What do your skips carry? The weight of coal would be about 22, 23, or 25 cwt. gross. Our skip is an exceptionally large skip.

2956. Is that coal run down the screen and then into the box? Yes.

2957. Is your seam a clean seam? It is a fairly clean seam, but we have rather a bad roof, and that is why they cannot weigh so many skips on account of having to take the dirt out.

2958. *Mr. Gregson.*] Have any complaints been made to you about sufficient skips not being weighed? Yes; and my answer is, "Why don't you weigh until half-past 4?"

2959. How many screens have you? One screen for weighing, one for the ordinary customers, and another for unscreened coal.

2960. Are your screens the ordinary sloped screens? Yes, the ordinary sloped screens.

2961. *Mr. Curley.*] Do you keep a record of the skips that are tipped with unscreened coal? No.

2962. You mentioned a difficulty with regard to screened and unscreened coal in the matter of weighing—is it not within your province to keep a tally of the unscreened coal? It is all unscreened coal before it is tipped.

2963. Do you not keep a record of that coal, to give you some idea of what has gone away? We have that information in our record of the railway weights.

2964. Can you always separate the large coal from the unscreened coal that has gone away? Yes.

2965. So that there is no trouble in getting a distinct calculation upon the quantities. You referred to that as a difficulty just now? No. I said that the conditions of the two screens are not alike, I say that if the screen to the customers is shorter than the other screen, necessarily the customers, to a certain extent, will get unscreened coal.

2966. Cannot you always gauge the quantity of unscreened coal distinct from the other coal, for this reason that you weigh it as unscreened coal? Yes.

2967. You have stated that the average of skips that are weighed at your colliery is about one in forty? Yes.

2968. Would you be surprised to know that from the 8th of July to the 31st of August of this year, that the average number of skips weighed at your colliery, has been one in sixty-six? That might be the case. We draw coal sometimes after half-past 4, but we cannot get that coal weighed. We draw coal off the roads, but the miners will not weigh it.

2969. Do you think that the limited number of skips you weigh complies with the 19th section of the Act of 1876. It says in that section of the Act, that the miners shall be paid according to the weight of the mineral gotten by them? To do that, you would have to weigh every skip.

2970. Do you not think that weighing more skips would give more satisfaction? I do not think that it would. The principal is just the same, whether you weigh twenty, fifty, or one hundred skips.

2971. Where a man gets a light weight, is that not a serious matter for him? Would that not cut both ways, supposing he gets a heavy weight.

2972. May not a man get a succession of light weights? He may also get a succession of heavy weights, and we know he does. So long as we have no control of the weighing the weight must be fair.

2973. *Mr. Gregson.*] Have the weighmen any choice of skips whatever. Can either of the weighmen, choose or see the skips to be weighed? No, they have no choice whatever.

2974. *Mr. Curley.*] Is the banksman supposed to take a skip to the weighman when the bell is rung? Yes. The first skip that comes out of the cage.

2975. Is your cage what is known as a double-decker? It is a single cage, with two skips coming up at the one time.

2976. Do the weighmen take the front skip one day, and the back skip another day? No. They take the front skip always, but of course they settle that between themselves. There is no objection to their doing it in the way you have mentioned if they like.

2977. Have you heard that the men want more skips weighed? Yes, I have.

2978. Have you had any trouble with the check-weighman? I have not had very much trouble, but occasionally there is a little friction between us. He is a little peppery and so am I, but on the whole we get on very well together.

2979. What was the cause of the friction you have mentioned? It was generally on trivial matters, but there may have been disputes that I know nothing about.

2980. Do you not leave the weighmen to settle these disputes themselves? I am only referring to the disputes that have been referred to me.

2981. Do you believe the men should have the right to select their check-weighmen from where they please? No; I do not believe in that.

2982. Do you say that he must be an employee of your mine? I think it would be an objectionable thing to employ outsiders.

2983. *President.*] Do you know that under the English Act the miners can select who they like as check-weighman? No, I did not know that; but I am willing to take the English Act as it stands, with all its deficiencies.

2984. What do you call its deficiencies? That, I think, is one.

2985. What are the others? The employment of any persons is unnecessarily elaborate; but there are not many deficiencies in the Act.

2986. On the whole do you consider it is a very good Act? On the whole I should be quite willing to take it as it stands.

2987. *Mr. Curley.*] Have you heard any complaints about the selection of these check-weighmen since the Act came into operation in England? No; I do not think I have.

2988. Have you heard of any objection on the part of the proprietors in England? No, I have not heard of any objection; but I am not in the way of hearing.

2989. Do not opinions travel very quickly now-a-days? No; I do not think so. I must say that I am not aware of any objection on the part of the proprietors. I think that nothing should be done to increase the friction that must always arise between an employer and an employee. I think that would be one way of causing trouble.

2990. Why should it be a reason? I resent the interference of outsiders.

2991. *President.*] Would a check-weighman know much about your business? Yes; he is in the way of obtaining a good deal of information.

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2992. *Mr. Gregson.*] Do you know that under the English Act of 1872 the check-weighman was to be an employee of the mine. The clause in the English Act I refer to is number 18? During my experience check-weighmen have always been employed from the men in the mine.
2993. *Mr. Curley.*] Don't you know that a man may be deprived of his occupation if he is an employee of the mine, that when he is a check-weighman you do not look upon him as an employee of the colliery, but as in the employ of the men? Yes.
2994. In the event of another man being placed in the position of check-weighman, is it not optional with the colliery manager whether he shall put him back to work again? I have no knowledge of such a case.
2995. Could you not object to him if you thought fit? Yes, I could; but I do not think it would make any difference to the man, because if he was objected to in one colliery he might not be objected to in others.
2996. Is not that the reason why he should be an independent man? No, I do not think it is; I do not see any difference whether he is selected from the employees of the mine or outside, if he is going to be objected to by the managers of the district, he will be all the same.
2997. Have you ever objected to any check-weighman being re-employed after he has left the office of check-weighman? No; I never have, although I have felt inclined to.
2998. What did you want to get rid of him for? A man may be particularly offensive, and stir up strife without any particular occasion to do so, and in some cases I might feel disposed not to re-employ him.
2999. Might not a manager have a mistaken view of the circumstances as well as the check-weighman;—might not he be in error as well as the check-weighman? Certainly.
3000. Would you like to see the men thrust a man away from the colliery because he was a little foolish? I do not think the men have ever had to complain of me in this particular.
3001. *President.*] Do you know of any recent legislation in England on the subject of check-weighmen? No; I do not.
3002. You are not aware that there was an Act passed last year? No; I was not aware of that.
3003. I have the Check-weighman's Act passed in England here (*see Appendix E*), and it looks as if the matter of the check-weighman had been a good deal canvassed in England;—will you kindly read the Act and tell me what you think of it? That is pretty hot, I must say.
3004. *Mr. Gregson.*] Is there anything in that Act that you object to? I think the whole thing is rather an insult, if you ask me.
3005. *President.*] Do you mean to say that this Act is an insult? Yes; that particular Act. I look upon it as an insult.
3006. *Mr. Curley.*] In conservative England? I do not think that in an occasional case where a manager has used his influence against the employment of some person, that it is right to throw legislation in the face of others.
3007. Do you not think that there may have been some necessity when that Act was passed? I do not think there was, and I know the trade in England very well. I think the Act is an insult.
3008. If you knew that a check-weighman had been objected to out here, in this Colony, that he had originally been employed by the men, and they still wished to keep him there, but he was objected to by the manager, how would you describe an act of that kind? Without knowing the circumstances, I could not answer the question.
3009. Assuming you had stopped your colliery, and the present check-weighman was on, that you gave the men notice of your suspension, and that you then took them back again, but after you resumed work you objected to take the check-weighman, on the part of the men, back, what would you say to such a case as that? I would want to know what was the objection to the check-weighman.
3010. In that case, suppose that you knew no more about the check-weighman than when he was at your colliery, that you had not objected to him, but that you objected to him when work was resumed again, what position would you consider that to take? Under those circumstances, I should say there would be very little sense in it.
3011. Assuming that the men wished to hold a meeting amongst themselves for the election of a check-weighman, and that the manager interfered and discharged a number of the men because they went to such a meeting, how would you look upon that? I would like to know the circumstances first.
3012. Would you think that an Act similar to the Act that has been passed in England was necessary under those circumstances? No; I would not. I do not think it necessary to legislate for the whole body of men because of the default of a few.
3013. Are you not aware that there might have been a species of intimidation that might have existed? I have been a long while in the old country managing mines, and I have no knowledge of it.
3014. Would you do such a thing yourself? No; I do not think so, although I have felt that I would be obliged to a man if he would go somewhere else.
3015. Have you ever discharged an official of the men? No; I do not know that I have.
3016. Do you know the president the men had down in your district some time ago—I think he was working in your colliery? They had a president, I know, named Coulson.
3017. Was he working at your colliery? He was.
3018. Do you know the circumstances that led to his dismissal? I did not dismiss him. He was not dismissed.
3019. Did he not get permission through the overman to leave the colliery for a certain time, and when he came back did you not object to him? No; he went away to the gold-fields, and when he came back I would not re-employ him.
3020. Did he meet you and tell you that the overman had given him permission to go away? I am not aware that he told me anything of the kind. He thought he had a good claim, and I understood that he had left the colliery, and when he came back I was not disposed to re-employ him.
3021. Do you get on well with the Union? I have always managed to get on amicably with the officers of the Miners' Union—as amicably as people can get on having divergent opinions.
3022. Do you have many visits from the Inspector of Collieries to your mine? Yes.
3023. How do you get on with the inspector;—do you find him act in anything like an officious way? I have never had occasion to find fault with any of the inspectors.
3024. Have you had a visit from all of them? I have had a visit from them all, I believe, except Mr. Humble.

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3025. Has Mr. Mackenzie, the Examiner of Coal-fields, paid you any visits? Yes.
3026. Has the Inspector ever drawn your attention to anything he thought required looking after at any time? I do not know that he has. I always reckon to have my place above criticism; and if he has it has been something trifling.
3027. If he was to do so would you pay heed to what he said, or would you regard it as an interference? It would depend on what he recommended, and on the man.
3028. I am speaking of the present inspector? I think he is a practical man, and knows what practical mining is, and he has had the responsibilities of office, and I would be very pleased to carry out any reasonable recommendation he might make.
3029. Do you think that he is an inspector that would attempt to do anything unreasonable? I do not think so.
3030. Have you noticed the proposed Bill with regard to the section dealing with the limitation of the hours of working—section 36 on page 17 of the Bill (*see Appendix A*);—do you approve of that provision in the Bill? No; I do not.
3031. Why do you not approve of it? Because it is entirely unnecessary, in my opinion, and it would add to the cost of producing the coal enormously.
3032. Do you not think that eight hours is long enough for a man to be in a mine (say) from bank to bank? I would be quite satisfied with eight hours for a miner, but we do not get it.
3033. Have you any objection to a provision in an Act of Parliament that the miners should work eight hours? Yes, I have. I object to anything of the sort going into an Act of Parliament.
3034. Do you agree, in a mutual way, that the men should work eight hours now? Yes, by established custom, but as a matter of fact, they do not work eight hours.
3035. Then what is your objection to embodying it in an Act of Parliament? I object to legislation for a grown up person. I do not see there is any necessity for it if the miners can secure a reasonable day's work.
3036. Can you not imagine a position in which a manager may require men to work longer hours; is it not possible that a manager might compel men to do that? He might; but I have yet to learn how to compel my men.
3037. Have you brought all the pressure you could to endeavour to get them to do so, as far as moral suasion is concerned? I have. I have asked them on one or two occasions to work an hour or two extra, but after a while they would not agree.
3038. Do you not think that it would be better to have a uniform system at all the collieries about this eight-hour business? I do not think so, although I am aware at some of the collieries the men do occasionally work longer, at least I am told so. I do not want to see any compulsory eight hours.
3039. Do you not know that when one colliery does that it gets to another colliery and that they adopt that as a reason for doing it also? Yes; very likely.
3040. That unless the other colliery adopts the same system it cannot compete in the market? I think that refers to wages.
3041. Does it not also refer to output? I do not think so.
3042. Assuming that you had another mine alongside of you at Helensburgh doing a similar amount of trade to yourself, and the men at that particular mine were working longer hours than you were, would you not make that an argument why you should follow suit? Perhaps I should.
3043. Do you not think that that is a reason for uniformity all round? I think it ought to be left to mutual agreement.
3044. Have you any objection to eight hours? If I could get eight hours actual work from the miners I would be very glad.
3045. You object to legislation on the matter? Yes; although the miners are supposed to work eight hours, we get say nine and a half hours from our other shiftmen, and if you put in a clause to make it eight hours from bank to bank we would lose at least two hours from our shiftmen, so that you cannot take the miners by themselves.
3046. Is that your only objection? Yes.
3047. Do you not think there would be considerable activity thrown into the business? No; take the ordinary Saturday when we are only working seven hours, we do not get eight hours output, we only get seven hours output. I think it is a very objectionable thing. If you put eight hours into seven hours you may possibly have more accidents, and competition causes high enough pressure at present. I have worked the thing out upon this question of eight hours.
3048. What do you think it would add to the cost? If it is made eight hours from bank to bank as I read the Bill, it will virtually reduce the working time of our miners to six and a quarter hours.
3049. Why;—will you kindly explain how you arrive at this conclusion? It takes us forty minutes for each shift to wind men up and down, and at least an average of twenty minutes to walk to their working places, and twenty minutes back again. There is an hour and twenty minutes. Then, there is half an hour for meals, and that practically leaves six and a quarter hours work. It will reduce the wheelers from nine and a half to eight hours, and winding from eight hours to seven and a quarter hours. The winding is reduced by the time of winding the men up and down.
3050. Assuming that the men ought to be down the pit within the eight hours—that your winding was taken out of the business altogether, and also cut out the time of coming up,—would you be in favour of that being embodied in an Act of Parliament? No, I am against compulsory legislation altogether.
3051. Do you know that there is legislation at the present time for boys? Yes.
3052. Have you any objection to legislation of that kind? I do not object to the present Act for boys at the age of 13, but I think the proposal to raise it to 14 years of age is objectionable. In England it is 12 years of age. The conditions of the mines in our days are very favourable to health. It is not the same now as it was thirty or forty years ago, when the mines were insufficiently ventilated. We have no prematurely old men now in the mining community. The health of miners has improved very greatly during the last thirty years. I can recollect men who were prematurely old miners at thirty years of age.
3053. What made them prematurely old men? Bad ventilation. Speaking generally the mines are well ventilated now, and there is no reason why boys should not enter them at 13 years of age.
3054. Have you been in any other mines? I have been in a few, and I do not see why every mine should not be the same if inspectors carry out their duties.
3055. Is bad ventilation the fault of the inspectors? I think the minimum 100 cubic feet per minute under the present Act is the cause.

3056.

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3056. How do you interpret the Act in that respect? I think the 100 cubic feet minimum is a dangerous provision, because if there was no such provision as that in the present Act, an inspector going round, if he found a place was not adequately ventilated, and it is possible to have a mine not properly ventilated with 1,000 feet of air, he could see that sufficient air was given. An inspector now goes round and finds that there is 150 cubic feet of air per minute, and he says, "Very well, you have 150 cubic feet of air per minute"—in fact he says, "I can do nothing."
3057. *President.*] Will you look at the three sub-sections, in section 12 of the present Act dealing with this matter. You say that if an inspector finds 100 cubic feet of air that he can do no more. Will you tell me what this means? It means this, that supposing the inspector was to prosecute a manager for insufficient ventilation, the manager can say, "I have got the statutory requirement."
3058. In my opinion he could do nothing of the kind? With all respect to your opinion, my experience is that that is what it works out to.
3059. You mean to say that that is the practice that prevails? I mean to say that if a manager has succeeded in providing 100 cubic feet of air per minute, he can snap his fingers at the inspector.
3060. My reading of the Act is, that a manager has to have a 100 cubic feet of air at all events, and if that quantity of air is not enough he has to give what is necessary? I think in the English Act they have done wisely in not providing for what is an adequate amount of ventilation. I think 100 cubic feet is too little, and that the ventilation ought not to be governed by the number of men in a mine, but that the condition of the mine should govern the ventilation.
3061. If the ventilation is not adequate with 100 cubic feet of air, my reading of the present Act is that an adequate amount of air must be provided? That is not the way the officers read it. My opinion is that if you provide an adequate amount of ventilation you do not want to provide for anything else—bratticing, cut-throughs, or anything else.
3062. Supposing we say an adequate amount of ventilation, not less than 150 cubic feet, should be given? I fancy that if a prosecution was taken against the manager that he would be all right.
3063. Supposing the words were put, that an adequate amount of ventilation, not less than 150 cubic feet of pure air per minute, should be given to dilute and render harmless noxious gases, &c. If it was put in that way, do you not think that a manager would have to put in 150 cubic feet of air, and as much more as was necessary to be adequate;—will you tell me what harm there is in that? I think it is dangerous to define what is adequate.
3064. It does not define what is adequate, but that they are not to have less air in any case? I think it would be a debatable point.
3065. Would there be any harm as far as the condition of the atmosphere was concerned? I consider 100 cubic feet of air per minute ridiculously small, because I want to see the mines well ventilated.
3066. *Mr. Gregson.*] Your idea is that a mine would be better ventilated by having the word "adequate" alone? It is my opinion that the conditions of the mines themselves have to do with ventilation.
3067. *President.*] In a gassy mine, from actual necessity there would always be ventilation sufficient, but in a mine where there is no gas a manager has not to contemplate that danger, and the desire is in that case to see that the men are supplied with that air? That is all right enough; but take our case, where we require 1,500 or 2,000 feet per minute, and I submit this 100 or 150 feet of air per minute would be dangerous. A reckless manager might reduce it; he might not care to burn so much coal for his fans and boilers, and sail close to the limit of safety.
3068. *Mr. Gregson.*] Would it not be dangerous where there is no gas;—would it not be better without a minimum altogether? Yes; it is not because I object to ventilation, but because it is better for the men.
3069. *President.*] You see a mine manager, who is chary about giving his men air, if he does not provide 100 feet for the men they would be suffering? It would depend altogether upon the conditions. There might be some mines that would not require 100 feet of air.
3070. Suppose that a manager did not supply enough air—say he supplied 50 feet;—if it is left to him, and his mine is not a gassy one, there is no incentive on his part to supply a large amount of air to keep down gas, and he only gives what he thinks is enough. In that case would it not be better to say that he must supply, at all events, 150 feet of air and as much more as necessary? He has to in such a case. That unfortunate clause would apply to the conditions of a mine that requires so much more.
3071. If we say an adequate amount of ventilation which is not to be less, it does not say that it is not to be more? It is a general hint not to supply more. When the Act of 1876 was framed it was intended as ventilation for sanitary purposes. There were no gassy mines then.
3072. *Mr. Curley.*] Were you in this Colony in 1876? No; but there were no gassy mines then, and possibly anything beyond sanitary purposes would not be contemplated. I think it is a fact that in 1876 there were no gassy mines.
3073. *Mr. Gregson.*] It is only in this Bill that you get any limitation as to the minimum? Yes.
3074. Do you get any limitation as to the minimum in the English Act? No.
3075. *President.*] I think we are all agreed that everything should be done for the better ventilation of mines. Mr. Gregson and Mr. Robertson think it would be better to leave a minimum out altogether. It is my opinion that under the present Act the men are entitled to an adequate amount of ventilation; that if they require 1,000 cubic feet of air they are entitled to have it. I think that they are to have 100 cubic feet of air at all hazards, and in cases where more is necessary, that more shall be given. That, however, was not the trouble that was pointed out by Mr. Edden. His difficulty was that the air had to sweep past each working place, that if a man said to the inspector that he had not enough air, the inspector would not measure the air in the bord but in the air-way, and if he found there was 100 cubic feet of air he would consider that everything was all right? I do not think the inspectors would agree with Mr. Edden in his contention.
3076. Take it that through the absence of air a man's working place is stifling, that he complains to the inspector, and the inspector goes with his anemometer, and says to that man, "I cannot help you," because he finds that 100 feet of air is sweeping past the working place;—do you agree that the men working in that bord should be supplied with an adequate amount of air? Undoubtedly.
3077. You think that the danger lies in saying anything about 150 feet of air, in case that quantity should not be enough? Certainly, that is so.
3078. *Mr. Curley.*] Do you know that the air has to meet with a considerable amount of friction in travelling throughout the mine? Yes.
3079. What amount of friction does it meet with in proportion to the air travelling at the Metropolitan Colliery? It takes about 250-horse power of an engine to overcome the friction. 3080.

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3080. Do you think that in a mine without either furnace power or other mechanical power, that friction could be overcome with natural means? If you can supply ventilation by natural means it is very well, but it is very unreliable.
3081. Would you get much air into a working place where that is done? When our two shafts were communicated, strange to say, by natural ventilation we obtained over 100,000 ft. of air per minute, but we could not depend on that, it depended altogether on the state of the atmosphere.
3082. Do you think that if the workings were in anything like half a mile or a mile the men would get anything like a fair amount of ventilation under such circumstances? I do not think we could obtain one quarter of that amount now. It was simply in the beginning of the colliery, and the workings were very limited. Of course nobody believes in natural ventilation now-a-days.
3083. Do you think that natural ventilation in a mine should exist? No, I do not think so.
3084. Do you know Inspector Dixon? I do.
3085. Did he inspect the Greta Colliery while you were in charge there? Yes.
3086. Do you consider him an efficient inspector, from what you have seen of him? Yes; I think he is a man of ability, and a capable man.
3087. There is a provision in the proposed Bill with regard to giving additional powers to inspectors. Do you think that inspectors should have a fair amount of power? I have no objection to inspectors having all reasonable powers. Provided inspectors are men of standing in the profession, and not the creatures of a weak Minister, I say, by all means, let them have any reasonable power.
3088. Do you think that an inspector should have power to withdraw the men in case of danger? If the danger was apparent I should say so, by all means.
3089. I suppose you are aware that in these days of coal-mining we get men on a Board of Directors who are not practical men? I think that prevails more in New South Wales than in the Old Country, where directorates are born and bred in the coal-mining profession. In England you will find, I think, a larger amount of practical men on Boards of Directors than in this Colony.
3090. In this Colony is not a manager's business sometimes liable to be interfered with by men over him, lacking a proper knowledge of the system of mining? I think that depends a great deal on the manager. If he is a man of little character, or a weak man, he may be unduly influenced.
3091. Do you think that a Board that has very little mining knowledge, and whose chief object is to provide good dividends, may not press a manager unduly? There might be a danger of their doing so.
3092. Is not that one reason why an inspector should be invested with a fair amount of power? An inspector should have power, provided he is a capable man, and has the confidence of the community, and is not under any influences.
3093. Do you believe that there should be some stipulated minimum in the proposed Bill with regard to the size of pillars? No, I do not. I think that would be a dangerous provision; unless the circumstances and conditions of a mine are alike you cannot have a stipulated or a minimum size for pillars. The question is very much to my mind like the definition of adequate ventilation.
3094. Is not a manager left entirely free under our present Act with regard to the size of pillars? Yes.
3095. If you had known of several collapses, and that numbers of men had lost their lives in consequence of a fall coming over pillars, would that not necessarily involve something being done to avert a calamity of that kind? I think the pillars ought to be sufficient to sustain the roof under the conditions prevailing in that particular mine.
3096. If they have not been sufficient under an absolute system of freedom, where managers have had all their own way, don't you think that something ought to be done? Suppose you have a minimum size for pillars, for what depth is that size of pillar to be sufficient. If you have a 10-yard pillar, and that is sufficient for 100 feet in depth, what are you to do in the case of 1,500 feet in depth; and if you have a pillar of 10 yards each way, and the roof is good, and it is sufficient under those conditions, what are you to do when the roof is bad? The conditions vary from day to day in different mines very much—perhaps I should say from place to place. To-day we may have a good roof, to-morrow a bad roof; one mine may have a hard coal, and another mine a soft coal. I do not think you can lay down any rules; it must be left to the discretion of the manager.
3097. Will you look at Rule 46 on page 32 of the proposed Bill, "Size of pillars in mines not under ocean, &c." (see Appendix A);—Do you approve of that section? No, I do not.
3098. What do you object to in that section? I do not see the reason for the limitation to eight yards in the former part of the Rule.
3099. If you read further on in the Rule, you will see something in regard to Welsh bords;—what is your objection to that section? I object to any limitation at all. I think a bord should be any width you like. Why should it be limited to eight yards when we are working with ten-yard bords?
3100. Would you not call ten yards a Welsh bord? A Welsh bord is a bord with a double road, and packed walls in the centre. We do not attempt to build the wall, but merely put the debris in the middle.
3101. You do not believe in a minimum size for pillars? No, I do not.
3102. Now with regard to the size of pillars under tidal waters. Will you kindly look at Rule 42 on page 31 of the Bill—"Width of pillars and position under ocean" (see Appendix A);—do you believe in a provision of that character in connection with mining under tidal waters? I do not think it is possible to have a provision of that sort. It would be absurd to apply such a provision as that, to the proposed Sydney Harbour Colliery, because any system of working there could not be affected by the ocean.
3103. Would you not make any provision where the strata is of a limited thickness? I think that would be all covered by giving the power to the inspectors. If an inspector thought it was not safe, he could object, and if there was any dispute he could go to arbitration.
3104. Would not that make the inspector create almost an Act of Parliament himself? You cannot lay down rules to apply to all conditions. I do not see how you are to get out of the difficulty.
3105. No matter if there are only the alluvial deposits, or rock, you would leave the matter absolutely free? This clause does not say so. If the clause said so, I might answer the question in a different way.
3106. Do you know any of the collieries in the north that are working under tidal waters, such collieries as Stockton, Hetton, and Wickham and Bullock Island? Yes.
3107. Would you not say that there should be some stipulated minimum in regard to those collieries? I think it would be extremely difficult to lay down any rules even with the conditions of those collieries.

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The seam differs in thickness, and in its proximity to the surface, and I cannot see how you can formulate rules to guide the management under all those conditions.

3108. Have you heard tell of falls coming to the surface in connection with any of those collieries. Would you think that that was a satisfactory condition of affairs? No. I should think that was the time for an inspector to step in and do his duty.

3109. Would you not consider a condition of affairs like that, if they were known to be beyond dispute, some reason why there should be something embodied in the Bill? No, I cannot agree with that. That would be a reason for great vigilance and great care; but you cannot go into the details of mine management in an Act of Parliament.

3110. Why? You can only lay down general principles. Immediately you interfere with details, you get involved at once, and the conditions are changing with every colliery.

3111. Where you know that the deposits overhead were nearly all alluvial deposits, and a limited thickness of rock, would you not consider that there should be bores kept in advance of the winning places? It would depend on the circumstances, and every care should be exercised to render the workings reasonably secure.

3112. Should there be any doubt about substantial pillars being left under these conditions? Substantial pillars ought to be left.

3113. Do you think that pillar working should be permitted under those circumstances? I must know the thickness of the seam to answer that question.

3114. Say the seam ranged from 8 to 10 feet, and higher, or thicker? How near would it be to the alluvial deposit?

3115. Say the alluvial deposit ran pretty well down? I should say that in such a case there would be considerable danger if the pillars were taken out.

3116. Do you think that a miner should have any experience under ground before he works at the face of the coal? No, I do not think so. I do not think that it is at all necessary.

3117. Would you take a man and send him down to the coal-face without any experience? Yes, with an experienced man, without a doubt. A man must gain his experience some time. If he goes down as a boy, he still has to get his experience.

3118. Will you look at Rule 41, on page 31 of the Bill, "Persons not to be employed in coal-getting without experience" (*see Appendix A*);—do you approve of that section? I think it would be a great hardship in New South Wales, because if we had to mine with experienced miners, we could not get them. In the old country you can always get experienced miners, but here we have to take gold miners, and men who have been working in tunnels. Some of the best men I have have been working in railway tunnels, and so forth.

3119. Do you know that the last Report of the Department of Mines points out a large decrease in the number of miners. The report says that in the Northern district, in the year under notice, there has been a decrease of 746 persons employed in and about the collieries, and an increase of 401,662 tons of coal raised;—if there has been a large decrease like that for one year, would not that point to considerable depression in the coal trade, and that men had been driven to other occupations? It might, and it might be the attractions at the new gold-fields, because we know that miners do go to these fields.

3120. Have you many applications for work in your district? Just now, we have not many applications, and if I had to wait until I could get skilled miners, we would not have half enough.

3121. If you advertised for skilled miners, would you not get them? I would get a number of applications, but there is a difficulty in getting skilled men—good men.

3122. Do you find from experience, that the skilled men are the best men? I find the most careful men are those who have been engaged in gold-mines, or in railway tunnels, and in our mine they can earn as good wages as experienced miners after a month or two's practice.

3123. This section of the Bill says, that an inexperienced man shall not be allowed to work alone. Does not that get over any difficulty you may have with regard to this section? I think there would be a difficulty in carrying that out. Suppose a man's mate was not in the mine, and I am not supposed to know whether his mate is there or not, I would be liable to a prosecution, if I allowed him to work without his mate.

3124. Do all your men go in together at the one time? Yes.

3125. Do they work two in one place? Mostly two, occasionally three.

3126. *President.*] Do you think that you would be liable to a prosecution in such a case as you have mentioned? Say the unskilled man goes down and is working for two or three hours alone. If the deputy finds him working alone, he would say where is your mate, and if his mate was not there, it would be the deputy's duty to send that man home.

3127. *Mr. Curley.*] What kind of drums have you in connection with your winding engine? They are wrought-iron arms, and heavy ironbark flagging.

3128. Are they conical drums? I do not like conical drums at all. When you get off the flat drum, you introduce another element. The conical drum is not as safe as the flat drum in my experience.

3129. Do you object to inspectors going round the colliery on behalf of the miners to make check-inspections? No, but I think it might be dispensed with, where there is a desire on the part of the management to do everything that money can do for the sake of the men. I think it is in bad taste, where the men know that everything that can be done is done for their safety.

3130. Does it cost the management anything? No.

3131. Do you think it can do much harm? I never fear a visit from the miners' inspector, but I think it might be dispensed with, where they admit that everything that can be done for their safety is done.

3132. Has this system of check-inspection been carried out at your colliery? Yes, but it has lapsed.

3133. Do you think it is a necessary matter, where the ventilation is carried out in a sort of indifferent way? I do not know that it does any good.

3134. Does it not draw attention to certain defects occasionally? It might; but I do not know that on the whole it does any good. I admit, however, that the miners have the right to make this inspection.

3135. How often does the Government inspector visit your colliery? It is the usual two month's inspection. Of course, if there is any accident he comes to make inquiries.

3136. Does the inspector give you any intimation of when he is coming? No, never.

3137. I think you said that you were the manager of the Greta Colliery for some time? Yes.

3138.

3138. Were you manager at Greta at the time the fire took place? No; that was just before my time.
3139. Had you any trouble with the ventilation there? Yes, I had. The ventilation depended on a very shallow furnace shaft, and the downcast shaft was a pretty deep one, and in summer weather the ventilation varied a good deal. I first put on an additional furnace, and then a fan. The fan was just about ready to start when I left the colliery.
3140. What was the method of working there? Bord and pillar, the stereotyped method in the north.
3141. Did you carry out that method while you were there? Yes.
3142. Did you continue to do so? You cannot alter the system of a mine in a month, or even within a year.
3143. While you had that trouble with the ventilation would the men be very satisfied with the situation;—would they not have to put up with some defects? I am prepared to say that the men found no fault with the ventilation.
3144. Do you think that was the interpretation of the Act? I am not sure of it. The men got 100 cubic feet of air per minute, and that satisfied them. The anxiety was more on my side; I am sure of that.
3145. Had you any extensive falls in Greta when you were there? No.
3146. Did you inspect the shafts by your own officers at Greta? Yes; they were regularly inspected by the officials.
3147. Do you do the same at the Metropolitan Colliery? Yes, frequently. Four men go down both shafts every week slowly and examine every inch of them.
3148. Did you see anything that attracted your attention at Greta? No, but I am free to say that the strata in New South Wales is more dangerous than I have experienced it at Home, and I would be inclined to say, that all the shafts in this Colony should be bricked from top to bottom. I know that opinion is not shared by other managers, who are quite as well able to judge as I am. The shafts here are affected by the weather, you may sound them, and in 20 minutes they will burst off with the weather. At Home, when you sound a stone, and it rings, you know it will be safe for all time, but here it seems to be affected by the weather.
3149. *Mr. Gregson.*] In your examination before the Select Committee of the Legislative Council, in December, 1890, were you not referring to the Bill that had been introduced, in 1889? Yes.
3150. Have you read the present Bill sufficiently to know whether it is similar in its provisions to the Bill of 1889? There are so many Bills, that I think I have got mixed up with them.
3151. The Bill of 1889 was introduced by Mr. Sydney Smith, the present Minister for Mines. Do you think that the present Bill is pretty much on the same lines as that Bill? Yes, I think it is.
3152. Do you recollect the evidence that you gave then? I do.
3153. Do you think that evidence would apply pretty well to the present Bill? Well, I think it would.
3154. You were speaking mostly as to principles then. Are your ideas on the matter of ventilation pretty much now, what they were in 1890? Yes.
3155. Do you think the provision for an adequate quantity of ventilation, would enable us to dispense with all the rigmaroles of cut-throughs, splits, and other provisions? Yes, I think so.
3156. Are you perfectly well satisfied, in your own mind, that it would be sufficiently good in the miner's interest, if the interpretation of an adequate quantity of ventilation was left to the inspector? Yes, I am quite satisfied in my own mind.
3157. That if the inspector came and said, you have not sufficient air, you must put more, that that would be sufficient for the miner, not only for his safety, but for his comfort? I think so.
3158. In working under inspectors in the old country, was it not your experience that the manager tried to do as much as possible to meet the requirements of the inspector? Yes.
3159. Is that the general rule with managers? I think so, unless it was a vital question they would never for a moment dispute the matter.
3160. Would you not think it a point to be made, that you should establish with the inspector, a character that he might rely upon you for doing a fair thing? Yes, I have always tried to do so, and I can speak for nine-tenths of the collieries at home.
3161. You would like to see the inspector in a position to say, "Well, I know Mr. Robertson is doing the best he can there"? Yes, if you do not have an inspector in touch with you, you might find it hard to carry out your duties. It is better to have the sympathies of the inspector, if you are endeavouring to carry out the spirit of the Act.
3162. In your evidence before that Select Committee, in 1890, you say that the inspector should be empowered to do this, that, and the other thing, without reference to headquarters? I think so.
3163. Do you think there is anything in the circumstances of this Colony that would render you less willing to act under the direction of inspectors than in the old country? That is rather a delicate question to answer. I have always got on amicably with the inspectors here, but I do not think they are as independent here as the inspectors at home. Here they are almost afraid to move of their own accord. They are not as independent as the inspectors are at home.
3164. Do you think that arises from the system under which they work? I think so. I do not impugn their ability.
3165. You think that they look to headquarters, and will not take action until they hear from headquarters, that they will not take an independent position? Yes, there is no mistaking that the Minister interferes with the inspectors here more than the Secretary of State does at home. I think political influence is felt more here than at home. There is no such thing as politics at home in the management of the Coal Mines Regulation Bill.
3166. Notwithstanding that, you think it would be sufficiently good in the miners' interest to work under the Council's alterations in the present Bill? I think so.
3167. Trusting to the manager to do all that he thinks ought to be done? Yes.
3168. And to the inspector to make him do it right, if he has not already done it? Yes, given good inspectors, and ample power, you have only got to lay down general principles.
3169. With regard to the provisions in the Bill for pillars. Have you read the report of the Royal Commission on Collieries adjacent to Ferndale. Do you recollect that that Commission proposed a regular size for pillars, and a maximum width for bords, under tidal waters (*see Appendix A*)? I think I could concur with that, for the reasons that Commission has given in the former part of the clause in their report dealing with this matter, but I think with regard to the latter part of the clause, I would leave the management free, with the supervision of the inspectors.

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3170. Do you take it, that they mean that the alteration should be in the direction of safety? Yes.
3171. They propose a minimum thickness of eight yards for pillars, and a maximum width of six yards for bords, and leave the management free to exercise their discretion in altering these sizes so as to increase the general safety? Yes.
3172. Are you quite satisfied to accept, on the authority of that Commission, a provision of that kind? I think so, but I object to defining the adequate sizes of pillars at all.
3173. Even under tidal waters? Yes I think so, I think that might be dangerous. It might be found to be desirable to have the pillars very much larger. I think that an 8-yard pillar is small, as a matter of economy. You can never recover with economy small pillars.
3174. On the whole, perhaps, you are of opinion that it would be better not to specify the width of pillars or bords under tidal waters? I think the system should be left, so as to be adopted to suit the conditions, whatever they are.
3175. Do you agree with your evidence given in 1890 with regard to the size of pillars in collieries that are worked under the land;—you said then that there should be no restrictions whatever? Yes, I do.
3176. That would apply either to ordinary pillars or pillars on the main road? Yes; I would leave it all to the manager on the grounds of safety entirely. There is one point in the Bill, with regard to the division of a mine into splits, that I take decided objection to. Can anyone explain to me what is gained by reducing the number of men to sixty?
3177. *Mr. Curley.*] Is this not a reason why there should be a limitation to the number of the men, that when you commence with a volume of ventilation for each split, if you have a very large number of men in that split, the air as it is going round the men picks up inferior elements in its march, and will not the last of the men in the split get what it carries round, and have to breathe that to a great extent? You can usually meet that by sufficient ventilation. It does not matter whether you have 70 or 700 men in a split, if you have sufficient ventilation. It is all met by the provision for adequate ventilation. We know the advantage of splitting the air, but sometimes it is very inconvenient.
3178. Have you seen what Mr. Hopton says on this subject? I do not know that he is a stronger advocate than I am. To ventilate a mine sufficiently, you must have splits; you could not ventilate a mine with one current of air. I submit if you have 700 men or seventy men, that if you provide sufficient ventilation, the air would be just as pure from 700 men as from seventy men. It is all met by adequate ventilation.
3179. *Mr. Gregson.*] You think it is all included in the term adequate ventilation? Yes.
3180. Have you read the Bill sufficiently to be able to say that you are with the Legislative Council in the amendments they have made in the Bill? I think so.
3181. Do you think they have met the case? I think so.
3182. Do you think they have eliminated most of the blemishes in the Bill? Yes.
3183. And, on the whole, do you agree with them? Yes; no one can be more anxious than I am for a workable measure, but it must be a workable measure.
3184. *Mr. Curley.*] You said something a little while ago, about the Home Secretary not interfering with the inspectors. Do you know that he has sometimes given them specific instructions? No doubt he has.
3185. *President.*] Did you not mean that out here, people are very much nearer to each other? Out here there is more of the political business.
3186. *Mr. Curley.*] Will you look at this book of Mr. Nelson Boyd's, "Coal Pits and Pit Men," and see what he says in connection with the Home Secretary and anonymous communications:—

"The Home Secretary, in reviewing the debate, repeated the statement that accidents had greatly diminished since the passing of the Act. He looked on the certificate of colliery managers as quite as important as those granted to masters of vessels, and had always given instructions to prosecute managers when there was sufficient cause for doing so; but for safety it was necessary to depend mainly on the responsibility of employers and employed. He repudiated the view that inspectors were not to visit a mine unless an accident had occurred, and he had issued 'consolidated instructions' to the inspectors on that subject. These instructions enjoined on the inspectors to examine a mine on invitation or complaint; to pay attention to anonymous complaints without divulging the source of their information; not to send notice of intended visits to mines unless advisable to do so; and to examine mines as frequently as possible without announcing their intention, as the liability to an official inspection without previous warning might be a most effective prevention of abuse. Lastly, that a record should be kept of the inspections and the results obtained."

Do you see that inspectors have to pay attention to anonymous communications? Yes; I agree with that.

3187. *President.*] What is the salary of an inspector in England? I think £600, and some of them run up to £800.
3188. What is the salary of an inspector here? I think about £400, or £450; perhaps not as much as that. The salary of an inspector at Home is equal to double the salary of an inspector here.
3189. Why do you say that it is equal to double the salary of an inspector here? We always reckon that a salary at Home is equal to double the salary here. I do not think that the money that is paid to an inspector here is sufficient.
3190. *Mr. Curley.*] You said just now that you agreed with the amendments made by the Legislative Council in the Bill we have under consideration? Yes.
3191. Are you aware that some of the evidence you have given is quite in opposition to the views of the Legislative Council? Yes; you are quite right in that.
3192. *President.*] The grave thing, as I understand it, is sub-section 5 of section 21, in the Bill, on page 8 (*see Appendix A*). Do you think, in your opinion, that an inspector should have power to withdraw all the men in case of danger? I think it is only a reasonable thing.
3193. Then you agree with the Legislative Assembly in that matter? I do certainly.
3194. Do you think it is right to put it in the power of one man to withdraw all the men in that way? (*Mr. Gregson*): I think you thought differently in 1890. This is part of your evidence given at that time:—

87. *Mr. Hoskins.*] In reference to sub-clause 7 of clause 21 in the bill, which provides that the miners may be withdrawn from a mine if the inspector finds cause of danger;—is there in the English Act any such power given to an inspector to act on his own motion? I do not think so.

88. Did you ever hear of such a power being given to one man? I have not heard of it.

89. I suppose your long experience in connection with mining has led you to arrive at the conclusion that differences of opinion exist between persons of large experience in mining as to what may be considered dangerous in working a mine? Undoubtedly.

90. There is no general concurrence of opinion on this subject? Oh, no.

91. Therefore you think the power given under sub-clause 7, which enables an inspector to close a mine, if in his opinion it is dangerous to work a portion of the mine, is a power that ought not to be vested in one man? Undoubtedly not.
92. Have you ever heard of any such power being vested in one man to interfere with the private enterprise of an individual? I have never heard of such a power.
93. *Mr. Macintosh.*] With regard to a mine being dangerous—is it not easy of proof when inflammable gas is present? That may be a matter of opinion. It depends altogether upon the quantity of gas that is present.
94. But as to its being dangerous? It opens up a very wide subject of discussion.
95. You object to the appointment of a chief inspector, because you think, as he would have to be consulted on any matter arising, it would lead to circumlocution? Yes and delay. He cannot, of course, be resident in the district.
96. You would prefer to have a district inspector? Yes, responsible to the Minister.
97. And you think that to entrust these powers to a man of the high attainments you have mentioned would be dangerous? Yes, I do.
98. And that the lives of the miners should be risked simply because there might be a difference of opinion between the inspector and the mine manager;—that the danger should continue until arbitration could be brought about? No. It does not follow that because an inspector deems a mine dangerous the lives of the miners are in danger until the dispute is settled. I do not think what I propose would tend to endanger the lives of the men in any way.
99. Not in the case of inflammable gas? The mere fact of an inspector stating that a mine was dangerous would not endanger the lives of the workmen. It might put the proprietors to considerable expense and annoyance.
100. Are there any instruments that test the quantity of gas in a mine? Oh, yes; the ordinary Davey or safety lamp will test that.
101. *Chairman.*] Danger from inflammable gas in a mine may arise very suddenly, may it not? It may.
102. And in case of such sudden danger arising you say you disapprove of the inspector having power to order the men out of the mine;—in whom would you vest such power? Well, I think the managers are quite competent to deal with that question.
103. But suppose the inspector and manager differ in opinion;—it is a matter of immediate moment;—to whom would you give the power? It would not be a matter of immediate moment, because the inspector might be hundreds of miles away at the time the danger arose. He cannot be there always, of course.
104. But suppose a dispute arose between a manager and an inspector as to immediate danger, to whom would you give the power to decide? I should leave the responsibility of continuing operations on the manager. He is responsible. If he is wrong he may lose his certificate.
105. Would he have any other liability under such responsibility? He might lose his certificate and lose his occupation, and that would be quite enough.
106. Supposing by the non-withdrawal of the men an accident happened and lives were lost, what would be his responsibility then? Well, as I said, there would be an inquiry into his fitness and competency under this Bill, and his certificate might be withdrawn, and his means of livelihood taken away. I am not quite sure that he is not liable to imprisonment, but of that I cannot speak positively.
107. Do you not think that under such circumstances as these a chief inspector as a referee would be of use? Undoubtedly he would be of use. If he was a man who had the respect of the community we should in all probability take his advice. It is frequently done.
108. *Mr. W. H. Suttor.*] Have you read section 41 of the English Act dealing with the powers of inspectors? Yes.
109. Does not that seem to give the English inspectors unlimited power with regard to dealing with mines? No; I do not think it gives the inspector the power that is given here.
110. *Mr. Wood.*] You have urged a great many objections against General Rule 7, giving the Inspector power to withdraw miners if he finds cause of danger. I think you told the Committee you were not aware of any such provision ever having been in existence? Yes.
111. Are you not aware that this provision is in the existing Act, which has been in operation in the Colony for the last fourteen years? No; I cannot say I am.
112. Are you aware of any instance in which inconvenience has been suffered through the inspectors having that power under the existing Act? No.
113. Seeing that the present Act has been in operation for fourteen years, and that no inconvenience has arisen from the inspectors having this power, why should you suppose there would be any danger in their having the same power in the future? I can only speak for three years or so out of the fourteen. There might have been inconvenience for all I know to the contrary; but whether or not I think it unwise to give inspectors such power.
114. But the fact that you did not know that such a power was in existence would show that the managers have not been harassed very seriously by the exercise of that power? I have not, certainly.
- You say in reply to *Mr. Macintosh* (question 91), that you do not think the power to close a mine should be vested in one man? Yes; but you could not close a mine without referring the matter to arbitration, and at that time there was an idea of some fussy interference on the part of inspectors.
3195. *Mr. Gregson.*] Consider the thing now, don't you think it would be better to leave such power to the manager? I cannot conceive of any manager of any standing, or knowledge, or experience, who would allow his men to work under dangerous conditions; but still, I think, there ought to be a power in the event of operations being carried on, and the mine obviously unsafe, to compel him to withdraw the men.
3196. *Mr. Ourley.*] Is that your opinion, *Mr. Robertson*? I think so. I do not mean that an inspector should enter into a dispute with a deputy as to trifling details, but rather that my remarks should apply to cases where there is great danger.
3197. Have you ever known an inspector at Home stop a portion of a colliery because there was gas there and it was not safe to work. I think *Mr. Hopton* gives an instance of that? *Mr. Hopton*, in his book, is talking of things that occurred twenty or thirty years ago.
3198. *President.*] Do you say that this sub-section 5 of the Bill, to require the manager to withdraw the men from any mine, should stand in the Bill? I should qualify that by saying that they shall not enter the mine until the inspector says it is safe, until the matter is referred to arbitration. In any dispute between a manager and inspector there is a provision in the Bill for referring that dispute to arbitration.
3199. *Mr. Gregson.*] We are talking of an inspector that comes across something that he thinks would be immediately dangerous, and under this provision he has power to withdraw the men there and then;—that, you think, is a proper thing to do? We could not have the inspectors entering into a dispute with the deputies. We are supposing that it is something grave affecting the whole of the mine, or a portion of it. I think these powers should only apply to specially dangerous conditions.
3200. *President.*] I can hardly conceive of men being withdrawn where there is not danger;—you can say that a mine is dangerous because there might be some movement, but there might be a difference of opinion;—the inspector might say, "You ought to withdraw the men—I think this is dangerous," and the manager may differ from him, and then go to arbitration about it;—that movement might suddenly result in some accident? If there was a movement in portion of the workings, of course an accident might occur at any moment; but, on the other hand, it might be delayed for weeks. If the inspector was a practical man I do not think there could be any dispute in such a case. I cannot say I recollect any great conflict of opinion between an inspector and a manager.
3201. If the manager was a competent man, don't you think he would withdraw the men? Yes.
3202. If the manager was told by the inspector that he thought there was cause for danger, would not the manager withdraw the men? I think so.

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3203. Don't you think he would withdraw the men without the inspector saying anything at all;—would not he see the danger and withdraw the men? I am not prepared to say that.

3204. It has been put that a manager might have a certain order to complete, and that it might be a pressing matter with him, and might probably override all other considerations;—do you think that a manager having pressing business and with an anxiety to fulfil that business, that it would weigh with him in such a manner as to make him ignore the men's lives? I cannot conceive of any man doing such a thing.

3205. What do you say then to this sub-section;—do you think that it should remain in the Bill or that it should not? Personally, I would not have any objection to that sub-section.

3206. Would you be willing to put that power in the hands of the inspector? Yes; in the hands of a capable man who is not interested in any way.

3207. *Mr. Curley.*] Put yourself in the position of an inspector, and assume that you went to inspect a colliery, and saw an apparent danger impending which threatened the risking of men's lives, would you not, under such circumstances as that, say that the men should be withdrawn? Certainly I would.

3208. Would you like to have such powers invested in you to act? I think it would be desirable under those circumstances.

3209. If you were the manager of that colliery would you not take out the men on your own part? Certainly.

3210. Suppose the inspector said, "Well, I think the men ought to be withdrawn"—and you can only conceive of the danger in a case in which there may be two opinions; supposing I said, as an inspector, "I think the men should come out," and you, as a manager, thought the place would hold for a few days, would you be guided by your own opinion or by mine? I would not take the responsibility after the inspector said he thought the thing was dangerous.

3211. *Mr. Gregson.*] Would not any manager's situation be imperilled in such a case? He would be in a very peculiar position.

3212. Don't you think he would be likely to act on the inspector's opinion, rather than on his own opinion? Managers may act with the best of motives, and yet be careless.

3213. *President.*] Do you think that this sub-section that we are considering should remain in the Bill? I do. I do not think it would be exercised without due cause. I consider that clause of very much less importance than some of the other clauses.

3214. Is there anything in sub-section 4 of the same section (*see Appendix A*); I want to know what the value of this book is;—do you think that sub-section should remain in the Bill? I think so. In sub-section 1, I think that an examination once a month is absurd. The statistics give a very favourable report of the care that has been taken in connection with coal-mining in this Colony.

3215. Will you now look at sub-section 2 (*see Appendix A*); do you want those words, "except when absolutely necessary"? I don't think there is anything wrong with that.

3216. *Mr. Gregson.*] Don't you think it would be a great deal better to follow the English Act? I think it would be better to take the English Act altogether.

3217. *President.*] There was an English Coal-mining Act about 1862, and one in 1872, and another in 1887, and we say we are going to have a Coal-mining Act of 1894, based on these Acts. The third sub-section of the proposed Bill, is the same as the English sub-section, and we have taken that, but the next sub-section is apparently the bone of contention, do you think that that sub-section 5 should remain in the Bill? Yes, I do.

3218. Do you also think that sub-section 4, about entering a report in a book, should remain in the Bill? Personally, I should prefer it. We would have a record of an inspector's examination, and he could not say after that the mine was dangerous and he knew it.

3219. *Mr. Gregson.*] If he knew it was dangerous, and he did not tell the manager or the deputy, or whoever he saw, would he not be very much to blame? Yes, I think he would. An accident might occur in a month, or sometime after his visit, and I think it would be well to have a record.

3220. *President.*] The Upper House have suggested, that with the powers given to an inspector under sub-section 5 of the Bill, he might ruin a colliery. I will read you their objection to the sub-section:—

Because the new clause, which is an exact copy of section 41 of the English Act of 1887, provides all that is necessary to enable an inspector to do his duty if he understands his work, whilst, on the contrary, if clause 21 was retained, it would hand over in an arbitrary way the whole of the mining operations of this Colony to the whim and caprice of, it might be, an incompetent inspector, and would give him too absolute a power, which is undesirable. The power he possesses now under the present Coal-fields Regulation Act is quite sufficient, if not too extensive as it is, whilst the substitution of section 21 in lieu of the law as it now stands would endow the inspector with such substantial power that, at his will, he could ruin any mining company if he thought fit. All he would require to do, without rhyme or reason, would be to announce to the colliery manager that it was his wish the men should be withdrawn from the mine, in which case 400 or 500 men would be thrown out of employment, and a repetition of what occurred at the Stockton Mine possibly be the result. In that case the mining authorities declared the pit unsafe, ordered the men to be withdrawn, and the men themselves, after some enforced idleness, petitioned the manager to be allowed to go back to work as the mine was safe, notwithstanding the opinion expressed to the contrary by the mining authorities. The men went back to work, and have been at work for the last two years, in the face of the order that they should be withdrawn, and the fact that a prosecution was instituted against the manager for not complying with the mining authorities' orders, the manager being fined for working, what was then alleged, a property which was unsafe, but which, as has already been stated, has been at work for two years since, and is at the present moment in operation?

I do not think it would ruin a mine. It might cause some inconvenience until the matter was referred to arbitration.

3221. Have you sufficient confidence in the men, that you think will be appointed, to invest them with that power? Yes, I think so. Referring to that matter of the Stockton Mine, although operations have gone on, it does not prove that the action taken by the inspectors was wrong. Subsequent operations may have proved that work can be conducted safely, but it does not say that the inspectors were wrong. They may have apprehended danger, and I think they acted on the safe side.

3222. Is it still your opinion that this sub-section 5 of section 21 should remain in the Bill? Yes.

3223. *Mr. Gregson.*] Can you think of any other matter in which your opinion is different to-day to what it was some years ago; would the evidence you gave in 1890 apply to the present Bill? I think it would.

3224. *Mr. Curley.*] Will you look at rule [40] 38 on page 30 of the Bill, "Periodical inspection on behalf of workmen" (*see Appendix A*);—what do you think of that rule? I do not think that section ought to be in the Bill.

3225. Do you object to the check-inspectors forwarding a report themselves? No; but I do not see why

a manager should forward a report criticising his own management. Then the question arises, what is danger; he might retain the report and not send it.

3226. *Mr. Gregson.*] Have you read the report of the Royal Commission on Labour in England? I have read the proceedings from time to time.

3227. Are you aware that that Commission inquired into the operation of the Act of 1887, and that they reported that the working of this Act was very satisfactory? Yes. I venture to say that if these clauses had been embodied in the English Act, it would not have been so satisfactory; that is, if you are going to instruct a man how he is to work a mine he is simply a convenient peg to hang the responsibility upon. There is nothing left to his experience, judgement, or skill.

D. A. W.
Robertson,
Esq.
24 Sept., 1895.

[Witness withdrew.]

John McGeachie sworn and examined:—

3228. *Mr. Curley.*] What are you, Mr. McGeachie? I am the manager of the Coal Cliff Colliery.

3229. How long have you occupied that position? About fourteen months.

3230. Have you managed any other colliery previous to your managing the Coal Cliff Colliery? No; not direct management.

3231. What positions have you held in connection with collieries? All positions in a mine, from a trapper to a manager.

3232. Have you acted as deputy and as overman? I have acted as deputy, but not for a long period as overman.

3233. How long have you been out in this country? About eight years.

3234. Have you been mining in Great Britain? Yes; in Scotland.

3235. What mines have you been connected with in Scotland? I have been in Carron and Co.'s mines, situated in Lanarkshire, in Scotland.

3236. Were you mining there, or did you occupy the position of deputy? I have mined there as well.

3237. What was the system of mining there? The long wall system, and pillar and stall system.

3238. What was the height of the seams? They varied from 18 inches to 5 feet in different collieries.

3239. What was the depth of the pits there? We calculate the depth in fathoms. They were from 50 fathoms to 172 fathoms deep.

3240. What was the width of the bords you drove? Generally, under the long wall system, from 6 to 8 yard bords.

3241. What pillars did you leave? In some mines from 12 yards, other mines 15 yards, and some 10 yards.

3242. What was the length of the bords before you put in a cut-through? It all depended on the system we were working.

3243. Can you recollect what distances they were? They varied so much that I cannot remember exactly.

3244. Do you recollect the distance within a yard or two? I have seen them wrought from 50 yards to 100 yards.

3245. Were there cut-throughs between those distances? Yes.

3246. How far would you go before you put a cut-through through? We generally put them through every 20 or 30 yards.

3247. Do you call them walls? Yes; or cut-throughs.

3248. And you put them every 20 or 30 yards? Yes.

3249. Was there much bratticing done there? If there was any gas we always used brattice.

3250. How many men have you working under you at the Coal Cliff Colliery? About forty-five.

3251. Is that colliery what is known as the old Coal Cliff Colliery? Yes.

3252. Have you been long in the Southern district? For about six years.

3253. Were you in the district some years ago when there was some talk about a creep at Coal Cliff? I was at the Metropolitan Colliery at that time.

3254. *Mr. Gregson.*] What were you doing at the Metropolitan Colliery? I was roadsman; my position was to superintend the wheeling; to get out the coal.

3255. *Mr. Curley.*] Can you say anything about the creep at Coal Cliff. Was it in the interior of the mine? No.

3256. What system of mining did they adopt there? Bord and pillar, or pillar and stall.

3257. Have you a shaft there? Yes; an air-shaft.

3258. Do you know the depth of the air-shaft? About 100 feet.

3259. Do you work far under the mountain there? We are about three quarters of a mile in.

3260. Have you any idea what the depth would be there? The mountain rises and falls about Coal Cliff.

3261. Can you say what the highest pinnacle is? About 500 feet.

3262. What is the width of your bords? Eight yards.

3263. What is the size of your pillars? Twelve yards.

3264. Were they 12 yards when you took the management of the colliery? Yes; 11½ yards or 12 yards.

3265. Is your colliery a very dry colliery? No; it is of a dampish nature.

3266. Are the men's places very wet? No.

3267. Are they a little damp at the face? Going to the dip they are.

3268. Is there any dripping from the roof? None.

3269. Is it a clear seam? Yes.

3270. Have you any bands in the seam? There is a band, a parting between the bottom and the top coal.

3271. What is the height of your seam? Five feet.

3272. Have you any gas to contend with? No.

3273. Have you any fire damp? No.

3274. Have you had any complaints against the ventilation at any time? I have never heard any.

3275. *President.*] How is your mine ventilated? By furnace.

3276. *Mr. Curley.*] Do you pay the men by weight? Yes.

3277. Has your weighman any other duties to perform besides being weighman? Yes; he assists at the screens.

J. McGeachie,
Esq.
24 Sept., 1895.

- J. McGeachie, Esq.
24 Sept., 1895.
3278. Does he do any clerical work besides his own? No.
3279. How many skips do you weigh in a day? I leave that to the weighman and the check-weighman, I give no orders about the weighing. The weighman and check-weighman arrange that between them.
3280. Can you tell us the average number of skips weighed in a day? I cannot give you the average number of skips.
3281. *Mr. Gregson.*] What is your average weight? 12 cwt. 2 qrs.
3282. Have you standard weight at your colliery? Yes.
3283. What is your standard? 13 cwt. 2 qrs. That is the average for the past three months.
3284. *Mr. Curley.*] Does your bridge record any more than 13 cwt. 2 qrs.? Yes.
3285. How much does your bridge record? 10 tons.
3286. Do you weigh your skips in the waggon? Yes.
3287. Cannot you give the Commission some idea of the number of skips that are weighed in a day? I have no idea of how many skips are weighed in a day.
3288. Are you not the manager of the colliery, and do you not know what is transpiring at the colliery with regard to the weighing as much as any man about the place? Yes.
3289. Do you never look into the weigh-cabin and ask the weighman how many skips he has weighed? No.
3290. If you weigh a waggon do you not weigh enough skips to fill that waggon? You can only weigh one skip in each waggon. When they are weighing the check-weighman and the Company's weighman arrange the skips that are going to be weighed before the sets come to the surface. Suppose there is one skip in the waggon, when the set arrives they will require to only weigh one skip in that waggon. That is taken for one number, and there are about five skips that will go in the waggon.
3291. Do any of these skips weigh over the 13 cwt. 2 qrs.? When I introduced the standard weight I believe there were one or two skips. The standard weight was introduced to relieve the rolling stock.
3292. At the present time suppose a skip was to come out that weighed more than 13 cwt. 2 qrs., would that weight be recorded for that day? Yes; but there are no skips that come out over 13 cwt. 2 qrs. If our average weight is 12 cwt. 2 qrs., you cannot have skips 13 cwt. 2 qrs.
3293. If a skip came out more than 13 cwt. 2 qrs., would the miner get that weight. Supposing for that particular day a man was weighed over 13 cwt. 2 qrs., would you allow that record to be taken for that man? No.
3294. You would not allow it to be taken by the check-weighman? No, not by the check-weighman.
3295. Can the bridge make a record over the 13 cwt. 2 qrs. for the miner? It can.
3296. But you will not permit the check weighman to take that record? No.
3297. *Mr. Gregson.*] Is the Coal Cliff Colliery the same as the Clifton Colliery? Old Clifton is the Coal Cliff Colliery.
3298. *Mr. Curley.*] Are there some days that you never weigh at all? Yes, there are days we do not weigh.
3299. Why is that? It is left between the check weighman and the Company's weighman to arrange that for themselves.
3300. Can the check-weighman compel the other man to weigh? They have sanction to weigh at any time. It does not make any difference to me, how many skips are weighed.
3301. Have the men ever asked you to have more skips weighed than you do weigh? No, never.
3302. Has the check-weighman ever asked you? No.
3303. Has the weighman ever objected to certain weights called by the check-weighman? I have never heard of it.
3304. *Mr. Gregson.*] As far as you are concerned has the check-weighman power to call for skips at any time of the day? No.
3305. Do you object to him having that power;—do you think there would be anything prejudicial to the Company if he had that power? It is left to the weighman. I do not see that it would do for them both to have power. If we had to weigh all day it would be a drawback to the output. Coal Cliff belongs to the old school of collieries. All the outside work is done near the jetty, and the coal has to be shovelled down the screen.
3306. If the weighbridge was kept going all day, would that be prejudicial to the Company? It would.
3307. In what way? It would stop the output.
3308. Have you not room for another screen? No.
3309. *Mr. Curley.*] Have you not any idea about the quantity of skips that are weighed at your colliery? No; I have not any idea of how many skips are weighed.
3310. How do you weigh your coal for going away? In the waggons.
3311. Do you weigh that coal yourselves? The Company's weighman weighs that coal.
3312. Do you ever compare that weight, the weight you send away in the vessel, with the weight you pay the miners? No.
3313. Do you never make any comparison? Yes; I have made a comparison.
3314. How often do you compare these weights? Fortnightly.
3315. How do you find them stand? Sometimes the Company is 2 tons to the bad and sometimes 2 tons to the good.
3316. Is the difference as little as 2 tons? Yes; sometimes only 2 cwt.
3317. What is the largest difference you recollect? Not more than that.
3318. When did you last make a comparison of these weights? Well, I quite forget what it was for the last pay. I cannot mention any single pay.
3319. When you make a comparison in this way have you not to have some consultation with the weighman, about the quantity of weight he hands in? No.
3320. Who does he hand the weights in to? He hands the weights to me. They are left in the office.
3321. Is the record of the skips weighed not brought to the office also? No; it is left in the weigh-cabin.
3322. From the quantity of tonnage the weighman brings in, could you not give the number of skips that are weighed? I cannot say how many skips are weighed.
3323. You must have some recollection of some of these tonnages for the fortnight. Can you tell us what tonnage they represent. Will you give us the weighman's account of your tonnage that you get from him every fortnight? Some fortnights we send away only 250 tons of coal, and on other fortnights 700 to 800 tons of coal.

3324. When the 250 tons of coal goes away, what quantity of weight have you from the weighman? J. McGenchie, Esq.
The weighman's weight varies sometimes, 1 ton, sometimes 2 tons.
3325. I am asking you the quantity of tonnage weighed? All the coal is weighed on the weighbridge.
3326. Is there not a certain tonnage weighed every day, according to the number of skips? It is all weighed by the skips. 24 Sept., 1895.
3327. Do you know the tonnage it represents? No; I do not know how many skips are weighed.
3328. Is it a fact that you really do not know the number of skips that are weighed at your colliery in a day? I cannot tell you how many skips are weighed. Some days they do not weigh at all, some days they weigh in the forenoon, and some days in the afternoon.
3329. Do any weeks pass without any weighing at all? No, not a week. I have never had any complaints from any of the men.
3330. *Mr. Gregson.*] How far is your weighbridge from the ship's side? About 250 yards.
3331. How many waggons have you at your colliery? 150 waggons.
3332. *Mr. Curley.*] What hours do you work? The mine is open from 7 o'clock to 5 o'clock.
3333. Do the men do any water-bailing? No.
3334. Have you no water-bailing? The wheelers do the water-bailing.
3335. Do the men bail into a cask? At times.
3336. Then the men do do some water-bailing? There is one bord; the main dip.
3337. When they do not bail the water out, do they sit down till that is done? Yes.
- 3337½. Does that happen very often? I have never ordered the men to bail water yet.
3338. If those representations are made to you, do you remedy them? Yes.
3339. Are the hours that you have spoken about the regular hours that you work? We sometimes vary an hour. We have a jetty exposed to the open sea, and we only work half time. If we want to load a boat we start at 2 o'clock in the morning, and knock off at 2 o'clock in the afternoon.
3340. Do the men ever go in at 3 or 4 o'clock in the morning and knock off at 5 o'clock in the afternoon? We have done so.
3341. How many hours do you reckon a man should work there? Have you any stipulated time? The miners go in at 7 o'clock, and come back at 5 o'clock. We have two shifts, a front shift and a back shift.
3342. When does the front shift come out? The front shift works from 7 o'clock until 3 o'clock.
3343. If the miners come out before 5 o'clock do you find fault with them? Not unless we are waiting on coal.
3344. Suppose you are waiting on coal? There is no fault found. If a boat comes in at 8 or 9 o'clock, we start the mine, and if a miner comes out before the boat is loaded I would find fault with him. If he went in at 7 o'clock and came out at 5 o'clock I would not find fault with him.
3345. If you were pressed frequently for boats in this manner, would you still request the men to work? No; I would put on more men.
3346. Do you think that eight hours is long enough for a man to work in a mine? I do not know. I think a man should please himself on that matter.
3347. I think you said you had been mining yourself? Yes.
3348. Did you consider when you were mining that eight hours was long enough to work? I have seen some days when six hours was long enough, but that was when I was not well. Some days I could work ten hours.
3349. Do you think that eight hours is long enough for a man to work? Yes, but if required eight, or eight-and-a-half, or nine hours, at times.
3350. Do you still say that you cannot give us the average number of skips that you weigh at your colliery? No, I cannot.
3351. What would you consider a fair average for the number of men you have working at the colliery now;—how many men have you? Forty-five men, but only twenty-five to thirty of them are getting coal.
3352. How many skips does each bord of men send out in a day? About twelve skips.
3353. What would you consider a fair average of skips to be weighed in the day for these thirty men? I do not see that it matters much how many skips are weighed.
3354. *Mr. Gregson.*] The more skips that are weighed the nearer the approach to absolute facts? Well yes, but if they get an average I do not see that that would make any difference.
3355. Do you think that it is possible that any four of the men working for you, could go four months without having a skip weighed? They could do that; that is one bord of men.
3356. Would you be surprised if you were told that that had been the case? I would be surprised.
3357. If you have fifteen bords of men, and they send out twelve skips a day, that is 180 skips in all, what would you consider a fair average out of that number to be weighed to get anything like a reasonable margin of knowing what the weight actually is? I think if one or two of those skips were weighed, that that could be taken as a fair average.
3358. What do you think is a fair average yourself? Well, two or three skips.
3359. You think that two or three skips, out of 180, is a fair average? I suppose, twenty out of that number would be a fair average.
3360. Could you weigh twenty skips a day on the one screen? Yes.
3361. Could you do that without interfering with the working of the pit? No.
3362. Would not the weighing of twenty skips occupy the greater part of the day? It would occupy three hours of the weighbridge each day.
3363. Do you think there is anything like this number of skips weighed at your colliery? I believe we have, at times.
3364. Say for a quarter—the last quarter—is there anything like this average number of skips weighed? I do not know how many skips are weighed at the colliery. The weighman and the check-weighman arrange that between themselves. I have heard no complaints, so I have never interfered with it.
3365. Has any individual man mentioned the matter to you? No.
3366. Might not the check-weighman have requested the weighman to weigh more coal, and may he not have refused? I have never heard of that.
3367. Do you know whether your weighman has objected to certain weights that have been made occasionally? No.

[Witness withdrew.]

WEDNESDAY,

WEDNESDAY, 25 SEPTEMBER, 1895.

[The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.]

Present:—

FRANCIS EDWARD ROGERS, Esq., Q.C. (PRESIDENT).

JAMES CURLEY, Esq.,

JESSE GREGSON, Esq.

Witness, Thomas Canning:—

- Mr. T. Canning.
25 Sept., 1895.
3368. *Mr. Curley.*] What are you, Mr. Canning? I am a furnace-man.
 3369. At what colliery are you employed? At the Duckenfield Colliery.
 3370. How long have you held that position? For between two years and six months and three years. I cannot say exactly.
 3371. Have you been employed in the Duckenfield Colliery for any length of time? I have been employed at Duckenfield over four years.
 3372. Have you worked as a miner? I worked as a miner when I went there first.
 3373. Did you do any other work? I was also at the pump.
 3374. Have you done anything else? No.
 3375. What time did you go to work in the morning? I am there at 6 o'clock.
 3376. Are you continuously employed at the furnace the whole of the day? Yes.
 3377. Do you do any other work? No.
 3378. What time do you cease work? At 3 o'clock in the afternoon.
 3379. Does anybody relieve you when you cease work? No.
 3380. You have nobody that takes your place? No.
 3381. Do you damp the fire down when you knock off work? Yes, one half.
 3382. Does the fire stop in that state till you get there next morning? Yes.
 3383. During the day do you keep the fire in fair motion? Yes.
 3384. Do you keep a good blaze of fire going? Yes.
 3385. What are your instructions from the manager with regard to keeping the fire going;—have you any instructions at all, or do you use your own discretion? I received instructions once to keep the fire blazing away.
 3386. What time do the men in that mine go to work in the morning? They go to work very irregularly, some earlier, and some later. I should say they leave the pit top at half-past 5 sometimes.
 3387. Do they go into the pit by the shaft? No, by the tunnel. I enter the pit by the shaft at half-past 5 o'clock, and I meet them at the furnace when I get there.
 3388. Is there anybody in the mine before you? I have seen lights in the bords when I have gone past.
 3389. Do you go into the mine the same way as the men? I go down the shaft, and go in by the fault district.
 3390. Where do you see these men's lights? In the fault district.
 3391. Do you judge from that that these men are in there before you go in? Yes.
 3392. Do you know if there is any stated time at that colliery for the men to enter the mine? Nothing but the miners' rules—that they leave the pit top at 6 o'clock and retire at 3 o'clock, and go in at 7 o'clock and retire at 4 o'clock.
 3393. Is there any stipulated rule on the part of the management? Not that I am aware of.
 3394. Have you seen the colliery rules? Yes.
 3395. Is there anything in these rules about this matter? I do not know if there is.
 3396. Have you the colliery rules with you? Yes. [*Copy of rules handed to Mr. Curley.*]
 3397. You do not know of any regulation about the men going into the mine apart from what the miners have themselves? No, sir.
 3398. As a practical man, do you think that regulation is sufficient for the management of a colliery? No, I do not.
 3399. Do you think that there should be a definite time for men to go to their work? Yes.
 3400. Do you think that they should go to work uniformly? Yes.
 3401. *President.*] Would that be practicable;—is the furnace always going? No; the furnace starts at 6 o'clock. I believe that there should be a stated rule for all the workmen, and that the furnace-man should be the first to enter the mine.
 3402. *Mr. Curley.*] You think that the furnace-man should precede the miners? Yes; for half an hour at least, to get his furnace started before the men enter the mine.
 3403. Do you not think it would be better if the furnace-man entered the mine an hour before the miners? Yes.
 3404. Do you think it would be better if the furnace was kept going all night? Yes.
 3405. Are there a few men working on the night shift in that colliery? Yes.
 3406. If the furnace is not kept going at night, how is the mine ventilated? I think there is always sufficient natural ventilation, besides that the fire is not out.
 3407. Is it not possible that the ventilation may be very stagnant if the furnace is damped down during the night, and that these men may not have sufficient ventilation? I think it is the experience of the men that are working at night that they have the best of it.
 3408. Do you think that they have plenty of air? I think so. There is a natural current of air, and the fire is to cope with the extra necessity during the day. The fire is damped up sufficiently to keep going all night. The air is not better during the night than during the day, but it is better air on account of the absence of the other workmen. There is not so much air used by the men at night, and consequently not so many noxious fumes.
 3409. When do the men leave the mine? We have two shifts, one shift goes in at 6 o'clock and leaves at 3 o'clock, and the other shift goes in at 7 o'clock and leaves at 4 o'clock.
 3410. Are the men working in the mine an hour after the furnace is damped down? Yes, half of them; the back shift men.
 3411. Do you know if any of the men stop in the mine the whole of the day? No, I do not.
 3412. Do you know if any of the men stop in the mine after 4 o'clock?
 3413. Might they not do so without your knowledge? Yes.

3414.

3414. Do you ever see any of the men going home late in the evening? No, not miners.
3415. Do you live in the locality of the mine? I am living at the far end of the town—on the outskirts of the town.
3416. Do you think that the furnace should be kept going the full time during the day until the men leave the colliery? I think so; still I make this proviso, that those men who are in the mine between 3 and 4 o'clock have as good air as the men that are there all day, on account of half of the men being away.
3417. Is it the intake shaft that you travel in by in the morning? There is more than one intake, but that is one of them?
3418. What is the depth of your shaft? I cannot give any idea. I cannot speak of that.
3419. Is the shaft a considerable depth? I have merely heard remarks about the depth of the shaft.
3420. What remarks have you heard? I think I have heard them say that it is 260 feet deep, but I cannot say.
3421. Are the workings in a considerable distance from the furnace shaft? Yes.
3422. How far would you estimate they are in? From which shaft?
3423. Say from the downcast shaft? The downcast shaft is just at the end of the workings. There might be five cut-throughs.
3424. Is the downcast shaft the hauling shaft? We have no hauling shaft.
3425. Do you fetch your coal out by the tunnel? Yes.
3426. Do you know the number of men working in the colliery? No; I do not.
3427. How far are the workings in from where you enter the mine? The first workings begin after five or six cut-throughs.
3428. How far are the workings at the furthest point the other way? How far will the men have to travel there in the morning, to the furthest point, to get to their work? About a mile and a half from the tunnel mouth. (*Witness illustrates the air-course of the fault district of the colliery*).
3429. From the description you have just given on paper, the air course appears to be very much zig-zag? Yes.
3430. Is that the ventilation that comes in the tunnel;—is the tunnel the intake? No.
3431. The downcast shaft? Yes; that is the main intake.
3432. Is the tunnel not the intake in the ordinary sense of the term? No, not for the fault.
3433. Is any part of the mine ventilated from the tunnel? There is ventilation from the tunnel, but it does not depend on the tunnel. The fault is closed off from the tunnel mouth altogether. The tunnel will supply part of the dip, and other workings, but they have other shafts for that.
3434. The road that you take to go into the mine in the morning, is that an intake or return? The intake.
3435. Do you notice the air rather stagnant in the mornings when you go in? No, not generally, when the tunnel is working regularly. When it stands the air is stiff.
3436. Do you mean when there is no work? Yes; for three or four days, or a week.
3437. Does the air then get stagnant or flat? Yes.
3438. Do you keep the furnace going at much of a pace on those occasions? No.
3439. Is that on account of economy;—to save fuel? I suppose to save fuel.
3440. What are you doing when the mine is not working? Idle.
3441. Who looks after the furnace? The fire is kept banked up—smouldering.
3442. Is there anybody, so far as you know, attending to the furnace? There is nobody there permanently. Somebody goes in in the morning and evening and banks it up for the night, to keep it smouldering.
3443. Was it at this mine the men were affected with foul air a week or two ago? No; that was at the Back Creek mine.

[Witness withdrew.]

John Odgers sworn and examined:—

3444. *Mr. Curley.*] Where are you working Mr. Odgers? At the Back Creek Colliery.
3445. What occupation do you follow? I have been working as furnace-man since about last March twelve months.
3446. What time do you go to work in the morning? At six o'clock.
3447. What time do you cease work? I knock off work about half-past three o'clock. I arrange to get on the top by four o'clock.
3448. Is there any other furnace-man employed at the colliery besides yourself? There is one at the No. 2 furnace, in the No. 4 tunnel.
3449. Is that in another section of the mine? Yes.
3450. Is it in the Back Creek tunnel? No.
3451. Is there any other furnace-man in the Back Creek Tunnel besides yourself? Yes; there are two furnace-men, one to each furnace.
3452. Are there two furnaces in the Back Creek tunnel? Yes.
3453. Is that the furnace you were referring to just now? I am working in the No. 2 tunnel at Back Creek.
3454. Is there any other furnace-man in the No 2 tunnel besides yourself? No; I am the only furnace-man.
3455. Do you bank the fire down in the evening when you leave off work? Yes.
3456. Does the fire smoulder till you go back next day? I put it so as to get a good fire next morning when I go back to work.
3457. Do you see any of the miners at work when you are going to work in the morning? I do not go down as far as the miners are.
3458. Do you know whether the miners go to work before you? Yes; a good many of them go to work before me.
3459. What time do you think some of the miners go to work? From what I have been told some of them go to work at four or five o'clock in the morning. I hear them talk amongst themselves.

3460.

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T. Canning,
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Mr.
J. Odgers,
25 Sept., 1895.

- Mr. J. Odgers.
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3460. Can you say whether this is true or not? No; I cannot say. It looks like it when I go in in the morning, because I see their picks gone, and I think that is a good proof they are at work.
3461. You notice that the picks are gone? Yes; I have taken notice of that many a time.
3462. Would the whole of the men be in the mine then? No; part of them. They would not be all in.
3463. Have you any particular instructions from the manager about the furnace work? No; not any particular instructions, but to keep on a good fire. They come and look at it once in a while, but I have had no complaints.
3464. Do you know the quantity of coal you burn in a day? About three skips of coal a day, unscreened coal (round and small coal mixed), about 13 or 14 cwt. in the skips.
3465. Can you use more coal than the three skips if you wished? I am not limited in any way.
3466. Is that about your average quantity? Yes, that is about the average quantity used.
3467. Do you know how many men there are in the No. 2 tunnel? No, I cannot say. I think last quarter there were 46 tokens running. I got that information from the bank-rider, but I would not like to say it is a fact. I know that there are not many men working down there, because there is only one section of the pit working.
3468. Have you worked as a practical miner there? Yes; but I am not a coal miner. I have been used to quartz reefing and copper mining.
3469. How long have you been working at coal mining? About 5 or 6 years.
3470. Do you not consider yourself as practical as most of the men who are working? Perhaps so.
3471. Do you like coal mining as well as quartz mining? No; I prefer quartz reefing to coal mining.
3472. Is quartz mining more pleasant work than coal mining? It depends on what a man is used to. If I had gone into coal mining in my early days I do not suppose I would have disliked it.
3473. *President.*] Is coal mining just as comfortable as quartz reefing? I think so.
3474. *Mr. Curley.*] Do you have good and bad ventilation in quartz reefing as well as in coal mining? There is plenty there, I can assure you.
3475. Have you heard tell of any circumstances arising of a peculiar character at Minmi a few days ago;—had not a few men to be brought out of the mine? Yes.
3476. Was that in the tunnel you were working in? Yes; the dump pile caught alight through the bush fires. The dirt on the top caught fire, and the smoke went down the air-shaft.
3477. Was not that rather an exceptional circumstance? Yes, exceptional.
3478. How far is the downcast shaft from the furnace shaft—the intake;—have you any shafts there except the furnace shaft? I suppose 500 or 600 yards—more very likely, that is in a straight course from one shaft to the other; perhaps it is 600 or 700 yards.
3479. Did you see these logs that took fire? No, I did not see them. One of the men boarding with me gave me to understand what it was. It seems they were old logs from the bush, and the bush fires caught on the dirt, and this caught the dump pile, and the smoke issuing from the fire went down the air shaft.
3480. What do you call the dump pile? The dump heap.
3481. Is that a heap outside the shaft altogether? The heap consists of the debris from the sinking of the shaft, and is outside of the pit altogether.
3482. Did you see any of the men that were brought out of the mine? No; I was not working when it happened; my son went to the furnace that day.
3483. Did the manager or anybody else come to see your son that day? They came to see if the furnace was going all right, and told him to throw his coal on quickly, and not to stop there long. There is a door back from the furnace, which is the intake for fresh air, and through that door you get fresh air.
3484. Did they say to keep the furnace in motion a little smarter than usual? No; they told him to keep his fire on as well as he could, and to slip out of the way as fast as he could.
3485. Did he go in at the usual time that morning? Yes.

[Witness withdrew.]

Peter Curran sworn and examined:—

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3486. *Mr. Curley.*] What occupation do you follow? I am a miner.
3487. How long have you worked as a coal-miner? For nineteen years.
3488. In what mines have you worked? I wrought nine years in mines in Scotland, and ten years within a few months in New South Wales, in the Minmi Collieries.
3489. *Mr. Gregson.*] How many years have you worked at Minmi? Nearly ten years—within two months of ten years.
3490. Are you working there now? No; not at present. I am living there, but I have been out of employment for six months.
3491. *Mr. Curley.*] Have you worked at those collieries up to that time? Yes.
3492. Have you worked at both collieries? Yes; at Duckenfield and at Back Creek; nearly an equal division of the time between them both.
3493. Which of the collieries did you work at last? At the Duckenfield Colliery.
3494. How long is it since you worked at the Back Creek Colliery? About two years ago.
3495. Was there a system of cavilling between these two collieries at one time? Yes; up to nearly two years ago, I think.
3496. Had you opportunities of being cavilled at one mine or the other? Yes; every three months.
3497. Has there been fire-damp given off at any of these mines? Yes.
3498. At which of the collieries is this fire-damp given off? Specially in the No. 4 Colliery; that is, Back Creek. There are two collieries there, No. 2 and No. 4.
3499. Are they separate and distinct collieries? The workings communicate; they are built in, but they are distinct and separate collieries. The old workings of the one adjoin the other.
3500. Has there been fire-damp given off in the No. 2 tunnel? Not to my knowledge. There has been, but it was in the course of opening out the workings, and they have closed that part. I do not know of fire-damp to any extent in the current workings of the No. 2 Colliery.
3501. Do you recollect a fire at one of these collieries some years ago? It was previous to my being there. I have passed through the section in the course of making inspections.
3502. Have you acted as check-inspector? Yes; on several occasions.

3503. In which of the collieries did you act as check-inspector? For the three collieries; that is, the two Back Creek collieries and the Duckenfield Colliery.

3504. How long were you in that position? I think I acted in that capacity for two years at various times.

3505. When you were check inspector did you ever notice any defects in connection with the ventilation? Yes.

3506. What were they? Deficiency in the quantity of the air travelling in certain sections of the workings, and the accumulation of black damp in some quarters.

3507. Did you notice particularly where this black damp was coming from? It was exuding from the sides of the travelling road leading to the fault heading workings where a creep had taken place. At the time I came to Minni the creep was actually on. This creep had closed the original travelling way, and they had to cut a new travelling way through the debris. This is now the travelling road through the old workings, hence the cause of the black damp.

3508. Is this black damp noticeable travelling past it? Yes, you can smell it, and it is perceptible on the light of the lamp.

3509. *President.*] Can you smell black damp? You feel a strangeness in it for the time being, and people who are not strong are affected by it. This black damp is only in the travelling way, and it might affect you for ten minutes or a quarter of an hour. A few years ago we had to come home from work for two or three days a week on account of this damp. It was lodged in the travelling way.

3510. Does it lodge in any particular place? At night it accumulated in greater quantities than during the day in the travelling or hauling roadway.

3511. Do you say you had to go home because you were ill? We could not pass through this black damp in the mornings. There is a down-cast shaft at the further end of the working. This is the return way from the workings, and the men have to travel this road where the black damp exudes. The furnace is damped down at night, and this is the reason why this damp accumulates. I do not think it is so bad now.

3512. When you were working there was it bad? Yes.

3513. Would you say that mine was inadequately ventilated? It is the result of the method of working the mine in the past, through not leaving sufficiently strong pillars in years gone by. The pillars are crushed out, and the roof has fallen in, and it is not repairable as it is. The roof of the roadway is supported by a continuous row of wooden pillars on each side, and the coal behind these pillars is crushed to dust.

3514. You think that nothing will take it away but proper ventilation? Quite so.

3515. *Mr. Curley.*] Is the furnace banked down at night? Yes, when I was check-inspector to my knowledge the furnace-man banked the furnace up about 3 o'clock. It was very perceptible, when working in the face we could always tell whether the furnace was banked up or not. In the morning the current of air in the mine was very weak, you could always feel it get stronger about 8 o'clock. The furnace-man comes back to work at 6 o'clock in the morning, and puts the furnace in full blast.

3516. Did you ever make any request that this furnace should be kept going night and day? The Lodge has in years past made this request. There have been two men engaged in the furnace, but there is only one now. The miners complain that the mine is not sufficiently ventilated. They believe that where there is a furnace, the current of air should be kept going night and day.

3517. Do you know whether men work in the mine at night occasionally? Yes.

3518. Is that an exceptional thing? When they are opening new workings—special places—there are six or eight men, and a water-bailer engaged at night, and sometimes brushers are at work that cannot be done in the daytime.

3519. These brushers are taking away part of the roof to give greater height in the main ways? Yes.

3520. Have you any records showing that there have been reports made about this ventilation? I have. I have acted as secretary, but I have not brought the secretary's books with me. I have brought one or two check-inspectors' reports with regard to the ventilation. I will read some of them:—

Inspection in 1890 :—There was a large quantity of stagnant water and mud lying about.

Inspection in 1886 :—Throughout two sections of the mine the anemometer would not act at all in what is termed the E heading and the D heading sections.

3521. *Mr. Gregson.*] Were you check-inspector then? No, Sir, I just followed shortly after that. The check-inspectors' names were George Nix and James Cook. The thermometer registered 74 degrees, and there was no result with the anemometer.

3522. *Mr. Curley.*] What was the height of the seam there? It was then about 4 feet 6 inches, I think. The old tunnel, I think, averaged about 4 feet 6 inches then all through.

3523. Were these measurements taken on the headings? Yes.

3524. Would that be the main intake road for that particular district? Yes.

3525. What time of the year was that in? In May. I did not bring the minute book. We made complaints to the manager about this report, and received promises that the matter would be remedied, but there was no remedy. We sent to Inspector Dixon, but he did not come, and the Lodge then sent to Mr. Mackenzie, the Examiner of Coal-fields, and he asked Mr. Dixon to attend. This state of things continued for two or three years. The manager was taken to Court, and fined for bad ventilation, and for driving bords over the specified distances, from 36 to 39 yards before the air.

3526. What year was that in? I think, between 1886 and 1888, but I am not certain.

3527. Was that prosecution taken at the instigation of the inspector? Yes, under the pressure of the Lodge. The Lodge brought the matter under the notice of Inspector Dixon, and finally under the notice of Mr. Mackenzie, the Examiner of Coalfields, and the result was that the firm was prosecuted and fined by the Court. In 1891, in what is called the fault section of the Duckenfield Colliery, there were two places where there was no result with the anemometer.

3528. Could you not get a register? No.

3529. Do you know the height of the seam? It varies from 4 feet 5 inches to 4 feet 7 inches, or an average of 4 feet 6 inches. The average height of the seam in the Duckenfield Colliery is 4 feet 6 inches. In a report made on November 25th, but I cannot give the year, the temperature by the thermometer was as high as 78 degrees, and 74 and 75 degrees. Another report on a certain portion of the Duckenfield Colliery says there was no result with the anemometer. That was in what was called the No. 3 flat.

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The anemometer would not act through insufficiency of air. There are two or three reports in 1893 and 1894 which state that the average amount of air travelling was not more than 120 feet, a little over 100 feet in some instances, with 72 degrees and 74 degrees of temperature.

3530. Were there any of the districts in which the air was not up to the requirements of the Act? Only in those places where I have mentioned no results. I have a report for February, 1894, where the average is a little over 120—125 and 127—with 72 degrees of an average for the thermometer. I may state that the check-inspector had always something to say about the insanitary condition of part of the roadways in most of his reports.

3531. Have you noticed whether any brattice is used in connection with some of these places? Yes.

3532. Can you understand why a mine of that description should not be well ventilated? My own convictions are, without prejudice, that it is from a point of economy, and want of due regard to the health of the miners. What leads me to believe so is that, while acting as check-inspector, we have complained to the overseer that the air was a little over 100 feet, and that we thought that there was need for more air. He said that he had met the requirements of the Act. When men were firing shots they were stifled for the want of greater power for ventilating.

3533. Is there much refuse in that seam;—have you to throw much refuse out of the coal into the working place? Yes; there are two bands in the seam known as penny bands; also 6 inches and 3 inches of inferior coal treated as refuse with thin layers of clay on the top of the seam; the whole refuse in general measures 1 foot.

3534. Have you to clean all this away from the coal? Yes.

3535. And throw it back into the working place? Yes.

3536. Along with the slack that you make? Yes.

3537. Does this refuse frequently fill up the sides of the roadway? Yes; up to the roof in some places. It is quite a common thing in the No. 3 and No. 4 workings, and what is known as the H and the fault workings, to have just sufficient egress and entrance for the skip into the bord, through the place being built up on either side nearly to the roof. The cause of that is chiefly due to the fact that there is no place for the refuse made at the opening away of the bord, and the miner has to stow it up behind him. That is, in my opinion, the cause of the smoke remaining in the bords. I do not say it is a general thing, but it is of more common occurrence than the exemption. It is specially common in No. 4 heading. In that heading it is nearly up to the roof all the way.

3538. What is the width of the bords you work? Eight yards.

3539. What is the size of the pillars? They vary. Some of the pillars are, I think, cut through in one day. They would not be more than 2 or 3 feet. Others, again, go to 8 or 9 yards.

3540. Did that occur up to the time you left the colliery? Yes.

3541. Are these things still going on in the same way? Yes. I have wrought in bords, and have gone through from one side to the men on the other side, and have had to leave my bord when these men have been firing shots. That was in the H heading and also in the No. 4 heading. In the No. 4 heading I was working two bords from a man who was shot in his own bord by his mates who were working in the other bord. That man was on the accident fund for nine days.

3542. Did the shot go through the pillar? Yes.

3543. Did the shot go through from one place to the other? Yes. The man's name was Willoughby, and the numbers of the bords were 30 and 31. Several times to my knowledge the shot has removed part of the pillar—shattered the pillar on the other side.

3544. With regard to working in a bord, if the manager wishes you to make the place narrower does he put a chalk mark on it? Yes.

3545. Does he request you to respect that mark? Yes. He says that such mark is to be observed. He gives injunctions to that effect.

3546. Could he drive these bords by a line if he pleased to do so? Yes; there is nothing to prevent him.

3547. Would that be to keep his pillars to a uniform size? They drive headings and cut-throughs by line always; but, as far as the bords are concerned, they do not do so with them.

3548. Have you worked in the smaller pillars when they have been taken out? I have not wrought in pillar work. I have only wrought in cut-throughs there. I know of some instances where men have gone through two pillars in a day, and perhaps they might be a fortnight going through the next pillars.

3549. When men are extracting pillars, do they look to the main roads for safety? Yes.

3550. Is that in the event of an impending fall? Yes.

3551. Do you think that these small pillars are sufficient to keep the main road safe? No; I do not think so.

3552. With regard to the cleaning of the coal;—is there a heavy penalty imposed if you send out refuse? Yes; the penalties graduate.

3553. What is the custom in this respect? In the first instance you are cautioned, but you have to see the manager in every instance. You are compelled to go to the colliery knowing there is no work. You go into the office, and they tell you there is no work, you go home, and then have to see the manager. I have known men to remain at home thinking they were putting in their penance for the offence, and when they came to the mine the day following they were sent home again to suffer the indignity of being sent home.

3554. Are they stopped for any length of time? One day generally; sometimes two or three days; sometimes instant dismissal.

3555. Have you what is known as the regulation dirt-scale? No; we have made an attempt yearly to get it. We have placed it before the manager, but he says that his judgment shall be the only arbiter as to what shall be done. In most of the places the air is so bad through the smoke that the men cannot see what they are filling. There is 1 foot of dirt, and men who want to fill clean coal are surprised when they come to the surface to see the dirty coal. A vitiated atmosphere, with smoke, lies there all day. I used to work, and put no coal out, in order to fire two or three shots at night, and then fill the coal next day, for fear of this penalty, but now miners have to rush and do all they can.

3556. Have you anything like what is known as the standard weight at that colliery? No; there is a standard weight to a certain degree. New-comers are placed on 10 cwt. till they are weighed, and should they be weighed 11 or 12 cwt., they get that weight as their average from that day forward until weighed again, but they may be filling 11 or 12 cwt. and only get this 10 cwt. up to the day on which they are first weighed. As check-weighman, I have found that men have been losing 1 and 2 cwt. per skip filling 4 or 5 skips daily for a fortnight.

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3557. If they are not weighed for some days, how are you going to give them the standard? The average of the colliery should be placed as the standard weight.

3558. What do the skips carry as a rule? They vary—from 10 to 13 cwt. The average is 11 cwt. 1 qr. or 11 cwt. 2 qr.—7 lb. or 14 lb.

3559. Do you consider that what is termed the standard weight should be entirely abolished altogether? Most certainly I do.

3560. Is it abolished at Minmi? Yes.

3561. Is there any complaint there about the number of skips that are weighed? Yes; because when they are on low-weight they do not weigh for a week or a fortnight, and know that they have fully 2 or 3 cwt. more on a skip. I have known men while I was check-weighman, good fillers of coal, who never varied their weight, but by an accident on the roadway their skips might get upset, and so they might lose 1 or 2 cwt., and they may stand on that weight for a week, although they actually filled 1 or 2 cwt. more. In some cases the miner may work on tender coal for a day, and that may detract 2 cwt. off his weight. He may get on good coal next day, but the weight of the tender coal will be taken as the standard till he is weighed again. I have known men not to be weighed for a fortnight, and some men may be weighed twice or three times in a day. It is all by accident.

3562. Do you weigh continuously during the whole of the day? No.

3563. What was your regulation with regard to weighing? Only the will or the caprice of the masters' weighman. He had to oversee the timber and the topmen, do the ticketing of the trucks going away, arrange for the filling of slack coal, and various other duties. Whenever he had to perform these functions the weighing ceased.

3564. What colliery was that in? The Duckenfield Colliery.

3565. Did the same thing apply to the other colliery? Yes.

3566. What were the number of skips weighed in a day? Sixty or eighty, as near as I can judge.

3567. What number of skips would come up the tunnel in a day? About 1,000 skips per day.

3568-9. Do you think the men are satisfied with the average number of skips that are weighed? No, I do not think so.

3570. What do the men want? Well, I believe, to give them justice, that every skip should be weighed; or, if it is not possible to do that, that they should exercise the present system of averaging to a greater degree, and keep the weighman standing there weighing.

3571. Do you think that the average would be acceptable provided there were a fair number of skips weighed? That would be preferable to the present system; but the opinion of the miners is that every skip should be weighed.

3572. *President.*] Would not that be utterly impracticable at some of the mines? It is not impracticable, but it might interfere with the hauling to a certain extent. In Scotland where I came from they weighed every skip.

3573. Would it not be unreasonable to expect that every skip should be weighed with the condition of things here;—if a larger proportion of skips were weighed, would not that do? That would be more favourable than things are at present; but, to give justice to men and masters, I believe that all material should be weighed. I do not think that the miners would stornly hold out for a condition of things that was going to militate against the working of the colliery; but if it is possible, with any degree of justice, it should be done. I think that all material produced should be weighed.

3574. Would it be better for the miners if the whole of the mines were shut up? Well, I do not know.

3575. Would it not throw a lot of men out of employment? If there were not so many mines open there would not be so many miners. There might be a better regulation of the trade. Men might fall back on other occupations.

3576. *Mr. Curley.*] Do you think that in the absence of every skip being weighed, that if a fair proportion of the skips that come out of the mine were weighed, that would give the men better satisfaction? Yes; I do believe so. Both the miners' weighman and the masters' weighman get into very bad grace with the miners; but the minors' weighman is not to blame, because he has only to stand by and see the weight registered.

3577. If the miners' weighman had power to compel the masters' weighman to weigh, would that do? That is what is wanted, and would give a better average of the weighing of the skips.

3578. Do you think that the men should have the right to select their own check-weighmen? Yes.

3579. Do you think they should have the right to select him outside of the colliery if they chose to? Yes.

3580. Have you any reasons to give for that opinion? Yes; I can quote two reasons. There were two men who were employed at the colliery for years as miners, and who were selected by the miners for the position of check-weighmen. One was named William Teague. He was the miners' secretary and delegate, and took positions in the miners' lodge before he was check-weighman. Because of his outspokenness it was well-known the manager had no affection for him. He was selected for weighman, and was in that capacity for six months, when an election took place. There were other candidates in the field, and he was defeated. The miners then worked for him to try and get him on the coal, but the manager refused. We did everything to get him reinstated, but failed. He could not get work in the district, and consequently had to leave. He died shortly afterwards of poverty, and his body was found up at Lithgow. Another instance was John Jenkins, who has wrought in the Minmi Colliery for seven years. He was selected by the miners as their weighman about a year and a half ago. He was in that position about six months, when a strike took place. When the strike ended the miners went back to work, but when Jenkins went to go back to his work the manager objected, and would not allow him to stand on the bridge. He asked for other work, but was refused; and to this day he is unemployed. That is between six and seven months ago, and he has no work to-day. In consequence of this the people of Minmi have made a collection to aid him to go to Coolgardie. Seeing that a man has no security for being reinstated in his work as a miner should he be defeated in the course of a ballot for the position of check-weighman, I think the miners should choose whoever they like as their check-weighman, especially when the manager will not reinstate him if he is chosen from the men at the colliery.

3581. Has the Company absolute power to select whom they please? Yes.

3582. Can they appoint who they like? Yes.

3583. Was there any charge brought against these men you have referred to that you are aware of? Not to my knowledge. If there had been the manager would have informed the lodge; the lodge has sent

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deputation after deputation, but without satisfaction. In the case of Teaguc, twenty men obtained employment while we were soliciting work for him.

3584. After waiting on the strength of a promise, he had subsequently to leave? Yes; as far as Jenkins was concerned, I believe the manager regarded that all relations between employer and employed had ceased when the strike took place, and he took up the ground that Jenkins was not in the employ of the Company, and he held that only an employee should be check-weighman.

3585. Are you aware that a manager can take up that position, legally, under the present Act? I think so; but it is a wrong provision in my opinion.

3586. Did you know both these men personally? Yes.

3587. Were they steady, sober men? They were both Good Templars, and educated men, well able for the office, courteous and civil at all times; perhaps they were too well educated.

3588. Do you mean to say that the employers want a flathead as check-weighman? Well, I don't say so.

3589. *President.*] Do you think so? The proprietors don't care for a man who bristles with principles.

3590. *Mr. Curley.*] Do you think that intelligence can be crushed—that it can be put out of sight? It is crushed very much at the present time.

3591. Coming back to the internal working of the colliery;—do you know anything about the inspection of the colliery in the morning—do you know the practice in that respect? A certain mark is placed on the working place, with the day of the month, which is generally an indication that the fireman has been there examining the place.

3592. Have you seen that mark? Yes.

3593. Did you expect to see it there? Yes; it was sometimes placed on a shovel, so as it could be seen.

3594. What would you conclude if you did not see the mark on the shovel? You would conclude that the fireman had not inspected the place.

3595. In that case, would anybody tell you that you were not to go in? No.

3596. Do you know the rule that says a workman shall not go into his place until it is inspected? I think there is a rule to that effect; I know the fireman does stop some miners sometimes to tell them there is danger.

3597. What would the danger arise from? Accumulation of gas; there is one portion of the mine where there is a probability of gas, that is in the No. 4 tunnel Back Creek Collieries.

3598. Do you know for a fact that there is fire-damp given off occasionally? Yes; when they are opening up the headings in the No. 4 tunnel.

3599. Is it a usual thing to put a mark on the shovel, or on the coal face, to show that the mine has been inspected? Yes; to give an indication that the place has been visited; and should there be danger there is a danger board placed at the road end to warn men not to enter the place. At the Duckenfield Colliery, till within three or four years ago, it was never inspected till they met with the presence of gas in Nos. 4, 5, 6, and 7 headings, and the miners made application for the fireman to visit there.

3600. Were these headings in the Duckenfield Colliery? Yes; in the dip workings.

3601. Was fire-damp found there? Yes; that necessitated the appointment of a fireman.

3602. Did the management not appoint a fireman until the men asked for him? No.

3603. Would he still examine those places independently of the mine working? It is generally understood that one half of the mine is not examined at the present time. Gas has not been found, and they think it is not necessary to inspect the places in the morning.

3604. Do you think that every place in the mine should be inspected? Yes; one does not know what may occur with a change of atmosphere. A short time ago, about a fortnight ago I think, about fifty or sixty men went to work, and they had to leave the workings when they had been in from a quarter to half an hour. Eight or nine of them were wheeled to the surface. The men had to all leave the workings by 7 o'clock, overcome by some fumes that were of an extraordinary nature, not to be found there at any other time. Not being employed at the colliery I do not know much about it, but the men told me that they did not find this mark on the working place, nor had they made it on that section of the mine. They concluded the fireman had not visited that section.

3605. They concluded that he had not visited that section that morning? Yes.

3606. What conclusion did the men arrive at as to the cause of this? The men themselves could not clearly understand what the cause was. They knew it was some irregularity in the air. It was discovered that the debris which had been taken from the downcast shaft, that was in the bush some distance away, had taken fire—some assume by the late bush-fires. Some wood had been intermixed with a kind of inferior coal and rock, and it had taken fire also, and the sulphurous fumes emanating therefrom went down the air shaft. I visited the shaft and saw the burning material that had been removed from close behind the shaft. I believe that to be the cause. It was discovered by the officials.

3607. Was that an occurrence of an exceptional character? Yes, purely exceptional; and it may never occur again. It proves to my mind that these shafts should be built up with a widening area a given height above the surface so that the air entering the shaft may be as free as possible from contact with putrifying substances, or poisonous gases originating through combustion of material lying close to the mouth of the shaft. The mouth of the shaft is level with the ground, and this material is piled several feet above the surface close by. The miners perceived this smell for three days before it took this intensified form and compelled them to cease work.

3608. The miners did not perceive it to such an aggravated extent as on this particular day? It seized them all at once just when they got to work. I think it proves conclusively that there was no one there before they went to work.

3609. What time do these men go to their places? At all hours. They are in before the furnace-man often. The furnace-man has informed me that most of the miners have their picks off the rack when he goes in. They are ten hours in the mine.

3610. Have you any engine planes in any of these mines? Yes.

3611. Do you have many accidents on these roads? Yes; in No. 4 tunnel about four years ago there was a man killed, by the name of Ephraim Ilamer, by the set. He was not a stranger, but had not taken notice that the man-holes were all on one side. He went to the other side and found out his mistake, and tried to squeeze between the skips, and lost his life.

3612. Were there sufficient man-holes according to the Act? Yes; but they were all on one side of the road.

3613. Do you know of any other accidents? There was another accident in the old tunnel at the Duckenfield

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Duckenfield Colliery. The miner's name was Walsh. Both the No. 4 and No. 2 tunnels are double width, but in the old tunnel you have to travel between the roads. Walsh was travelling between the roads, and met with an accident which killed him.

3614. Are there any man-holes there? Yes; at the Duckenfield Colliery there is a great turn, and it is difficult to hear the set coming. It travels at a great speed. For a considerable distance the road is so narrow that a man can easily stretch across and touch both sides of the road at the same time with his hands.

3615. Are the man-holes on each side of the road? Yes; I think they are alternated on either side.

3616. Do you know of any other accidents that have taken place? There was an accident, not fatal, to a man named Halestone. He was on what we call the landing from the top where the double road comes in. He was met at the crossing, and the empty set passed over him and broke two or three of his ribs. He was, however, able to work a few months afterwards. This is the only travelling road for the miners out of that tunnel—that is in between the rails of the hauling road.

3617. Have you looked over the proposed Bill? I have made a scanty perusal of it.

3618. Did you notice whether these refuge places were kept clear at all times? Yes; very clear. Some were not very high. You had to stoop down to enter them. On the average they were about 5 ft. high; some of them were not as high.

3619. What depth were they? I could not be accurate as to the depth. It takes three men as close as they can get together to get into them. They vary a good deal. They utilise the old place ends for half of the man-holes.

3620. Do you think if the man-holes were made on both sides of the road that that would be an improvement? I think it would. The miners about there never thought that there were no man-holes on that side.

3621. Have you been up there since? No; they have a new travelling road altogether now at No. 4 tunnel, Back Creek.

3622. Has this defect been remedied? Yes.

3623. Have you what is known as a spragman in the colliery? Until about two years ago there was none.

3624. What are a spragman's duties? He is supposed to go round and see that the miners place sprags at the working face, to secure the coal when they are holing it.

3625. Does he go round and warn the men? Yes.

3626. Do you believe in having these spragmen? I do.

3627. Do you think they are necessary? Yes; because there are miners who are careless as long as they do not see danger. Although I believe it is carried out in some cases very harshly, I think, in some parts, it should be the general rule.

3628. With regard to the provisions of the proposed Bill, have you looked over them? Yes, in a cursory manner.

3629. Have you seen the provision in the Bill dealing with the hours of employment—section 36, on page 17 (see Appendix A.)? Yes.

3630. Do you believe in the proposal in the Bill with regard to the working hours? Yes, I do.

3631. Do you know that it is proposed to make a change? Yes, to eight hours.

3632. Do you believe in the legalisation of the eight hours? I do.

3633. Do you think that eight hours is long enough for a man to work in a mine? My personal opinion is that it is too long.

3634. *President.*] Supposing a manager wanted a man to stop an hour or two later in the day to finish a vessel that was wanting coal, would the men agree to that? No; I should not consent to such a thing.

3635. *Mr. Curley.*] Don't you think that would become a general custom? There would be always boats on hand, I think. I think that trade would go on with the eight hours as it does with the ten hours at present. I think the traffic would adapt itself to the hours.

3636. Do you think it would interfere with the trade? No, I do not think so. I do not think that men should work any more than eight hours. From a physical point of view it is too much in a coal-mine in the vitiated atmosphere where the miner works.

3637. Do you know that proprietors occasionally suspend the whole of the operations of a colliery? Yes.

3638. Have they done so quite recently to your knowledge? Yes, they have shut down a colliery.

3639. Have they closed down one of the collieries in your district? Yes; the No. 2 and No. 4 tunnels were closed down.

3640. For how long were they closed? For four or six months.

3641. When was that? I should think about two years ago.

3642. Was that not working less than eight hours? I did not say it was in connection with the hours.

3643. Was not that working less than eight hours at that particular colliery? Yes; there were some hundreds of men thrown out of work under the pretence that the colliery would never work again. At the same time there were certain hints given that if the men would submit to a reduction they could go to work at any time.

3644. Have you thought the question out fully with regard to the eight hours? Yes.

3645. Do you think it would affect wages in any way? Yes, I do. It would minimise the time. The miners at present are receiving no more than they can possibly exist upon by working the ten hours a day. If they worked eight hours they could not live on less, therefore the miner would have the protection that he would not be giving labour away over the eight hours.

3646. *President.*] Do you think the miners would raise as much coal in eight hours as they do in ten hours, and get as much money? They would have to receive a higher tonnage rate.

3647. If the masters could not pay a higher tonnage rate, what then? They would be thrown out of employment. My experience is that the tendency with employers is to extend the hours of labour. One reduction comes, and then another, and, to meet this, another hour is put upon their labour. I have found amongst proprietors that the cause is competition amongst themselves, and that the miner is being used for that purpose. As long as the miner is willing to put on another hour, so they go on. I say it should stop at eight hours, and so allow the miner a wage to live upon. They are now taking boys of 13 years of age to do what their fathers were doing. Where two men used to work now they do with one. For the moral tone of society the law should compel eight hours to be a day's work, and no more. If coal is a necessity it will be got then, but it should not come out of flesh and blood.

3648. *Mr. Curley.*] In a competition period such as you have mentioned, and with a market overstocked with

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with labour, have the men very much say as to what their conditions shall be? They have any amount to say, but it has no effect on the proprietors. Circumstances command them, and if they disobey, they can go hungry.

3649. Do you think that eight hours is the general wish of the men as a body? I am certain of it. In the district where I come from the miners are agitating, by public meetings, for eight hours. One half of the time is taken up dealing with recalcitrant members, trying to bring them back to eight hours. There is a general complaint against the present condition of things.

3650. Do you ever hear many people say they are opposed to men working the eight hours? Very few.

3651. Even proprietors? I cannot say that I do.

3652. Is not their chief objection the matter of legislation? I believe the proprietors generally are not opposed to eight hours, but they are opposed to legislation on the subject. I hold that if a man believes in a principle, and sees that principle exposed to danger, or imperilled, that he should not fear to see it ratified by law.

3653. You said that a man would not get as much coal in the eight hours as he would in the ten hours—taking it over a number of years don't you think he would? I would not say altogether. A practical man with science expends an amount of energy, and taking an average for six months or a year of the energy expended, I think he will produce as much in eight hours as ten hours, because it produces bad health. Within a given time, I don't think he would produce as much by working ten hours as he would by working eight hours, because excessive toil impairs the constitution and consequently brings a premature destruction of the labourers' nerve power.

3654. In any case, do you think the miners are willing to take the consequences of anything that might arise? I do.

3655. No matter whether wages are effected or otherwise? Yes.

3656. Do you think the miners have fully considered that phase of the question? I do believe that.

3657. Apart from trades-unionism altogether, do you think that eight hours is long enough for a man to work? I do, conscientiously. I think it ought to be the maximum limit, because a miner's occupation is peculiar from any other occupation. There are two or three hours occupied going to and from work, and I hold that a miner should have so much time to himself every day.

3658. Have you looked at the clause with regard to ventilation in the Bill, section [50] 47, on page 23 (*see Appendix A.*)? Yes.

3659. Do you know that the proposed Bill has a provision stipulating a higher minimum quantity of air? Yes; the present Act specifies 100 feet, and the intended Bill 150 feet, which I believe is highly necessary.

3660. Do you believe in a stipulated minimum at all? I do.

3661. *President.*] If you had not that minimum in the present Act I believe it would be better in the way the inspectors have read the Act. It has been stated that they measure the air in the airway, and that if the necessary quantity of air is there according to the Act they have no power to remedy a deficiency of air in the working places? Where we find the air 100 feet we think there should be a greater quantity of air.

3662. The danger is in stipulating an amount for fear of its being misread. The difficulty is that if you specify a minimum in the proposed Bill it may be misread again? The miners are prepared to abide by the consequences, and they are prepared to go further than that minimum rather than have no minimum at all. If an overseer was to say there is an adequate amount of air, the contention would be as to what an adequate amount of air was. I think it would be much better to say there shall be a certain amount of air as a minimum. I believe that 100 feet of air is not sufficient, I think it should be 150 feet, and if possible more. I know the amount of air travelling in the intakes provides for double that quantity, but it is squandered. It would compel the proprietors to see that that amount of air was conducted to the working face.

3663. *Mr. Curley.*] Does the air not occasionally scale over the stoppings? Yes; if the air that enters the intakes was properly conducted all would be right, but it gets squandered through the stoppings not being kept in order.

3664. Do you know what the stoppings are built with at Brown's collieries? Yes; the refuse 6 inch and 3 inch with bands and slack, and sometimes portions of material taken out of the roof where it is necessary to add to the height of the road.

3665. Are the stoppings plastered with lime? No.

3666. Are not the main stoppings plastered with lime? Some of them are brick work and some not.

3667. Have you noticed occasionally that the air will scale away where the stopping shrinks? Yes.

3668. Do you still think that a minimum quantity of air should be stipulated in the proposed Bill? I do.

3669. Do you think that the Bill could be worded in such a way with regard to the minimum quantity that the manager could not say that that was all the air he had to provide? I think so. Mine managers at the present time work from a point of economy, especially at the Minni collieries.

3670. Do you find fault with working from a point of economy? The adequate amount of air I hold, under present conditions, would be the lowest public opinion would admit of their working the colliery.

3671. Is the economy you complain of the economy that limits the proper ventilation for the mine? Yes; there should be a very efficient eye kept to see that these stoppings are filled up, that the airways are kept in good condition, and that the furnace is kept going night and day. I hold that the stipulated amount of air should be higher than at present, and I maintain that an adequate amount of air would become in public opinion a certain amount according to whatever conditions prevailed, and that it should be specified what that should be for the protection of the miners. The health of the miners should not be imperilled on any monetary consideration.

3672. Have you noticed the provision in the Bill giving the inspector power to withdraw the men from the mine in case of danger? Yes.

3673. *President.*] Do you think it is right the inspector should have that power? Yes.

3674. If an inspector had that power given to him, do you think that it should be used only in cases of imminent danger? Yes. My opinion is that that power should be invested in the Government Inspector of the mine. If he is qualified to understand the nature of these cases I think he should be given the power to prevent loss of life—that is, in cases of imminent danger.

3675. Might not there be other circumstances besides gas to cause danger in a mine? Yes; such as mining under tidal waters, creeps in collieries, where indications are given days previous by pillars cracking, and so forth.

3676. *Mr. Gregson.*] Do you know if a strike took place at the Minni Colliery about six months ago, with reference to a proposed reduction in the minimum height of the seam? Yes.

3677.

3677. Did the miners who were at work then retire from the colliery? They refused to accept the terms.
 3678. Were you one of those miners? Yes.
 3679. Have you been out of work ever since? Yes.
 3680. *Mr. Curley.*] Have you applied for work at that colliery again since the strike? No.
 3681. Have you not made any application for work? No; for certain reasons I have not.
 3682. Do you occupy one of the Company's houses? There is a dispute between us on that subject at present. They have taken the matter to the Court, and they have withdrawn from the case.
 3683. *President.*] In the meantime, are you paying any rent? No.
 3684. *Mr. Gregson.*] Does not the house belong to the Company? I will not say so; I built the house, and agreed to pay 30s. a year for ground rent, to be deducted from my wages.
 3685. *Mr. Curley.*] Did the Company give you a lease of the ground you built your house on? I built the house on a temporary lease, upon the understanding that my lease would be renewed when it expired. Instead of renewing the lease, they come and say that I will have to pay a weekly rental, and be prepared to quit at a week's notice, although I built the house and paid for everything in connection with it. If, after doing that, a man comes and says it is his, I cannot see that it is.

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[Witness withdrew.]

William Lowe sworn and examined:—

3686. *Mr. Curley.*] What occupation do you follow? I am a miner.
 3687. What colliery are you working at? At present I am employed at the West Wallsend Colliery.
 3688. Have you followed mining for any length of time? Yes, from childhood; from when I was about 10 years of age.
 3689. What mines have you worked at in Great Britain? I have worked at four collieries in the county of Durham.
 3690. What are the names of the mines you have worked in? The Tudhoe Colliery and the Binchester Colliery.
 3691. Have you worked in any other collieries in Great Britain? Yes; in the Broomside Colliery.
 3692. Any other collieries? In the Sunnybrow Colliery.
 3693. What was the method of working in these collieries? In some of them bord and stall, and in some longwall.
 3694. In what collieries did you work the longwall system? In Tudhoe and Broomside.
 3695. What was the practice in the other collieries? Bord and stall.
 3696. Do you know the depth of any of these collieries? Approximately, they were somewhere about 80 fathoms deep.
 3697. That would be about 480 feet? Yes.
 3698. Do you know the width of the bords where they worked under the bord and pillar system? They used to work them six yards wide, but before I left five yards wide.
 3699. Where was that? In the Binchester Colliery.
 3700. What was the size of the pillars? The ordinary pillars were 12 yards thick, by 30 yards in length. The ordinary bord pillars were 12 yards in width and 30 yards in length.
 3701. What was the size of the pillars in the other two collieries? They were just about the same size.
 3702. What was the depth of these collieries? About 50 fathoms deep—300 feet.
 3703. What was the height of the seams? From 4 feet to 5 feet high, or an average of 4 ft. 6 in.
 3704. Did they use any brattice in these collieries? They bratticed right up to the face where the bord and stall system was worked.
 3705. What collieries have you worked in in New South Wales? In the Hetton and Seaham Collieries; at present I am working in the West Wallsend Colliery.
 3706. What was the system of working at the Hetton Colliery? Six-yard bords and six-yard pillars.
 3707. Had you much refuse to contend with at the Hetton Colliery where you worked the jerry? Only the jerry in the bottoms.
 3708. What was the thickness of that jerry? From 5 in. up to about 7 in. thick.
 3709. Did that band run right across the bord? Yes, right across the bord.
 3710. Were you ever in any wet places in that colliery;—did the seam make much water? The winning crosscuts were very wet. We had very often to use two damboards to dam the water back.
 3711. Do you know whether they keep bores in advance at that colliery? Yes; but I could not state the distances ahead.
 3712. Who puts these bores in? A man is kept specially for the purpose, and works in the night time.
 3713. Did you ever notice the ventilation in any way defective in some of the places at the Hetton Colliery? It was very defective in the narrow workings.
 3714. With regard to Wickham and Bullock Island Colliery; but, before we go to that, what are the sizes of the pillars at the Hetton Colliery? Six yards.
 3715. What is the width of the bords at that colliery? Six yards.
 3716. Were the bords driven by line? No.
 3717. Were the pillars kept to a uniform size? They were kept somewhere nearly about a uniform size.
 3718. Do you know whether they are working under tidal waters at the Hetton Colliery? Yes; they work all under tidal waters.
 3719. Did you ever hear any motion overhead? Yes; on two or three occasions we have heard the noise of the ferry boats going up the harbour when we were working down in the mine.
 3720. Was that noise quite clear? Yes; quite distinct.
 3721. Are you sure there could be no mistake about it? None whatever.
 3722. Do you think that a colliery in that position would have to be worked very carefully? I do.
 3723. *Mr. Gregson.*] Was the water salt? Yes; very salt in the workings; most of the water was of a brackish nature.
 3724. *Mr. Curley.*] Does the Wickham and Bullock Island Colliery adjoin the Hetton Colliery? Yes.
 3725. Does the same practice prevail at that colliery as at the Hetton colliery? I have never worked there. I have only worked at the Hetton Colliery on Bullock Island.
 3726. Have you worked at the Seaham colliery? Yes.

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3727.

- Mr. W. Lowe, 3727. How long have you worked at that colliery? For three years. I worked there up to the time of the fire.
- 25 Sept., 1895. 3728. Did the fire that occurred there lead to the closing of the colliery? Yes.
3729. Were you working at the Seaham colliery at the time of the fire? Yes.
3730. Did you work there as a practical miner? I worked there for six months as a miner on the coal.
3731. What was your occupation later on? I was acting as fireman for the rest of my time at that colliery.
3732. Was it part of your duty to inspect the working places of the colliery in the morning? It was my duty to inspect one district every morning when the pit was working.
3733. Who inspected the other districts? There was another fireman on the opposite side of the pit.
3734. Were all the places in the colliery inspected every morning before the miners went to work? Yes; all round the pit.
3735. Was that done by order of the manager? Yes.
3736. Had the men to see you before they went into their working places? Yes; every morning we had to stand and see every miner at the pit bottom.
3737. Was there any fire-damp given off in that mine? In the north-east workings we had to keep it bratticed to within 3 feet of the face to keep it clear, or as near that as possible.
3738. Do the workings in that district rise or dip? They rise.
3739. In what position is your upcast shaft? To the rise of the mine.
3740. How far is it away from the downcast shaft? I cannot say definitely, but somewhere about 7 or 8 chains.
3741. What is the height of that seam? According to the system of working, the average was about 5 feet.
3742. Would this represent something like a section of the coal. [*Witness shown a section of the coal from the report of the Department of Mines for 1889, see Appendix T.*] Yes, that is a section of the seam showing the band and the roof.
3743. What kind of brattice do you use at that colliery? Canvas cloth.
3744. Can you use that canvas cloth for a considerable time? Yes, under different conditions. I have some of that cloth in use that has been there ever since I went to Seaham. It was in use when the pit knocked off.
3745. Is the gas very active in that mine? In one section of my district it was very active.
3746. Did it require special vigilance? Yes, special vigilance.
3747. Do you use safety lamps there? No, we work all by naked light.
3748. Do you depend on the ventilation? Yes.
3749. Is the mine ventilated by fan or by furnace? By fan.
3750. What kind of a fan is it? A Waddle fan.
3751. Do you know the diameter of the fan? I cannot say exactly what the diameter is.
3752. Would you consider the cost of bratticing for that colliery a specially expensive item? Well, as far as the expense is concerned, once the brattice is put up, it will last for a very long while.
3753. Is the expense, then, merely nominal? Yes.
3754. Is there any fire-damp given off in the dip section of that mine? We have never found any in the examinations.
3755. What is the width of the bords? 8 yards.
3756. Do you know the size of the pillars? 6 yards.
3757. What is the depth of the shaft? 460 feet.
3758. Are these shafts in the valley leading up to the mountain? One of the shafts is in the valley—the down-cast shaft, and the up-cast shaft is two-thirds of the distance up the mountain.
3759. Are your workings leading mainly towards the mountain? The headings are driven east and west, and the bords are working mostly through the range.
3760. Do the workings rise or dip in that direction? They are rising towards the range.
3761. What is the ratio of the rise? It varies greatly. In the west workings it is about 1 in 12, or 1 in 14, and in the east workings 1 in 8.
3762. Is it what you would call a moderate rise? In the west, yes; in the east, more than generally.
3763. When you get under that mountain will you get a considerable quantity of weight? Yes.
3764. Will that represent a greater depth in the mine? Yes.
3765. Did you say that you had only a 6-yard pillar? Yes.
3766. Do you ever discuss this matter of sufficient pillars with the manager at all? Yes, with the underground manager, but never with the manager.
3767. Who is the underground manager? I refer to Mr. William Henderson, the late underground manager.
3768. Was he the underground manager? Yes, under Mr. John Turnbull.
3769. Has he been employed in the mine since? No.
3770. Where is he now? In Victoria.
3771. Is he still living at West Wallsend? His family is still living there.
3772. How do you ventilate the mine? By four splits, two on each side of the mine, two on the east side, and two on the west side.
3773. Was the mine ventilated in that way when you first went there? No; by furnace, and only two splits.
3774. What condition was the ventilation in at that time? It was very poor, but the number of men employed was not so large.
3775. Was the ventilation anything like it is now? Nothing like it is now.
3776. It is ventilated by fan now? Yes.
3777. Was this fan put up later on? Yes; the fan has only been up about eighteen months.
3778. Did you make the splits previous to, or since the erection of the fan? Since the erection of the fan.
3779. Where do your splits start from? East, 2½ chains from the pit bottom, and west, 20 chains from the pit bottom.
3780. When you put these splits in did you notice a considerable advantage in the ventilation? It more than doubled the air in the east workings, and it gave one-third more air in the west workings.

3781. Do you think that a mine should always be vigorously ventilated? Yes; and in a mine of that description specially so.
3782. Do you believe in splits? Yes.
3783. Have you considered this question of ventilation? I have made it a great study during the last three years.
3784. Is that part of your work? It is my sole work to look after the ventilation.
3785. Did you look after the putting up of brattice? Yes; I looked after that right through the pit where I was last working. I looked after the putting of all the brattice up.
3786. *Mr. Gregson.*] Did you put up all the brattice in the Seaham Colliery? Yes; till the colliery stopped.
3787. *Mr. Curley.*] Do you say that you had to put up the brattice for the whole of the colliery? Yes; but since the change of management—since Mr. Turnbull left and Mr. Fairley took charge—the miners have been reduced to two-thirds.
3788. Did they reduce the underground men? Yes; there was one fireman instead of two.
3789. Were you the fireman that was kept on? Yes.
3790. How many men were employed there as underground officials when Mr. Turnbull was manager? There were four—two on the back shift that came down at 7 o'clock; but their duties were more numerous than what they were later on.
3791. Do you know the number of men employed when Mr. Turnbull was there? Approximately 250 men.
3792. How many men were employed later on? One hundred and twenty-four men.
3793. Does that 6-yard pillar you have referred to apply to the main roads, and everything in the mine? No, only to the ordinary bord pillars.
3794. What kind of pillars did you leave near the main road? They were 16 or 18 yards thick.
3795. Away from those pillars, were the other pillars only 6 yards? Yes, 6 yards.
3796. Are you a practical man? Yes.
3797. Do you know the depth of that colliery? Yes.
3798. You know that it is going under a mountain? Yes.
3799. Knowing that, would you regard those 6-yard pillars as of anything like an adequate size? No; in conference with the underground manager we always objected to the size of the pillars.
3800. If you had to take up an independent position as a manager would you leave larger pillars? I would grade them off, and leave nothing less than 8 yards.
3801. Have you had any experience in extracting pillars? Yes; I have had a little experience at home.
3802. Do you believe that the coal can be obtained better by leaving larger pillars? Yes; pretty nearly all the coal can be got with the larger pillar, but with small pillars you often lose a lot of coal.
3803. Have you a very strong roof at that colliery? Yes, a splendid roof.
3804. Do you think it will be likely to stand for a considerable time? Yes.
3805. If you were taking out pillars, would you not require a larger pillar to break it off when it once comes away? In beginning to take pillars out, a larger pillar would be needed to break the first fall.
3806. Have you commenced to work any pillars out there yet? No.
3807. Is the mine a comparatively new mine? Yes.
3808. Have you looked over the proposed new Mining Bill? No.
3809. Do you know that there is a provision in the Bill to alter the hours of working, to bring them down from what they are now to eight hours? Yes.
3810. Do you think that eight hours is long enough for a man to work in a mine? Yes, quite sufficient.
3811. Do you think that such a matter can be better arranged between the men and the manager, or do you think that there should be legislation upon the subject? Well, it is a question that I have not taken much time to study, but I think there is a possibility of it being agreed to between the men and the managers. In some cases, however, it would be very difficult to decide.
3812. Do the men mostly work eight hours in that particular colliery? Yes; exclusive of meal hours.
3813. Have you not given the question of legislation on this matter any consideration? No; I have not.
3814. Do you know the provisions in the present Act with regard to ventilation? Yes.
3815. The proposed bill stipulates for a minimum of 150 cubic feet of air, but that is objected to by the Legislative Council, who want the provision that is in the English Act, which provides for an adequate quantity of air without a minimum. Do you consider that a stipulated minimum quantity of air should be embodied in an Act of Parliament? I think that there should be nothing less than 150 feet of air, especially in connection with the mine that I have worked in during the last three years, that is in the gassy section.
3816. Leaving out of sight a gassy mine for the present, for ordinary sanitary purposes don't you know that the defect would be in providing ventilation where there is no gas? Yes; if there is no proviso for a minimum quantity it leaves it to the caprice of a manager as to what is an adequate quantity.
3817. Do you think a manager might attempt to take advantage of the word "adequate"? All that I can say is that I have seen cases where, with very little trouble, a manager could have given more ventilation, but did not do it.
3818. Does that impress you with the idea that there should be a minimum quantity stipulated? Yes.
3819. The present Act of 1876 states that the air shall sweep undiminished past each working place;—do you think that the air should be carried into the working place? Yes; it does very little good in passing along the heading when the bord gets in 30 yards. The miners do not feel much effect from the air on the heading.
3820. Have you noticed in your experience that in some of the mines a good deal of refuse has been put on each side of the bord? In the present mine I am working in there is fully two-thirds of the side filled up with refuse.
3821. If this is so, how is this air to get into the working place? The system we use would be to carry it in in the intake side, and leave the wide side for the return.
3822. Do you mean to carry it in by brattice? Yes.
3823. Do you think that the shortening of the cut-throughs would be an advantage? Not if brattice-cloth was used as a means of ventilating.
3824. Do you think that if brattice was put up there would be no need to shorten the cut-throughs? Yes, I think there would be no need to shorten the cut-throughs.
3825. As things are carried out at present, do you think that the cut-throughs are too long? Yes, far too long.

Mr. W. Lowe.
25 Sept., 1895.

- Mr. W. Lowe. 3826. *President.*] What do you say should be the proper distance in front of the air? Fifteen yards in front of the air.
- 25 Sept., 1896. 3827. *Mr. Curley.*] If you had a 35-yard cut-through, would that mean 20 yards of bratticing? Yes; about that quantity.
3828. Do you think that part of this refuse could be utilised for the purpose of bratticing? Yes; what is thrown back on the road side could be utilised along with the brattice cloth.
3829. Would you regard bratticing as a very serious item of cost? I think the cost is merely nominal after the stock of brattice has once been worked up. Our purchase of new brattice would only run about one bale in every two months.
3830. What is the size of a bale of brattice? About 100 yards.
3831. Is that double width? Yes; double width.
3832. Would that be 2 yards in width, and 1 yard in length? Yes.
3833. From the experience you have had in using brattice, do you state that it can be used over and over again? There is brattice cloth in use now at the Seaham Colliery that has been in use over three years.
3834. There is a clause in the proposed bill with regard to giving power to the inspector to withdraw men in the face of danger. The Legislative Council has objected to and erased this clause. Do you think an inspector should have this power? I think it is only fair to allow the inspector power, if there is real danger, to withdraw the men.
3835. Do you think that is a power that ought to be vested in the inspector? Yes.
3836. *President.*] You think that an inspector should have that power in case of imminent danger? Yes. In the case of a creep, it generally gives warning for some time. With a strong roof it will be a couple of months.
3837. Do you think that this great power to inspectors should only be given in cases of imminent danger? Yes.
3838. Not unless there was imminent danger? I scarcely think that any of the inspectors would use such a power, except in cases of imminent danger.
3839. If you gave the inspector that power, you would not give it to him except in a case of immediately impending danger—a danger close at hand? Dangers might appear in two or three different lights, and as inspector of mines, and a man of practical experience, it would only be in the case of danger that he would attempt to withdraw the men. Only in a case of immediately impending danger.
3840. Is that all that you would give that power for? Yes.
3841. *Mr. Curley.*] With regard to a creep, in the case of a strong roof, if there was any appearance of it being on the move, and the inspector came in when this motion was going on, don't you think it would be right for him to have some authority to say whether the men should be withdrawn? It would all depend on the conditions at that time. I have seen instances where pillars have been worked out, where it would creep weeks before it came away. It generally gives warning before it comes away. In a case of that sort, I think it would depend greatly upon the nature of the roof as to the length of time it would be creeping, and they would scarcely exercise the power in an unjust manner under those conditions.
3842. Do you think that an inspector would endeavour to act with some kind of judgment under such circumstances? Yes.
3843. You think that he would not use his judgment in any arbitrary way? No; he would simply use his experience of the nature of the ground.
3844. Do you know the present inspectors? I only know one.
3845. Which of the inspectors is that? Mr. Humble.
3846. Have you met him occasionally? He used to come to the Seaham Colliery.
3847. What opinion have you formed of Mr. Humble? I think he is a thoroughly efficient officer.
3848. Has he made suggestions to you at any time with regard to what would be for the benefit of the colliery? Yes on small matters; he has given advice, and I have generally followed it out.
3849. Have you benefited by that advice? Yes.
3850. Are you aware when the inspector is coming to the colliery to make an inspection? No.
3851. Do you generally expect him every two months, or so? I think once in every eight or nine weeks, although sometimes it is only six weeks between his visits.
3852. Do you know whether the question of the 6-yard pillars at Seaham has been a matter for discussion at any time between the inspector and the manager? He has drawn our attention to the size of the pillars, but I know nothing about any conversation with the manager.
3853. What do you mean when you say that he has drawn your attention to the pillars? When we have encroached on the pillar he has drawn our attention to it.
3854. Do you drive your bords by line? Yes, with Mr. Turnbull during the last twelve months of his management.
3855. Have you been doing so later on? We have not followed the same principle since he left the colliery.
3856. Do you think that principle should be adopted? I think it is the best method of working to keep the pillars intact.
3857. Does it keep the pillars to a uniform size? Yes.
3858. Did you get your instructions principally from Mr. Henderson, the underground manager? He was the underground manager under Mr. Turnbull.
3859. Were you at the Seaham Colliery when this fire occurred recently? I was fireman at the time.
3860. Were you in the mine the day the fire occurred? No, not on the day the fire was reported.
3861. Was the mine not at work? The mine had only worked one day that week.
3862. Were you only working when the mine was working? I had only worked one day more than the mine.
3863. Do you know anything of the origin of that fire? The origin of the fire is unknown.
3864. Is it one of the mysteries appertaining to fires? Yes, as far as I am aware.
3865. Were you in the mine after the fire occurred? I was about one of the first in the mine after the underground manager discovered the fire.
3866. Where was this fire situated? In the flat, in the north-east workings of the mine.
3867. After attempting to put it out, was it decided to close the mine down? Yes.
3868. Did they fail to accomplish the object of putting it out at the time? Yes.

[Witness withdrew.]

MONDAY, 30 SEPTEMBER, 1895.

[The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.]

Present:—

FRANCIS EDWARD ROGERS, Esq., Q.C. (PRESIDENT).

JAMES CURLEY, Esq.

JESSE GREGSON, Esq.

Jonathan Coates sworn and examined:—

3869. *President.*] What are you, Mr. Coates? I am a farmer and dairyman.
3870. Have you ever been a coal-miner? Yes.
3871. How many years have you been a coal-miner? Fourteen years.
3872. Have you been coal-mining in this Colony for that length of time? In England, and in this Colony.
3873. How long have you been coal-mining in England? Nine years.
3874. And the rest of the time you have been in this Colony? Yes.
3875. What mines have you been working in in this Colony? In the Minmi collieries in the Newcastle district, and at two collieries in the Southern district, and two collieries in the Western district.
3876. *Mr. Curley.*] What collieries have you worked at in the Western district? At the Vale of Clwydd and the New Vale Collieries.
3877. Are you well acquainted with the system of weighing in the Western district? Yes; I am very well acquainted with the system of weighing.
3878. Have you conversed with men working at other collieries to ascertain from them the system of weighing in the same district? Yes.
3879. What was the system of weighing at the collieries you have worked at? There was no uniform system. It was a system of averaging, but it appeared to be very unsatisfactory, and has been proved in many cases to be unsatisfactory to the men.
3880. For what reason was it unsatisfactory? Chiefly that there was far too small a number of skips weighed in proportion to the number of skips raised.
3881. Was that a subject of common complaint? It was the most serious complaint, and it was the general complaint.
3882. *President.*] What position did you hold in the colliery? I was check-weighman at the Vale of Clwydd Colliery.
3883. *Mr. Curley.*] How long ago is it since you held the position of check-weighman? Something like two years ago, or a little over.
3884. Did you hold that position for any length of time? Something like two years, or a little over.
3885. *President.*] Two years ago you were a check-weighman? Yes.
3886. *Mr. Curley.*] Did the manager call the skips to be weighed, or what was the understanding about the system of weighing? The system of weighing was that the manager had full control and absolute power to call for what skips he liked. The check-weighman had no power whatever; he simply saw that the skips were weighed correctly as far as he could judge, but the manager had sole control over the calling of the skips.
3887. Would the weighman on behalf of the Company make this call? Quite so.
3888. *President.*] Do you say that the check-weighman had no voice in what skips should be weighed? Yes. That is one objection to the system now prevailing. The men now contend, and have for many years contended, that they ought to have the same power for the calling of the skips as the weighman on behalf of the Company.
3889. *Mr. Curley.*] Has the Company's weighman any other duties besides weighing? Yes.
3890. What other duties are these? As a rule, the manager weighed the coal, but not at all times. He had at times a clerk, and this clerk used to assist him.
3891. What colliery are you speaking about? The Vale of Clwydd.
3892. Who was the manager of that colliery? Mr. Thomas Broughall.
3893. *President.*] How many skips, on an average, used to be weighed? I have a statement here which will give particulars.
3894. *Mr. Gregson.*] Where did you get the figures in this return from? From the present check-weighmen in the Western district.
3895. Have you taken these figures from the check-weighmen's books yourself? Yes; the check-weighmen were present with me when I took these figures. I took the figures myself, in conjunction with the present check-weighmen.
3896. *President.*] Whose books are these? The books, of course, belonging to the Miners' Association. While the check-weighman is there, of course he is for the time being the owner of the books.
3897. *Mr. Curley.*] Are these figures copies from the check-weighmen's books? Yes.
3898. What particulars have you with you? The quantity of skips drawn since the 12th January in the present year up to the present time, at the Vale of Clwydd Colliery, is 20,474 skips.
3899. What date is this return up to? Up to 28th September, inclusive—up to last Saturday.
3900. How many skips have been weighed out of that number of skips? 130 skips.
3901. *President.*] Have you any record to show whether these skips are weighed once in a day, once in a week, or once in a fortnight? As near as we can get at it, it was from two to six weeks. They may weigh a small number of skips in one day, and then go from two to six weeks without weighing any skips at all. They would have a lapse sometimes for two months, and in one case three months, between the periods of weighing.
3902. *Mr. Curley.*] What year are you referring to? This year—1895.
3903. Do you think that one skip in 157 is anything like a fair proportion of skips to weigh? No; I do not.
3904. Have there been very many complaints made to the manager about the insufficient number of skips that were weighed? During my time there were many complaints of that description made.
3905. Was the manager ever requested to weigh more skips from time to time? Yes.
3906. Was he urged to do so? Yes.

Mr.
J. Coates.
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- Mr. J. Coates. 3907. Did the manager decline to weigh more skips, or what reply did he make to these representations? He never gave any definite reply as to how many skips he would weigh. He regarded it as his absolute right to weigh when he thought proper, and as many skips as he thought proper. He never gave us any more satisfaction than that.
- 30 Sept., 1895. 3908. *Mr. Gregson.*] Where is Mr. Broughall now? He is the manager of the same colliery still.
3909. *President.*] Would he have a record of the number of skips weighed for the period you have mentioned? He ought to have. I think he should have a record.
3910. *Mr. Curley.*] Can you give us any information with regard to any of the other mines in your district? Yes; the Zig Zag Mine.
3911. Have you the figures in a similar way for that mine? Yes.
3912. Have you taken these figures from the check-weighman's books? Yes.
3913. What period do these figures cover? The same period.
3914. Will you give us the particulars with regard to this mine? The number of skips drawn from the 12th of January to the 28th of September, inclusive, is 20,348.
3915. Why do you fix the date on the 12th January? Because that was the first pay in the new year.
3916. What number of skips were weighed out of that quantity? 225.
3917. *Mr. Gregson.*] Only 225 skips? Yes; only 225.
3918. No more? No more.
3919. *Mr. Curley.*] Who is the manager of the Zig Zag Colliery? Mr. John Wilson.
3920. Do you think that one skip in every ninety is anything like a reasonable number of skips to be weighed to get at a fair average of the weight? No, sir; I do not.
3921. Do you know if there have been any complaints made at this colliery with regard to the weighing? I can only say what the check-weighman has stated to me. He gave me to understand that many complaints had been made at that colliery of a similar character to those made at all the other collieries.
3922. Do you know of any other colliery where this system prevails? Yes; at the Eskbank Colliery.
3923. Have you the figures for that colliery for the same period? Yes.
3924. What are the figures? The number of skips drawn was 22,957.
3925. What number were weighed there out of that quantity? 102 have been weighed.
3926. *Mr. Gregson.*] Only 102 skips weighed? Yes, sir.
3927. *Mr. Curley.*] Do you think that one skip in 225 is anything like a reasonable proportion of skips to be weighed? No; I do not.
3928. Have complaints been made at that colliery as well? I cannot say positively, but from what I can hear they have.
3929. What is it that you have heard? The men state that they are anxious, and have appealed to have more skips weighed. The same complaints are made at that colliery as at other collieries in the district.
3930. Notwithstanding these complaints, does the same system of weighing still go on? Yes.
3931. Can you give us any information with regard to any other colliery? In connection with the Eskbank Colliery, they have another small coal mine where there are only a small number of men employed, and there they hardly ever weigh at all. They give the men an average of 14 cwt. 1 qr. per skip.
3932. *President.*] Is not that standard weight? They suppose that the men fill this amount of coal in every skip.
3933. *Mr. Curley.*] Do you mean to say that they assume that quantity is in every skip? Yes.
3934. Is that all the men are paid for? Yes; these skips come out of the tunnel, and go to the ironworks for local consumption, and they base their calculations on the weight of the skips.
3935. Who is the manager of that colliery? Mr. John Spooner.
3936. *Mr. Gregson.*] How many men are employed there? I cannot say exactly. I have made inquiries, but I cannot get the information exactly. As near as I could ascertain it was six men.
3937. I suppose when the men engage they know the system on which the weighing is done, and accept work on those terms? Yes.
3938. *Mr. Curley.*] How many men are employed at the Vale of Clwydd Colliery? Twenty-five is the average number all the year round.
3939. How many men are employed at the Zig-zag Colliery? A similar number of men.
3940. How many men are employed at the Eskbank Colliery? They employ also about the same number of men. The number of men employed ranges from twenty to thirty.
3941. *President.*] Are there only twenty-five men employed at each of these mines? Yes; from twenty to thirty men all the year round.
3942. *Mr. Curley.*] Are there any other mines you wish to refer to? I have not the figures for any of the other collieries, because there is no check-weighman, and it was impossible for me to get the figures.
3943. Do you know how they weigh at these other collieries;—are the men paid by average weight at the mines where there is no check-weighman? Yes.
3944. What are the names of these collieries? The Lithgow Valley and the Hermitage Collieries, and the Vale and Oakley Park Collieries.
3945. *President.*] Have you anything to do with coal-mining now? No, sir; I may say that at the Lithgow Valley and Hermitage Collieries they weigh a larger percentage of skips than any of the other collieries in the district.
3946. *Mr. Curley.*] Is the number of skips weighed small at the Vale and Oakley Park Collieries? At the Oakley Park Colliery, from information received lately, the quantity is very small indeed there.
3947. Who is the manager at the Lithgow Valley Colliery? Mr. Campbell.
3948. Who is the manager at the Vale Colliery? Mr. Blackwell.
3949. What is the manager's name at the Oakley Park Colliery? Mr. Robert Hayes.
3950. Do you think that every skip should be weighed? In the absence of some amicable arrangement being arrived at between an employer and his workmen, I do.
3951. If there was a fair number of skips weighed during each working day, do you think that would satisfy the men? I do. I have a copy of the colliery rules, in which it states that a certain number of skips shall be weighed, and that is agreed to by the men and the employers.
3952. What colliery does that rule apply to? To the Vale Colliery.
3953. Was that some time ago? About five years ago.

3954. *President.*] Do you say that the men would be satisfied if a fair number of skips were weighed? *Mr. J. Coates.*
Yes.
3955. *Mr. Gregson.*] What do you mean by a fair number? The lowest number I have heard mentioned when a meeting has been called for the purpose of dealing with this matter was 5 per cent., or one skip in every twenty. Meetings have been called several times upon this question, and that is the lowest number that has been agreed upon. 30 Sept., 1895.
3956. *President.*] That has been suggested as a fair number? Yes.
3957. *Mr. Curley.*] Is that embodied in your rules? Not exactly, but something similar.
3958. What does the rule say? Rule 19 says, That the duties of the check-weighman shall be to see justice done in the weighing of the miners' coal, and also other matters relative to the miners' interest. He shall place on a board kept for the purpose the correct number of each miner's skips filled and brought out of the mine on each working day. He shall also place on the same board the average weight of each miner's coal that has been weighed on such day as weighing has been carried on by the Company's weighman and himself. He should further see that there is at least sixty skips per month weighed, and should the Company's weighman refuse to assist in weighing the said sixty skips, he shall draw the manager's attention to same, in writing. It shall also be the duty of the check-weighman to make a balance-sheet every fortnight showing the number each single or pair of men have filled during that period, and to assist the underground manager and general turnkeeper in every respect to regulate the turn fairly in the various headings or flats. He shall in person with the company's weighman test the weighbridge every fortnight, and should he not be satisfied with the correctness of the bridge he shall immediately bring same under the notice of the manager. He shall keep a full set of books showing all miners' work, and shall attend all meetings, and shall be paid fortnightly by the miners. 20.—In the event of the check-weighman not being able to attend to his duties he shall find a qualified substitute for one day only, in order that the decision of the lodge may be obtained confirming such appointment or otherwise. 21.—The check-weighman to be elected quarterly (by ballot), but should it be proved to the satisfaction of a majority of the lodge that the check-weighman has in any way misconducted himself at any time during the quarter, he shall be dealt with as a majority of the lodge may deem proper, but should the majority of the miners be in favour of his removal he shall be employed on the coal, providing he is a miner.
3959. *President.*] That rule says sixty skips per month? Yes.
3960. How many skips are raised per month? At present something like 2,400.
3961. Was that the number at that time? Yes; there might have been a little more trade at that time. Trade fluctuated at the Vale Colliery to a great extent at the time referred to.
3962. *Mr. Curley.*] Whether the colliery worked much or little, was that stipulation carried out? It was supposed to be carried out.
3963. Was it carried out? In some cases, but not in all. It is not carried out at present. It finally drifted, and was put on one side like many more things.
3964. Do you say that work at that colliery fluctuated a great deal? Yes; just at that time.
3965. Previous to this rule being agreed to, had there been any dissatisfaction about the number of skips that were weighed? Yes; that agreement was the outcome of the dissatisfaction.
3966. Do you say that the Company's weighman or the manager has the sole right of weighing? Yes.
3967. How could you enforce a condition of that kind unless the manager was willing to comply? No; it was left entirely to his option whether he did it or not.
3968. Is the manager's name signed to that agreement? Yes; it is signed on behalf of the Company by Mr. William Henderson, as colliery manager, and by Mr. John B. Turnbull, as consulting manager. Mr. Turnbull was the head manager, and Mr. Henderson was the manager under him. Mr. Henderson was overman, or underground manager, but Mr. Turnbull was always appealed to in any case of dispute.
3969. Did you find Mr. Henderson a man that would carry out any contract he made, as far as he was concerned? I always found he would.
3970. Have you anything else you would like to refer to? There are one or two other matters that have been discussed many, many times by the men. One of them is the selection of the check-weighman.
3971. What have you to say about this matter? The men in the Western district have contended for many years that they should have full and wide choice for the men to be selected as check-weighmen.
3972. *President.*] Do you mean to say that the check-weighman should not necessarily be an employee of the mine? Yes; that is what I mean.
3973. *Mr. Curley.*] Do you believe that is what should be done yourself? I do.
3974. What makes you form that opinion? In the first place, seeing that the men have to pay the check-weighman, I think it is only right that they should have full choice with regard to the man that is to be employed. I think it is only being on an equal with the employers. They have full choice as to whom they appoint, and I think it is only right that the men should be allowed the same liberty and freedom.
3975. Do you ballot for a check-weighman every three or six months? Yes; if there are more nominations than one.
3976. In the event of the weighman being balloted out at any time, would the employer give him a start at the colliery again? I have never seen a case where they have refused to do so, but they could refuse if they chose.
3977. Is that one of your reasons why you think a check-weighman should be selected from anywhere? Yes, sir.
3978. Is there anything else you wish to refer to? There is one other thing I would like to mention, and that is with regard to ambulances.
3979. What have you to say upon this matter? The men in the Western district appear to be under the impression that ambulances should be provided at every colliery, in case of accident. It is not so long ago since a miner was seriously injured at the Vale of Clwydd Colliery, and they had to put him into a skip, and the consequence was, that his injuries were aggravated. Since that accident the men think it is really necessary that ambulances should be provided.
3980. *President.*] Is there a rule in any Act that you know of that ambulances should be provided? Yes, though I do not think it is compulsory.
3981. *Mr. Gregson.*] Is the coal clean in the Lithgow mines? Yes, fairly clean.
3982. Are the miners paid for round coal? Yes; round coal only. They are paid for small coal if they have instructions to fill small coal only. They have always been paid for screened round coal.

- Mr. J. Coates
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3983. *Mr. Curley.*] Weighed at the bottom of the screen? Yes; weighed at the bottom of the screen. There is one other matter in connection with the weighing that I would like to mention, and that is the adjustment of the weighing-machine. I know from experience that the men have had to contribute towards paying the Inspector of Weights and Measures for examining the machine.
3984. Do you consider that the inspector should examine those weights and measures in the same way as he does any other weights and measures? I think he should.
3985. You think the men should not be asked to contribute toward the expenses in this matter? Yes; I consider it unjust.
3986. *Mr. Gregson.*] Who do you think should pay for it? The inspector is a man who is in the service of the State, and for that reason particularly the miners think that he should not charge anything.
3987. Is not the inspector paid by fees? Quite so.
3988. Then who is to pay the fees? He does not charge anything in our district for testing storekeepers' weights, and I think this should apply to the miners as well.
3989. *President.*] Do you know that there is a proposal in the Bill we have under consideration about ambulances;—will you look at rule 34, old rule 36, on page 30, of the Bill (*see Appendix A*)? Yes; but it is not carried out.
3990. It is in the proposed Bill; your suggestion, therefore, seems to have been anticipated? Yes. In connection with the adjustment of the weighing-machines, the miners think that the employers should provide what is known as Government stamped weights. As a rule, they have 56-lb. stamped weights, and the men think that there should be at every colliery weights that should weigh half a ton at least, so that the weighing-machines could be adjusted at any time they may think it necessary.
3991. In the proposed Bill there is a section, on page 21 of the Bill, dealing with the application of the Weights and Measures Act to the weighing-machines used at mines [*see Appendix A*] ? Yes; but under the present system of adjusting the machine, the beam is only adjusted, and not the machine.
3992. Must we not expect that the inspector will do his duty? The Government machines are tested in the way the men are anxious to have their machines adjusted. Something like half a ton of weights are placed on a table, and the men desire that both the beam and the machines shall be tested.
3993. *Mr. Curley.*] When you have worked in these mines, have you ever experienced any defective ventilation? Yes.
3994. In what colliery have you noticed the ventilation defective? In the Vale of Clwydd Colliery.
3995. What was the nature of the defect? That the air was not sent around the mine in its proper course, in a proper way.
3996. Do you mean by that, that it might be on the heading, but not in the working place? Quite so. When it is registered, there was always a sufficient quantity of air in the heading, but not in the face.
3997. *President.*] Is the working place the same as the working face? Just the same.
3998. Did the inspector or the manager appear to be satisfied if there was air sweeping along the air-way? Yes.
3999. Do you know how much air? I cannot state the quantity.
4000. *Mr. Curley.*] What you wish to convey is that there might be sufficient air, but the air might not go up to where the men were working in the working place? Yes. Every time the men's inspectors went round they could always register air far and above what was specified in the Act at the Vale of Clwydd Colliery.
4001. Was that on the heading? Yes, but not on the working faces; and that is where the trouble used to be continually cropping up.
4002. Are you speaking from your own experience? Yes.
4003. Did you experience these defects in the air personally? Yes; in that particular mine. I never experienced anything like it in the Vale Colliery. The Vale and Vale of Clwydd Collieries are the only two collieries I have worked at in the Western district.
4004. Have you heard of complaints at any of the other collieries? Yes, sir.
4005. Did you hear these complaints in conversation with the men? Yes.
4006. Would brattice have assisted to get the air into the working face? Yes, it would.
4007. Do you think shorter cut-throughs would be an improvement? Yes, I do.
4008. *President.*] Do you want both these things? Not necessarily.
4009. You want the air there, no matter how it is got there? Yes.
4010. *Mr. Curley.*] Do you think if the bord was a shorter distance up, before they put the cut-through, that that would improve matters? Yes.
4011. *President.*] Do you care whether the bord went up 500 yards or more as long as you got your air? Not as long as there is good air; that is all that is required.
4012. *Mr. Curley.*] Would you not be more likely to get that air with the bord a short distance, say, 20 or 25 yards? Decidedly so.

[Witness withdrew.]

John Estell sworn and examined:—

- Mr.
J. Estell.
30 Sept., 1895.
4013. *President.*] What is your name? John Estell.
4014. *Mr. Curley.*] What occupation do you follow? I am a miner.
4015. How long have you been mining in this Colony? For about eleven years in this Colony.
4016. *President.*] What mines have you worked in here? At the Wallsend Colliery, at the Co-operative Colliery, and at Miami; but not as a miner at Miami. I was working underground at Miami and am at present employed at the Wallsend Colliery.
4017. *Mr. Curley.*] How long have you worked at Wallsend? Four years.
4018. Have you worked in different parts of the mine during that time? Yes; all over the mine.
4019. Have you a system of quarterly cavilling? Yes.
4020. By that means do you have opportunities of getting into different parts of the mine? Yes; into different districts.
4021. Have you a Miner's Lodge at that colliery? Yes.
4022. Do you hold any office in connection with that Lodge? I am secretary of the Lodge at the present time.

Mr.
J. Estell.
30 Sept., 1895.

4023. How is the Wallsend colliery ventilated, by furnace or by fan? One portion is ventilated by furnaces, and the other portion by fan.

4024. Are there a large number of men employed at the colliery? I should say about 550 miners.

4025. What is the system of working? Bord and pillar.

4026. What is the height of the seam? It varies from 8 feet to about 5 feet 6 inches, or perhaps a little under 5 feet in some places.

4027. What is the width of the bords? The working bords are generally 8 yards wide.

4028. What is the size of the pillars? They are supposed to be 8 yards.

4029. Have you ever worked where the pillars have been less than 8 yards? Yes; I have taken pillars out less than 8 yards.

4030. What size have you taken pillars out? I have taken them out as thin as 3½ yards.

4031. Has the roof ever fallen at the sides, when you have taken these narrow pillars out? While taking the narrow pillars out, the roof has fallen out at the sides, that is before we started to take the pillars out. The stone lays on the old goaf.

4032. Did you take these pillars out going from the heading inwards? Yes.

4033. Was it a critical matter to work pillars of that description? Yes, on account of stone falling on the slack; you cannot get the roof properly timbered on that account.

4034. Would the stones slide into the face? Yes; it was very dangerous in some cases.

4035. Did it entail a lot more labour? Yes.

4036. What is your experience of the ventilation in that colliery? In some cases it was fairly good, but in other cases it was not as it should be. I have seen it where it has not been very good.

4037. What part of the mine was that in? In the Jubilee district. In a district we call Mogag, it is not very good. There have been a great number of complaints from these districts.

4038. How many men are there in the Jubilee district? About 170 or 180. There are some splits that are good; but there are other splits that are not as good, depending chiefly upon the opening and shutting of doors. As a check-inspector I have been where we could not get a reading in some of those splits.

4039. Did you notice a report that came under the notice of the lodge some time ago? Yes; about three months ago.

4040. Was there a very limited quantity of air recorded for some of the men? Yes.

4041. Was that in the Jubilee district? Yes.

4042. Is it a serious matter for the men when the ventilation is very defective? Yes; one of the worst things a miner can suffer from, at the present time, is defective ventilation, because if it does not affect him in one way it does in another.

4043. Have you experienced any serious effects from bad ventilation, yourself? I cannot say I have. I cannot say I have been affected; although I have felt bad with pains in my head through white damp. I put it down to that; but it did not last long.

4044. Do you not think it is a serious matter if you are affected in the head with bad air? Yes; but I have not been affected with asthma and broken wind, in the same way as I have seen a lot of miners affected.

4045. Do you attribute that to bad ventilation? Yes; to bad air.

4046. If you had to continue to work in that air any length of time, do you think it would affect you eventually? There are portions of the mine that I think would affect me, if I had to work there any length of time.

4047. Is that in the Jubilee district? Yes.

4048. How is that district ventilated? Since a report was brought under the notice of the lodge, they have made an improvement in the ventilation.

4049. How is the district ventilated? By a fan.

4050. Do you know if the fan is kept going to its full capacity? I cannot say. By what I have heard, it is not kept going to its full capacity, because they say it can lift 200,000 feet per minute, and I think the largest report we ever got was 80,000 feet.

4051. Was that at the return? Yes.

4052. What was your intake for that district? I cannot say, there are three or four different intakes in the Jubilee district.

4053. You have stated that an improvement in the ventilation had been made there. Was that on account of representations made to the manager or the overman? Their attention was drawn to the matter by the check-inspectors, and I believe the check-inspectors were told, that if they had been a week later, the improvement would have been made. Working there I think there is an improvement in the split.

4054. Have you acted as check-inspector on certain occasions? Yes.

4055. Have you ever noticed the bord ends to be left open on the main roads? Yes.

4056. You refer to the old bord ends? Yes.

4057. Have you ever noticed the bord ends to be left open at Wallsend? Yes.

4058. Have they been left over for purposes of ventilation. Do you know if that was the idea? I suppose that is the idea, but it is causing a lot of air to waste that should go to the working places. It would do far more good, if the air was confined to the working places.

4059. Does that district give off any gas? Yes, to a small extent. Towards the dip-workings, you can always hear the gas whistling. You can hear the gas in all the working places in the district.

4060. Do you mean fire-damp? Yes.

4061. Will not that probably be the reason, why these bord ends are left open, to prevent this fire-damp from floating about? That might be their object in doing it.

4062. Do you know the number of men that work in the Jubilee district? I think between 170 and 180 miners.

4063. Have you a downcast and a upcast shaft there? Yes.

4064. How far are these shafts apart? I cannot say exactly. They may be a quarter of a mile apart. They are a considerable distance apart.

4065. Do you know the stipulated minimum quantity of air to be supplied under the present Act? Yes, 100 feet of air, and in the proposed Bill it is 150 feet of air.

- Mr. J. Estell.
30 Sep., 1895
4066. Do you approve of the provisions of the Bill with regard to ventilation? I do.
4067. Do you think there should be a stipulated minimum quantity in the Bill? I do.
4068. With regard to the size of the pillars you referred to just now. Do you think the larger pillar or the smaller pillar is the best to work out? I think the larger pillar.
4069. Do you think the larger pillar is safer to work out, than the smaller? Yes, you have more chance to timber your place, and more room to work with the larger pillar.
4070. Are you likely to get more of the pillar out? Yes.
4071. Do you think that large pillars should be left? I do; I think it to the interest of the employers, and miners, to leave large pillars.
4072. Have you ever worked in any district, in the Wallsend colliery, where the roof has been showing indications of coming down on the pillars, where it has been weighting, or pressing on the pillars? Yes.
4073. Did that occur where there were small pillars? Where I have worked, we had large pillars.
4074. In the whole district were there large or small pillars? It varied in many cases.
4075. Do the men rely upon the pillars for safety in the main ways? Yes, in case of accident.
4076. In case of a break in the roof? Yes.
4077. Have you read the clause in the bill with regard to the powers of inspectors; have you read that part which gives the inspector power to withdraw the men in case of danger? Yes, I have read that.
4078. Do you approve of that provision in the Bill? I do.
4079. *President.*] Would you only give that power to the inspector in case of very present danger? Yes.
4080. Do you suppose that any manager in a case of pressing danger would keep the men in the mine? I think the inspector should be the best judge in cases of that description. The inspectors are supposed to act in an impartial way between the men and the manager.
4081. Would you only give that power to the inspectors in cases of imminent danger? Yes.
4082. Do you not think that a manager, in a case of imminent danger, would compel the men to come out? Yes; but the manager may look at it from a selfish standpoint, and the inspector would take an impartial view of things. I think that power should remain in the hands of the inspectors.
4083. *Mr. Curley.*] So far as small pillars are concerned; if larger pillars were left in the mine do you think it would do away almost completely with the power of any inspector requesting men to be withdrawn, as far as that is concerned? It would have a great tendency in that respect.
4084. In a case of that kind, such a circumstance might never arise? Yes.
4085. That is provided larger pillars were left? Yes; that is in case of a crush.
4086. Were you at Wallsend when there was a large crush there some years ago? No.
4087. Do you know anything about a man named Oughton who met with his death at that colliery? I only know of that matter from conversations with men who were working there at the time. I know nothing about it personally.
4088. Have you worked at the Co-operative Company's mine? Yes.
4089. Have you noticed any defects in connection with the ventilation at that colliery? A matter in connection with the ventilation there was brought under my notice. One of the miners at that colliery complained of the amount of air travelling past his working place, and requested me, as check inspector, to go back and take the measurement in one of the old cut-throughs, and we found a larger reading in one of the old cut-throughs than we did at the working faces.
4090. Were you the check-inspector at that time? Yes.
4091. What did you measure the air with? The anemometer.
4092. Was the complaint that the air was not going into the working places? Yes; that it was being distributed through the old workings.
4093. Did you ever meet with any fire-damp in that colliery? No.
4094. How is that mine ventilated? By furnace.
4095. What is the system of working there? Bord and pillar.
4096. What was the width of the bords? Similar to Wallsend.
4097. What was the width of the pillars? Similar to Wallsend.
4098. Were the pillars 4 yards or 8 yards wide? There were some thin and some thick. I have seen them that thin that I could knock a hole through them.
4099. You have seen them so thin that you could knock a hole through them? Yes; in exceptional cases.
4100. Do you know of any extensive fall while you were there? Yes; there was one big fall while I was there.
4101. Did the fall come over the pillars? Yes, I believe it went over a good number of pillars; it went right down to the working faces.
4102. Did this occur at night-time? No; during the day.
4103. Were the men called out? Yes; but I was not working in that particular district, therefore it did not affect me, but when I came out of the mine I found all the men out also. They had all been called out on account of the fall.
4104. Do you know how many men would be in that district? No; I have no idea.
4105. Can you recollect how long ago it is since this happened? I think about ten years ago—perhaps not quite ten years ago.
4106. Did a circumstance of that kind impress upon you that larger pillars should be left in these collieries? Yes; I thought that at the time, and especially in that part of the mine where they were working, which was on to a fault, and from a fault.
4107. Is the size of these pillars left solely to the discretion of the manager? Yes; men may encroach on a pillar, but it is the manager's duty to stop that.
4108. If a miner is going too wide, cannot they chalk him off and say that so much has to be left on? Yes.
4109. Is this order generally obeyed? Yes; in all cases, I think.
4110. A manager would either have power from his Board of Directors to carry out the system of mining, or he would guide his Board of Directors, and either of these, or both combined, would be responsible for the size of pillars? Yes.
4111. Is it not a matter the miner has nothing to do with? Yes.
- 4112-3. Do you believe in the provision in the Bill for a stipulated minimum size for pillars? Yes.

4114. *President.*] Do you not think that the size of pillars should be left to the discretion of the manager? I think it would be better if they were 8-yard pillars.

4115. *Mr. Curley.*] Can you place any faith in the discretion of managers from what has taken place in the past? I believe it would be better if there were hard and fast rules.

4116. *President.*] Would you make the manager a mere automaton? I believe it would be better to have it all in black and white for the safety of the miners.

4117. *Mr. Curley.*] Do you think that men's lives should be placed in jeopardy? No, I do not.

4118. Will you look at section [30] 28, sub-section III, on page 14 of the Bill [*see Appendix A*].—do you think that the buildings, streets, roads, creeks, rivers, bays, and limits of any tidal waters should be exhibited on the same plan as the workings of the mine? I do; I think it is a very important matter. In municipalities where there are large interests at stake, and where persons have their dwellings on the surface, I think that colliery owners should be prevented from taking out the coal indiscriminately, and by doing so causing subsidences.

4119. Do you know much about this matter of undermining? In the municipality I am in we have had a lot of trouble with Mr. Sneddon, who is taking out the coal from the old Co-operative Colliery. My place was let down in consequence of a large subsidence, caused by this undermining, and the damage to my house would have been greater if it had not been that a large area was affected, and the strata was very thick in that particular place. The fall extended over about 5 acres of surface land. In Plattsburg it will cause a lot of damage if they are allowed to take out this coal indiscriminately.

4120. *President.*] Are they never to take these pillars out? I should place that power in the hands of the inspectors, and if they did take the pillars out they should make proper provision for the holding up of the ground. In cases where timber is put in it only requires years to rot that timber, and then there is nothing to keep the surface up.

4121. What would you have? I do not know. It is a certainty that if they take the pillars out the surface will subside.

4122. *Mr. Gregson.*] Did you build your house? Yes.

4123. Did you buy the land? Yes.

4124. Did you know at the time the coal was underlying it? I believed at the time it was.

4125. Did you buy the coal as well as the surface? No; only the surface.

4126. Have you not your remedy against the person who disturbed the surface? It would be hard to find out who was the responsible party.

4127. *Mr. Curley.*] Do you think that everybody should run into litigation over matters of this kind to assert their rights? No; we have had a lot of expense in the municipality owing to this undermining, especially with Mr. Sneddon.

4128. What is the size of your allotment? Sixty-six feet frontage, and 132 feet depth.

4129. In what street is this allotment? In High-street.

4130. Is that in Plattsburg Municipality? Yes, Plattsburg Municipality.

4131. Where did this fall affect the allotment? About half-way up. The crack in my place is not more than 6 inches under the surface; but I think the crush went from top to bottom.

4132. Did the surface subside much? My house went down 6 or 8 inches. The fall extended over 5 acres, and my house happened to be in the centre, but another house adjoining mine, went down a foot or 18 inches.

4133. Were these weatherboard houses? Yes; if they had been brick, they would have been no good.

4134. Do you know the names of the individuals the fall has effected? One was David Clough.

4135. Do you know of anybody else? Some of the house belonged to the Newcastle Building Society, but Clough's house was the worst of the lot.

4136. Did the Co-operative Company do this undermining themselves? Yes; the Co-operative Company did the undermining, but Sneddon took the water out after he leased the mine, and that is what we suppose is the cause of the subsidence, that is on account of the water being taken out from the old workings.

4137. Was this water taken out with a view to commence working these old workings again? I believe so.

4138. Will you look at rule 25 on page 29 of the Bill, "Coal not to be wrought under roads" [*see Appendix A*].—have you read that rule? Yes.

4139. Do you believe that a provision of that kind should remain in the Bill? Yes.

4140. If roads are affected in a municipality, is it not a serious matter for the rate-payers if the roads come down? I think it is a very serious matter. I think that the officers of the municipality should have the right to inspect all plans of the underground workings of any mine, to see what is going on, and if necessary, have power to enter an injunction, against work proceeding where there is likely to be a large amount of damage done.

4141. What is the system of working at your colliery with regard to hours? We are supposed to work eight hours per day, but there has been no uniform system until lately. The majority of the men work from 7 o'clock to 3 o'clock, and from 8 o'clock to 4 o'clock.

4142. When you say there has been no uniform system, do you mean to convey the idea that the men go into the mine at any hour? Yes.

4143. What time would they be going in? I have seen men going in at half-past 12 o'clock at night. They would get into the pit a little after 1 o'clock in the morning.

4144. When would the working places be inspected, or are they inspected? Yes, they are supposed to be.

4145. Do you know whether they are or not? I cannot. The only thing I have taken notice of, is the date chalked up on the lid in the face of the bord.

4146. Is there a mark put up there? Yes.

4147. Who puts that mark there? The fireman. So far as the Jubilee district is concerned I know it is inspected lately.

4148. What about the other districts? I think they inspect those as well.

4149. Have you seen the fireman's mark in those districts? I have never taken notice of his mark.

4150. Do you think there should be a uniform time for men to go into the mine? Yes.

4151. Do you think there should be a uniform time for coming out of the mine? Yes.

4152. Do you know the provision in the Bill for the regulation of the working hours? Yes.

4153. Do you believe in that provision? Yes, I do.

4154. Would you rather see the question of hours embodied in a Bill for legislation, or left to be arranged

- Mr. J. Estell. in a mutual way between the men and the managers? I prefer to see it legalised. I think that is the only way we can bring about the eight hours. I think if it is left to mutual agreement it will be abortive.
- 30 Sept., 1895. 4155. Do you think the men wish for this legislation? I do; the men as a body all desire it. Some men take advantage to make a few shillings more, and I think these men are likely to go on doing so if it is not legalised, but I believe that although there are men who work these longer hours for the sake of the little extra they can earn, that every man is in favour of the eight hours being legalised.
4156. How are you paid at Wallsend? By the average weight.
4157. Is the average weight system satisfactory? Yes; as far as we are concerned. It would be more satisfactory if we could get the skips weighed oftener.
4158. How many skips are weighed now on an average? I should say one in every twelve or thirteen.
4159. Are any of the workings wet in your colliery? Yes.
4160. What districts would this apply to? To mostly all the districts more or less.
4161. Do you find the work very uncomfortable where it is wet? Yes; it is uncomfortable.
4162. Do you set your own timber? Yes.
4163. Do you lay your own rails? Yes; after they leave the turn.
4164. Have you any jerry? Yes; in the Lambton district.
4165. Is this jerry a kind of shale or stone band? A stone band.
4166. Does it run right across the seam? Yes.
4167. What thickness is it? From 2 to 16 inches.
4168. What are the stoppings built with in your main intake? Bricks at the present time.
4169. When you were check-inspecting, did you pay particular attention to these intakes, to see if the air was scaling away? Yes.
4170. Have you noticed the air scaling away? Yes.
4171. When you noticed this, did you draw the attention of the manager to it? Yes; but he has generally rectified this, after his attention has been drawn to it.

[Witness withdrew.]

William Bower sworn and examined:—

- Mr. W. Bower. 4172. *President.*] What is your name? William Bower.
- 30 Sept., 1895. 4173. What are you? I am a coal-miner?
4174. Where are you employed? At the Wallsend Colliery.
4175. How long have you been coal-mining? I have been twenty-five years getting coal, and about twenty-eight years below ground altogether.
4176. What collieries have you been employed at? At various collieries in the Northern district of this Colony.
4177. *Mr. Curley.*] What collieries have you worked at in the Northern district? At Lambton, New Lambton, Waratah tunnels, Co-operative Colliery, Minmi, and Wallsend. I also worked for a short time at the Curlewis Colliery, near Gunnedah.
4178. Where are you working at the present time? At the Wallsend Colliery.
4179. How long have you been at Wallsend? For about thirteen or fourteen years.
4180. Have you worked in different districts of the Wallsend Colliery? Yes; pretty well all over the mine.
4181. What is your experience of the ventilation at that colliery? It fluctuates a good deal. Sometimes a split may be good at the time of one inspection and bad at the time of another inspection. I have worked in very bad air and in excellent air.
4182. What are the districts where you have found any defects in regard to the ventilation? The worst district now is known as No. 2 tunnel, or Willis' district, as it is generally called.
4183. What is the defect in that district? Want of ventilation.
4184. Is there not a sufficient quantity of air supplied? There is not sufficient air along the faces. There is sufficient air at the intake, but it is not conveyed along the working cut-throughs.
4185. Are there very many men in that district? I think there are sixty-six miners working there; and, besides the miners, six boys and six horses.
4186. Do you know anything about a check inspector's report that was made some time ago, and a defect shown in that report with regard to the ventilation? This is a copy of the check inspector's report dated 22nd July, 1895. It shows a deficiency of air in the No. 2 tunnel, and states that at the intake there was 13,340 cubic feet of air per minute. That would be about 300 yards from the nearest working place, and about six bords along we only got 5,040 cubic feet of air, and from that up to the return the anemometer would not register.
4187. What air did you find at the return? The anemometer would not register in the return; that is, within 200 yards of the working faces.
4188. What air did you get in the up-cast? 36,480 cubic feet of air per minute.
4189. How much was the air at the intake? 13,340 cubic feet of air per minute at the intake of the split.
4190. Could you not get any more than those small readings that you have named? That is all.
4191. Where had the air gone that came in the intake? We have tried to find out whether the big furnace and No. 1 tunnel did not get hold of it, and take it away. It is the impression of the overman and deputies that it gets away like that. They do not seem to be able to keep it from the lower workings of the mine.
4192. Has anything been done to remedy this matter since? I have not been round, but some of the men tell me that it is a little better. I do not think, however, that it is possible to remedy this without a radical remedy.
4193. What would that remedy be? My idea is, that they should hole the boundary cross-cut through to No. 2 tunnel, and make that the return, but that would be a matter of time. This state of things in that tunnel has been going on for two years.
4194. *Mr. Gregson.*] Has the inspector's attention been called to it? I think so.
4195. Is it not usual when the check inspectors find anything wrong to communicate with the inspector? No.
4196. Is there any objection to that being done? I do not think so.
4197. Why is it not done? The check inspector has to enter his report in a book kept in the office, and if the miners ordered a copy of that report to be sent to the inspector it would be done.

Mr.
W. Bower.
30 Sept., 1895.

4198. *Mr. Curley.*] Are you one of the check-inspectors? Yes; I am one of the check-inspectors at present.
4199. Did you draw the manager's attention to this matter? I drew the overman's attention to it.
4200. What did the overman say? He said he was doing all he could, and since that he has said that he would try to remedy it.
4201. *President.*] What will that bring about;—is there anything that you can say it has done already? I cannot say. At the present time there are men who could not work in that air, because of the effect it has upon their health. I know that there are men working in the mine at the present time who could not work there owing to the state of the ventilation.
4202. *Mr. Gregson.*] Is this district known generally by the name of the No. 2 tunnel? Yes.
4203. Does it cover the whole of the No. 2 tunnel workings? Yes; there are only sixty-eight men cavelled into it this present quarter.
4204. *Mr. Curley.*] Would the men nearest the intake fare better than the men farther in? Undoubtedly. The air strikes No. 30 bord first, I believe, and the numbers run less towards the boundary, and the air is less.
4205. Are there usually comments made upon this defective ventilation when it comes out like this? A report, when it is read at the lodge, is commented upon, and we very often have a chat with the overman or the deputy, and he promises to do his best to remedy things. If he does make an attempt we do not report anything but the bare inspection; that is, we do not make any note to go to the public. This report was commented upon in a meeting of the lodge, and the press got hold of it, but there was more made of it than might have been under ordinary circumstances. This tunnel has been anything but well aired for the last two years at any rate.
4206. You said something with regard to a big furnace;—how many furnaces have you? We have three up-cast shafts.
4207. Is there a district known by the name of the Jubilee district? Yes.
4208. How was the ventilation in that district? It was very good as a rule, although sometimes we found a deficiency. The most trouble is the long distance the air travels before it reaches the men. There is a lot of moisture in the air. Part of the air comes from the mouth of the tunnel, and another portion from a travelling road tunnel, both a mile or over from the workings, and it seems to pick up moisture on the way. The Jubilee district is ventilated by the fan.
4209. The fan is situated at the up-cast? Yes.
4210. Do you know whether this ventilation travels over a wide area of old workings? No; it is pretty well confined. The air does not seem to travel anywhere but in the travelling way all the way in. The No. 2 split is aired from the same current, but the workings from the intake to the return are very much scattered. With three pairs of men at the intake, the air was good, but it travelled over some hundreds of yards of water before it reached the next men. We have complained of this, and the manager has promised to attend to it. The complaints have been that the powder smoke did not seem to dissolve—the air seemed to be charged with smoke all the time.
4211. Would it do that with a vigorous current of ventilation? Good dry air does not, because it dissolves very quickly. On 22nd July the surface temperature at 8 o'clock in the morning was 45 degrees, and the thermometer registered 72 degrees at the intakes of Nos. 1 and 2 splits.
4212. Did you ever see any of the old bord ends left open? They were invariably left open in Wallsend, except just where the bords are broken off the main heading.
4213. Would not the air in that case have a wide area to travel over? It would have, and there would be very little force at all. In the rise workings the air has always a tendency to go down to the lowest part.
4214. Are some of those workings damp and wet? Yes; there are some wet places here and there.
4215. Is not the whole of the trouble with the ventilation that it does not get up to the working faces in sufficient quantities and purity? As a rule, we have plenty of air at the intake of the split, but you will find a want of air on the cut-through next to the working place. Supposing the air is registering 200 cubic feet per man, at the intake, you might find no reading a dozen bords along the split.
4216. Is there much brattice used in the mine to conduct the air? There is no brattice used at all, except where there is fire-damp.
4217. Have you any fire-damp in the Jubilee district? Yes, there is a little continually. On the dip side it always gives off a little gas.
4218. Are the working-places inspected every morning? I believe so. I know there is a fireman supposed to go round, but I have never seen a mark myself.
4219. Have you never seen a mark in the Jubilee district? No; the only mark I have seen was the date on the fireman's notice board.
4220. Would that be an indication that he had inspected the district? It would be reasonable to suppose that he had been round, but those boards are placed about a quarter of a mile from the working places.
4221. Do you think that the fireman should inspect these places, and that there should be no doubt about it? He should.
4222. What is the width of the bords? Eight yards.
4223. What is the width of the pillars? Eight yards.
4224. Have the pillars always been 8 yards wide? No; not always.
4225. What size have the pillars been? They were 4 yards at one time, and 6 yards subsequent to that; but latterly they have been 8-yard pillars.
4226. Have you seen some of the pillars very thin? Yes; I have cut through them with a few blows of the pick. I have seen no pillar at all left, but just the shell. As a matter of fact, a man was killed through the thinness of a pillar; he was shot through the pillar.
4227. How long ago was that? I think it was in 1876 or 1878, but I would not be sure.
4228. Were you working as the Wallsend Colliery at that time? No; I was working at the Co-operative Colliery at that time.
4229. Did you know of the circumstances through being at the inquest? I was present at the inquest, but I knew all about the circumstances at the time.
4230. Did you know of a man named Oughton being killed in the Wallsend Colliery? Yes.
4231. How did that accident occur? It occurred through a crush, or creep. The ground seemed to fall away suddenly, and the man was lost. Plenty of the other men had to run for their lives.

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4232. Was that an extensive fall of roof? It was said to be so.
4233. Did it come over the pillars? It did at that particular time.
4234. What was that fall caused by? It was on account of insufficient support for the roof. There have been repeated losses of ground, apparently through having insufficient pillars, but latterly, I know they are leaving larger pillars in Wallsend. I think a manager ought to know what would carry the strata.
4235. *President.*] Do you think it is necessary to legislate for a matter of this kind? I think it should be compulsory.
4236. How can you tell what is enough? I do not know how you can tell what is enough, but I am satisfied that 8-yard pillars will break an enormous thickness of cover, and they are quite strong enough to cut off the ground when it falls. If you were taking out a series of pillars there might be a dozen pillars taken out before a fall takes place, and if the pillars were weak the weight might be crushing them, but the stronger pillars cut the ground. That is the experience I have gained in the Wallsend Colliery up to the present time.
4237. *Mr. Curley.*] Have you worked in some very narrow pillars yourself? Yes; but I objected to work.
4238. Why did you object? Because it was not safe to work. You cannot make a reasonable wage in a day, and that caused me to say I would not do it.
4239. Do you regard the larger pillar as a safer method of working? Yes.
4240. Do you think the larger pillar is more economical for the management? Yes.
4241. Do you think that they get more coal out by leaving a larger pillar? Yes; they pride themselves they will get the whole of the coal out. We used to lose a lot of coal with the smaller pillars.
4242. Do you think that this is a matter that should be legislated for? Undoubtedly I do.
4243. Will you look at section 30, 28 of the Bill, sub-section 3, on page 14 of the Bill (*see Appendix A*). Do you think that there should be a surface plan provided in connection with collieries, showing all streets, roads, buildings, creeks, rivers, and other things mentioned in that sub-section? Yes; I think so.
4244. Do you know anything about the undermining of streets, roads or buildings? Yes; I have had some experience, and it has cost me a good few pounds.
4245. Where have you had that experience? At Brookstown.
4246. What do you refer to? The undermining of Brookstown.
4247. Is Brookstown a local name? Yes; it is a suburb of Wallsend.
4248. What was the nature of the undermining there? There was a piece of coal that was left by Mr. Laidley, the lessee of the Co-operative Colliery, and after his lease had expired the proprietors re-leased the colliery to another party, and he started to take the coal out under these buildings. It cost us an equity suit, and after buying allotments we were forced to leave. We were driven to law, with the result that we got very little satisfaction.
4249. *President.*] What became of your land? By a mutual arrangement, the gentleman who is working the estate bought our land over; but we were compelled to shift from the township through this undermining ruining it.
4250. The present lessee of the estate, you say, has bought you out? Yes; it cost us £220, and we got for that only £190.
4251. So that you lost £30? Yes; besides being compelled to shift from a locality I liked.
4252. What did you do? Bought another piece of land from the Wallsend Company.
4253. How much ground was let down? About 7½ acres. The allotments were ¼-acre allotments.
4254. Were the allotments all occupied? The large majority of them were occupied.
4255. Was the whole of the township let down? The present lessee was compelled by an equity suit to secure all the streets after an expenditure of £800.
4256. Did the Council expend that sum? Yes; the two Councils, but I think they recovered it from the Government afterwards. That was the expenditure to save the roads from being destroyed.
4257. Were all the houses let down? The ground is all down now, except where the present lessee has shifted the houses to suit himself.
4258. What sort of houses were they? Pretty well all weatherboard and frame houses.
4259. *Mr. Curley.*] Were the people apprised of this undermining, or had they to take their chance? We had no opportunity to know anything about it. As soon as we did we got a deputation together, and sent to Mr. Brookes who sold the land, and offered him the same amount of royalty to let the coal alone, but he said that it was too late, because he had already leased it to Mr. Sneddon. He would, however, have received more money from the residents.
4260. Do you think it is a right thing for an owner to let his land and then sell his coal? No. Sneddon is now taking out all the supports under the Plattsburg township.
4261. Who leased the coal to Mr. Sneddon? Mr. Brookes. Mr. Laidley's lease had expired and Mr. Brookes re-leased to Mr. Sneddon. Mr. Laidley had given up drawing coal from that particular tunnel before Mr. Sneddon got it.
4262. Did the Co-operative Company sell that land? No; the land was owned by Mr. Brookes, Mr. Kenrick, and Mr. Platt.
4263. Did the Co-operative Company have a full knowledge that these buildings were there? Yes.
4264. Would they have the power of granting a lease for what is going on now? It is still the same lease and part and parcel of the same estate.
4265. Then the Co-operative Company have nothing whatever to do with it? No; I do not think they pay any royalty to Mr. Brookes, except for the railway that goes over his land.
4266. Will you look now at Rule 25 on page 29 of the Bill (*see Appendix A*). Do you think that provision in the Bill is necessary? I do, under existing circumstances, where the coal is so near the surface. The same thing is applicable to the railways at the present time. If I recollect rightly at the Greta Colliery they were compelled to put their headings under the railway to suit the railway authorities. They were not allowed to take the coal out under the railway, and the same thing, I should think, ought to apply to a good road.
4267. *President.*] Can you conceive of any weight on an ordinary road such as a train? At Brookstown I have seen a cart go down nearly out of sight. That was in the Wallsend workings on a public road.
4268. *Mr. Curley.*] Do you think the travelling public have a right to be considered under such circumstances? I think so.
4269. Do you think that the municipalities should be subject to litigation in the way they have been? I do not think so.
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4270. You have had experience in connection with several other collieries—Lambton, New Lambton, Minmi, Co-operative, and Waratah;—did you experience anything in connection with the ventilation at any of those collieries? I have worked in good and bad air in all of them.
4271. Was the air not conducted up to the working face? That was the reason.
4272. Have you seen statements made by some of the managers about the cost of bratticing? I have heard an overman say that the cost of bratticing would make very little difference.
4273. You have heard an overman say that it would make no material difference? Yes; I have heard that stated.
4274. Where was that statement made? At the Wallsend Colliery.
4275. Do you think it would cost anything like 4d. or 6d. a ton for bratticing? No, nothing like that.
4276. Do you think that sum would nearly pay for the whole underground account of the colliery? I think it would come nearer to that than to the cost of bratticing.
4277. Could not a good deal of the refuse of the mine be used for conducting the air in connection with brattice? It is used now; wherever it can be used it is used.
4278. *President.*] You do not care what is used,—what you want is air at the working face? Yes; that is our greatest trouble. It would make mining much more comfortable if we had better ventilation.
4279. *Mr. Curley.*] Will you look at section [50] 47, on page 23 of the Bill, "Ventilation of Mine"; do you notice several erasures in connection with this clause—they represent the amendments made by the Legislative Council, and the clause without these erasures is as it was originally sent up by the Legislative Assembly (*see Appendix A*);—what do you think of that provision as it originally stood? It would make things a great deal better if we had it.
4280. Do you think that the clause as originally drafted should remain in the Bill? Yes.
4281. *President.*] Suppose the clause ran this way: (say) an adequate amount of ventilation, not in any case less than 150 cubic feet of pure air per minute for each man and each boy, and as much more as may be necessary, shall be constantly produced in every mine to dilute and render harmless noxious gases, &c.;—would not that meet all that you want? I think it would.
4282. You would not want cut-throughs or bratticing? Certainly; we want the air to the working face.
4283. Is the working face the working place? If it means the working face, why not send the air along the working face?
4284. I do not want the manager hampered; so long as he gives the proper amount of ventilation, what more do you want—say an adequate amount of ventilation, to be not less in any case than 150 cubic feet of pure air per minute, and as much more as may be necessary, shall be constantly produced to dilute and render harmless noxious gases, &c.;—will not that meet what you want? Yes; that will do all that I want. It is matterless to me how the manager does it, as long as he brings the air to me, whether he does it by brattice or otherwise.
4285. It has been pointed out that the provision in the present Act, subsection 3 of clause 12, says that the air is to sweep undiminished along the airway, past each working place? Yes; that is our difficulty at present. The difficulty is that the air is not carried into the working place. We are bound to average the air from the intake, and it does not matter which way it gets to the return.
4286. *Mr. Curley.*] Do you think that the shorter cut-through is likely to produce better ventilation? It will cool the place considerably.
4287. Might not shorter cut-throughs in some cases dispense with bratticing? Of course.
4288. *President.*] So long as you get the air you do not care whether it is by brattice or cut-through;—would you not be satisfied, no matter how you get it? Yes; but we cannot imagine any other system, other than bratticing or cut-throughs. Our only trouble is to get the air.
4289. Would not the way I have put it be the better way? I think it would be all that is needed.
4290. Let the manager find out how to do it? As long as the manager carried the quantity of air in it does not matter which way he does it; but I cannot imagine how it could be done, except by brattice or shorter cut-throughs.
4291. *Mr. Curley.*] Do you know that the principle at the present time is to drive cut-throughs? Yes.
4292. Are you in favour of the shorter cut-throughs? I have always been in favour of the shorter cut-throughs. They would assist many a time in getting the pillars out.
4293. Do you believe in splits—the currents of air being split into sections throughout different parts of the mine? Yes; I have worked in a mine with only one current of air, and I know what it is.
4294. Have you given any attention to the question of the hours of working that the Bill proposes to legislate for? Yes.
4295. What is your opinion upon this matter? That eight hours is long enough to be below ground.
4296. Do you think that it is a matter for legislation? Yes; I think it should be compulsory.
4297. So that if you went to work for ten hours you would be liable to be punished for working the extra two hours? Yes; I think that is necessary.
4298. *President.*] Do you think that is right? Yes; there have been men carried out of the pit before they would leave.
4299. Why? Completely exhausted in trying to make as much as they possibly can.
4300. *Mr. Curley.*] Do you think it is the opinion of the men, generally, that eight hours should be a legal day's work? Yes; since I started to work, I can recollect Mr. Garrard, the present Minister for Education, coming round our district, and we subscribed 2s. per man to assist the iron-workers to get the eight hours.
4301. *President.*] Do you think it should be made a penal matter? I do not see how we can do it by any other means than by legislation. There are plenty of men working more than eight hours, and others doing their best to keep up with them; but I think that eight hours is too long to be in a mine.
4302. *Mr. Curley.*] Do you believe in a uniform starting time? Yes; we have nearly successfully brought that about at Wallsend now.
4303. Do you think that men should be permitted to go into a mine when they please? I do not think so.
4304. Have you seen the provision in the Bill, giving an inspector power to withdraw the men in case of danger;—will you look at section 21, sub-section 5, on page 8 of the Bill (*see Appendix A*);—do you agree with that provision? Yes.

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4305. *President.*] Would you allow the inspector to withdraw the men unless the danger was imminent—immediate danger? Why use the qualification, imminent danger?
4306. Because the inspector might ruin a mine-owner if he was incompetent or arbitrary? I can hardly imagine a man like that getting such a position.
4307. You cannot say what you may get in the future. Suppose you get a capricious man, or an ignorant man, do you think you would put it in the hands of a man, perhaps of an arbitrary disposition, to take the men out of the mine, if the manager differed from him. Would you not rather put it to cases of imminent or immediate danger. Do you think that any manager would dare to refuse if the inspector said there was danger? He might dare to do so.
4308. Will you look at section 22 [20] on page 9 of the Bill, "notice by inspector of causes of danger not expressly provided against" (*see Appendix A*)? I think that provision would cover the ground for a long standing creep.
4309. Would the manager take the men out in the case of inflammable gas? I believe he would, for the sake of the mine itself.
4310. What other cases are there? Say, working towards a large body of water. There might be a difference of opinion, in the case of an abandoned mine lying full of water.
4311. Would they not in such a case go to arbitration? There would be a certain amount of risk while the arbitration is going on.
4312. Do you think that ten days is too long a time to allow the manager for sending his objection to the Minister? It might be, if he was driving a narrow place with six or eight men, continually going night and day. The plans showing an abandoned mine may be wrong, and of course neither the manager nor the inspector would know how near they were to those workings, and if you waited for an arbitration court to settle whether there was any risk, and kept the place going, it might be holed through, with the result that some men would lose their lives.
4313. Are those the only things you can mention, inflammable-gas, a creep, or working towards a flooded mine? Quite so!
4314. *Mr. Curley.*] Do you think the inspector should have the power that it is proposed to give him under this sub-section 5 of the Bill? Yes, I do, because I cannot understand why he should not have it when there is danger. It is a power somebody should have, and I think the inspector is the man that should have it.
4315. *President.*] If the inspector makes a mistake, you have this to consider, that he takes away the means from the men of earning their bread? That is better than their death perhaps.
4316. If this danger is so apparent, would not the manager surely see it just as well as the inspector? Sometimes you would think that a manager was not inhuman, but he was very neglectful. We have, only a week ago, a case which occurred in a tunnel at Mimui, and that might have ended in a catastrophe owing to the bush fires.
4317. Was not that a most exceptional thing? It is a clear case to show that the mine should have been inspected before the men went in.
4318. *Mr. Curley.*] Are you paid on a system of average weight at Wallsend? Yes.
4319. Are you satisfied with the average system? I cannot say that we are satisfied, because we consider we should be paid for all we fill, although I believe it is the best system in the Northern district.
4320. Are you not legally entitled to all the weight you put out? Yes.
4321. *President.*] On the average system, you are practically paid for what you are putting out? I hardly think it would pan out in that way.
4322. Why? We only get a certain proportion of skips weighed.
4323. If you get a good proportion of skips weighed, might it not be either for, or against you? We are held responsible for all the coal that is wasted, for all the coal that falls off on the road to the screens, and that means, many tons in the 24 hours as a rule, so that we do not get paid for all we fill.
4324. Is that because the miners are filling too full? No; if we filled within the wood we would be interfering with the output. They give us an 8-inch standard, and if we fill over that we lose the coal altogether.
4325. *Mr. Curley.*] Does not the coal in that case go to an accident fund? Yes; but it is a loss to the individual.
4326. *President.*] If these skips are packed properly, would the coal fall off? I am afraid it would, at the speed they travel. When the skips come together on the flat, there is a lot of bumping, and we have got that to put up with.
4327. Where would you have the coal weighed—down below? No: on the surface would do me.
4328. Would not the same thing you are calling attention to always happen? If the skips were filled level with the top of the wood, I do not think we would lose any coal. I think it would be easy to put 8 inches on the top of the skip, and for us to work not to fill any higher than that, and this would not interfere with the output.
4329. Do you object to the proportion of skips that is weighed? I would like to see them all weighed if possible.
4330. If that is not practicable,—if you wanted all the skips weighed, might not it cause a lot of the mines to cease working? I have been informed that if any mining expert told Mr. Alcock that he could not erect a machine that would do this, he would have a very small opinion of their intelligence. On the Government weighbridge they weigh while travelling, and why could that not be done with the skips?
4331. Who is Mr. Alcock? An English weighing-machine maker. I believe that in a colliery in New Zealand they weigh every skip. The name of the colliery is, I think, Brunnerton, and they ship at Westport. There is a large output at that colliery.
4332. *Mr. Curley.*] Would you like to see more skips weighed—is this the only matter that is complained about at present? Yes; I would like to see all the skips weighed if possible.
4333. In the absence of that, what would you suggest? I believe we have as fair a proportion of skips weighed as we can get. We cannot complain about that. I believe all the coal is weighed at Wallsend that can be weighed, and that if any more was required to be weighed, they would need another weigh-screen under present conditions.
4334. Was there a reasonable proportion of skips weighed at the other collieries you have been connected with? No. There was standard weight at the Co-operative Colliery. I have seen a discrepancy of 3 and 4 cwt. between what we were paid and what we sent out.

4335. *Mr. Gregson.*] Is the weighbridge at the Wallsend Colliery kept going all day? Yes; from 7 o'clock in the morning to 4 o'clock in the afternoon; that is the information I have received from the check-weighman.

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4336. Is every skip weighed that goes into the waggon? Yes, with the exception of the first and the last skip. The last skip is not weighed, because some of the coal is apt to roll off the waggon; it is liable to tumble over the side when they are putting the last skip of coal on the waggon.

[Witness withdrew.]

Thomas Abel sworn and examined:—

4337. *Mr. Curley.*] Where do you reside, Mr. Abel? At Plattsburg, Wallsend.

4338. *President.*] What are you? Council clerk for the municipality of Plattsburg.

4339. *Mr. Curley.*] Have you held that position under the Council for some time? For nineteen years, I think; but I have been connected with Municipal Councils for the last twenty-four years.

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4340. Have you seen the proposed Bill in connection with the Regulation of Coal-mines? I think so.

4341. Will you look at section 30 [28], sub-section 3, on page 14 of the Bill (*see Appendix A*); what is your opinion of that provision? I think it is a similar clause to the one in the Bill of the 12th of September, 1894.

4342. Do you see a provision in that sub-section for a surface plan? Yes.

4343. Do you notice that there is to be shown on that plan all streets, roads, buildings, creeks, rivers, bays, &c.;—do you believe in a provision of that character? Yes; but I think the clause itself is not sufficiently strong. It says "That there shall also be so provided, *if required*, a surface plan." I should like to erase those words and say "There shall also be so provided a surface plan," in order to make it compulsory to provide such a plan.

4344. Will you now look at Rule 25, on page 29, of the Bill—"Coal not to be wrought under roads"—[*see Appendix A*]; what have you to say to that Rule? I have seen that section before.

4345. Do you think a section of that character should be embodied in the Bill? Yes; but it only says that the inspector shall have the right to say what position the headings shall be driven under the roads, but it does not apply to any other mining operations under roads.

4346. Do you know of any instances of streets having been interfered with by undermining? We have had considerable experience in connection with that matter. It has cost the two councils, jointly, £1,075 10s. 2d. to test a mining matter of that kind. I have a paper with me showing the expenses we have been put to in connection with a matter of that kind. I have also a document in connection with the undermining of Brookstown properties. In the Supreme Court of N.S.W., in Equity, between Her Majesty's Attorney-General for the Colony of N.S.W. on the relation of the borough of Wallsend, the two councils proceeded against Messrs. Alexander and Andrew Sneddon for undermining the streets of that borough. They applied for an injunction against the Messrs. Sneddon to prevent them mining, so as to render the surface unsafe. The decree was simply that the mines should be allowed under the streets, but that the workings were to be under the supervision of Mr. Thomas Croudace; and our experience since then is, that there is no improvement. One of the main streets only this year came in, and in connection with that particular portion of Brookstown, the people who had property on the place, finding that they were going to be undermined, had to make the best bargain they could for their properties. The people got a certain amount for their property; but they had to take what was decided upon by the arbitrators, who were Mr. Thomas Fryar and myself.

4347. Did you agree upon the matter of compensation? Yes; we mutually agreed.

4348. Did these people build prior to the mines being there? No; the surface right was only sold the owners reserving the mineral right to themselves. The owners leased the right of the mineral, at a royalty of so much per ton, and as it is to the interest of the man that leased the mineral to get as much coal as he can, the result is, that the peoples homes are ruined. At the present time, we have the same undermining being carried out to a very large extent by the same gentleman whom we had this injunction against.

4349. Do you think if these streets had been properly secured they could have come down? No, certainly not. If sufficient coal supports had been left, they would not have come down. If the pillars had been left, the streets would have remained intact.

4350. Do you know the depth there from the surface down to the coal? In some places it is 130 feet, and at other places it is very thin. We put down a bore in Brookstown, and found it 135 feet.

4351. *President.*] Which part of the surface came down? It all came down; it is down altogether now. As soon as the people sold their properties, Sneddon took away all the coal.

4352. *Mr. Curley.*] Who makes good these streets when they tumble in? The Council has to do this, because they are liable if any accident takes place. In connection with the main road from Plattsburg to Minmi, we were aware that the Summer Hill Colliery, was undermining that road, and we applied to the Government to make an inspection. Mr. Humble, one of the inspectors in the Northern district, was sent to make the inspection, but he said, that all he had to do was to see to the safety of the men employed, and that he had nothing to do with the safety of the road.

4353. Has any undermining taken place at Plattsburg recently? Yes, on the 2nd of August, 1894, we had a very extensive subsidence, extending across High-street, and Neilson-street, and several properties were damaged. Alderman John Estell's house was one, and I know of two or three other houses belonging to the Building Society that were damaged to a considerable extent, but of course we have no remedy.

4354. *Mr. Gregson.*] You say there is no remedy. Could you not have sued the person who mined the coal? No; the persons who mined the coal, were the proprietors of the old Co-operative Colliery, and they left what they considered sufficient supports for that time. Then, the owners of the estate not content with what they had previously got, leased the remainder of the coal to Alexander Sneddon. The cause of the subsidence was considered to be the pumping out of the water, to get to the main body of the coal.

4355. Do you think the pumping of the water out was the main cause of the subsidence? It would be a very difficult thing to prove in connection with the last subsidence that took place. Some of the houses a quarter of a mile from where the fall took place were damaged, and one house was almost split in two. It would be very difficult to prove who did the undermining under that house. They might say, the mine was not conducted under that house.

4356.

- Mr. T. Abel. 4356. Do you know whether they have any of these difficulties in Great Britain? I really cannot say about Great Britain; but they are difficulties which we have experienced in this country. We have had the experience of spending £1,075 on an action, in which we could clearly show that the surface was undermined; but we could get no satisfaction.
4357. *Mr. Curley.*] Do you think that municipalities should be harassed in that way? I think the experience we have had in this matter will do the Council for all time.
4358. Was it the Wallsend road that was undermined? No; we were appealing against the undermining of Union and Cowper Streets,—two streets of Brookstown.
4359. Were those streets dedicated by the owners of the property? Yes.
4360. Were they dedicated, previous to the right being given to work the coal? Yes; I understand that was the case.
4361. If this condition of things is pursued, is it not liable to involve the municipalities in serious consequences? If the present undermining is allowed to continue, as it is being carried on, there can be no question that the Council will be put to serious expense, because the streets must of necessity collapse. Mr. Sneddon, I know, is working as near the outcrop as he possibly can, and what was thought sufficient support before cannot be sufficient support now. We know from the sound of the shots that they are not working far from the surface, and can often hear the men working with their picks, and it also shakes all the crockery in the house in certain instances.
4362. *Mr. Gregson.*] It seems to me to be a marvellous thing that this should be going on;—has anything been done to prevent it? We applied to the Minister to get a joint inspection, on the 13th of August last, of the underground mining operations of the Messrs. Sneddon, to ascertain what was being done under the roads and streets of the borough, and when the inspection took place, or was supposed to take place, we appointed Alderman Robert Davidson, who ought to be a qualified man, because he was the overman of the Co-operative Colliery for twenty years, until he retired. When the Council's representative and the inspectors went into the mine Mr. Sneddon refused them the right to inspect his workings. They were permitted to inspect the workings of the old Co-operative Colliery, but they met with foul air, and could get no further through the place standing so long. Our joint inspection to ascertain what had taken place had therefore no effect. On the 27th or the 28th of August, accompanied by the Mayor of Plattsburg, we interviewed the Minister for Mines, to ascertain if something could not be done in order to get an inspection of this particular colliery's workings. We thought that if the Minister would nominate the Council's representatives that that would get over the difficulty; but the Minister could not see his way to do that, and we have not been able to do anything else. We know from the sound below that undermining is being carried on, but to what extent we can only surmise. Our experience of the Brookstown results makes us think that when Mr. Sneddon has done with it there will be very little left.
4363. Do you know of any other places in the district where this state of things exists? Yes, at Tighe's Hill.
4364. Was it not the Crown that was responsible for that road? Yes; that was a different case.
4365. Do you know of any other cases? Yes; at Lambton, and at North Lambton, through undermining the streets have come down. When I was a miner, I was working under the roads and streets there. At New Lambton I only know about the main road that is under the control of the Government. It is well known that many pit-falls have taken place on this road. I am positive also that the Minmi road is considerably undermined.
4366. Is that a proclaimed road? Yes, it is recognised as a main road; but whether it is in the full acceptance of the term, I could not say. I think the Maitland road is the only main road in the district; but the other road is under the control of the Government at the present time.
4367. Does it not seem to you that it is rather a severe penalty on other coal-owners to pass this clause upon them, owing to the default of two or three others, seeing that they are cases in which owners could protect themselves, or seek a remedy for the damage done. Is there a remedy? Yes; there is a remedy. If the mine operations are carried on under the control of the inspectors, they would know what supports should be left to support the cover over the seam. Their duties at present are simply to see that the mine operations are carried on, with a view to the safety of the workmen employed.
4368. Can they not give evidence, in an action brought by owners of the surface, against those who are doing the undermining? I know in connection with that case at Brookstown, that before we could get an inspection of the mine, we had to deposit with the Lands office £75, in order to ascertain what was being carried on, and a poor man could hardly do that.
4369. There are poor men apparently concerned in this. Might they not band themselves together? At Brookstown all the residents did band themselves together, for the purpose of protecting themselves, but they found it was an expensive luxury to go to law, and preferred to go to arbitration, and take whatever award might be given. They could not carry on the expense of testing a case.
4370. *Mr. Curley.*] Was that arbitration a matter of mutual arrangement? It was a matter of mutual arrangement between the property holders, after the decision of the Court was given. The decision was that the Messrs. Sneddon should have permission to mine under these streets under the supervision of Mr. Thomas Croudace. The property holders were under the impression that the Council had virtually lost the case, and that Mr. Sneddon had the privilege to mine under the streets, and they were forced to go to arbitration.
4371. Do you think that cases of this character call for immediate legislation? I do. I know where my home is, that Messrs. Sneddon will come and take the feet from under my house; I know that the mineral is there, but he has the right to it, and if I have to take any steps to prevent him, I should find myself in the hands of the Law Courts. I would strongly suggest, that in connection with that particular section of the Bill, where this plan is to be provided, that the words should be inserted, "There shall be provided a surface plan on the same scale, &c." The wording, "if required," leaves it too open a matter altogether. I think that plan should be open to the municipal authorities, on the production of an order from the Minister for Mines.
4372. Why the Minister for Mines? He could grant permission to see the plan, if some substantial reason was given for wanting to see it.
4373. Would it not do to leave it to the inspectors? In that case it would mean going to law and calling the inspectors.
4374. Is there anything else in connection with this matter you would like to refer to? In connection with Rule 25 on page 29 of the Bill (*see Appendix A*), it seems to me that it does not meet our case at all.

It deals with headings going under roads, but it does not deal with the matter of mining the coal. Our Council sent a motion to the recent Municipal Conference dealing with the matter. The motion submitted by the Council reads as follows:—"And that in order to permanently secure the safety of all public roads, streets, lanes, or buildings, adjacent thereto, within the boundaries of any municipality, it shall be the duty of the Minister for Mines, his examiners or inspectors, to at least once in every six months, inspect all mining under such roads, streets, lanes or buildings, and take such steps, as the Minister or his officers may deem necessary to insure the permanent safety of such roads, streets, lanes, or buildings."

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[Witness withdrew.]

William Henry Goodman sworn and examined:—

4375. *President.*] What are you, Mr. Goodman? I am a storekeeper.
 4376. Where do you reside? At Stockton, near Newcastle.
 4377. *Mr. Curley.*] Are you an alderman of the Municipal Council of Stockton? Yes.
 4378. Do you hold the position of Mayor of that municipality? Yes.
 4379. *Mr. Gregson.*] Is this the first year of your mayoralty? Yes; I have been Mayor of Stockton since February of this year.
 4380. *President.*] How long have you been an alderman? About three and a half years.
 4381. *Mr. Curley.*] Have you resided at Stockton for a number of years? I will have been a resident of Stockton for ten years on the 16th of next month.
 4382. Do you know the Stockton Colliery? Yes; I have worked in that colliery for about five years.
 4383. How long ago is it since you worked there? I started to work in the Stockton Colliery in October, 1885, and worked there up to 1890.
 4384. Do you know of any extensive fall that occurred in that mine some years ago? There was an extensive fall in the No. 2 heading, I think, in 1889.
 4385. Was that one of the main roads? That is the main roadway.
 4386. How many men would work inside of where that fall took place? At that time, I think there were a greater part of the bottom seam, and also of the top seam working inside of this fall. There was only one heading working in the bottom seam besides No. 2, and that was No. 3. There were not many men working in No. 3.
 4387. Were nearly the whole of the men in the colliery working inside of that fall? Yes.
 4388. Would the fall affect both seams? Yes, it affected both seams.
 4389. Was the main roadway closed up? Yes; the main way was closed for some considerable time, but I cannot say the exact time. The pit was idle for some weeks.
 4390. How do you account for that fall taking place? I think it was due to the reckless way in which the pit was opened out—robbing the pillars.
 4391. Do you think the fall was caused through leaving too small pillars? Yes.
 4392. Do you know of any surface subsidences that have taken place in the township of Stockton? Yes.
 4393. This is a plan of the Stockton township (*plan produced*). Will you look at this plan, and indicate, if you can, where the subsidences have taken place (*see Plan, Appendix U*)? There is one fall in Stockton-street, and this street is supposed to be on the 100 feet water frontage. This street, from between Clyde-street and King-street, runs a distance of from 8 to 9 chains. It does not reach quite to Clyde-street, and the surface in this part has gone down about 2 feet on the street. The Government, of course, put in the alignment stones, and since the levels have been taken by our surveyor, Mr. Gardiner, we find this street has gone down about 2 feet. The subsidence extends from the water frontage to William street, and the William-street houses were affected a good deal in the way of plaster and walls cracking. They are nearly all wooden houses, and in some instances, the foundation has gone away, and left the houses standing. The properties, facing Stockton-street, have gone down so much, that if it was not for our road the tide would ebb and flow into their yards. We had to take away the surface water from their yards. The yards of Keenan, Davis, and Taylor, are the three persons who are most affected there.
 4394. Has the land gone down where these properties stand? A piece of ground about 9 or 10 chains in diameter, has gone down nearly 2 feet and in some places more.
 4395. Have you any idea when these subsidences took place? In October, 1892.
 4396. *Mr. Gregson.*] Where is the position of the Stockton shaft (*see plan, Appendix U*)? It is near the northern breakwater.
 4397. *Mr. Curley.*] Are both the upcast and the downcast shafts together? They are a distance of from 20 to 25 yards apart. We have another subsidence further down at the corner of Maitland and Hunter Streets (*see Plan, Appendix U*), and according to the levels our inspector has given us, the surface there has also gone down 20 inches. It takes in a good deal of Stockton-street. It did a considerable amount of damage, breaking the stones, &c., and the estimate for repairs to replace it, to bring it up to its original level, is £250.
 4398. *Mr. Gregson.*] Did you make any claim upon the Stockton Coal-mining Company for the damage done? We wrote to the Company, but they ignored our letter, or rather took no notice of it. This fall has extended as far as Mitchell-street and Crown-street (*see Plan, Appendix U*). My premises are situated near to this part, and it has cracked a brick building there. We have often heard the shocks and people are often alarmed by a noise at night-time and in the day-time like thunder.
 4399. *Mr. Curley.*] When did this fall take place? About two years ago.
 4400. Would that be in 1893? Yes; December, 1893.
 4401. When did that other fall occur? Fourteen months after the first fall.
 4402. *President.*] Why could not the municipality recover from the Stockton Company? The advice we received was that private property holders could recover, but that municipal councils, as custodians, had no redress whatever.
 4403. *Mr. Curley.*] Can you point out on that plan any other subsidences apart from the two you have mentioned? No; I cannot say I can.
 4404. *President.*] Was that decision given on the grounds of the Municipalities Act? I think the answer was, that as custodians of the streets the Council had no redress to recover from any company or to recover from the estate. I think we asked the question both ways, whether we could recover from the owner of the estate or from the coal company, and that was the answer we received. I think our solicitors drew our

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- our attention to a case that had been tried in England recently, and it was pointed out that they were unsuccessful there. It was a case something similar to ours of a coal-mine falling in and damaging the property of a council, and they could get no redress.
4405. Supposing you have a Municipal Council Chambers, and, through undermining, those chambers gave way or were cracked and broken, were you advised that you could not recover for that? I do not know whether that question was put.
4406. Was the question put, whether you could recover for your streets? Yes; and we were advised that private property-holders could recover. I think that some of the residents—Callen, Breckenridge, and Pilot Warner—are taking the matter up now. Chatfield's steps, in Stockton-street, are cracked right up the front, at one corner, and the building had been up for some four or five years before this crack took place.
4407. Do you know whose opinion was taken upon this matter? The solicitors for the Council were Messrs. Sparke and Millard, of Newcastle.
4408. *Mr. Curley.*] Were there any valuable buildings on this site? Mr. Peter Callen's house is a building that cost, I should think, from £1,500 to £1,600. The fall did a considerable amount of damage. It shattered the foundations, cement, and plaster of the houses in every shape and form.
4409. Did you see yourself that several of these steps were shattered, together with the supports to the houses? Yes; the houses are shifted. The water-spouting of the houses, instead of carrying the water to the back, carries it down over the front of the houses. The spouting holds no water at the back, and some of the other houses are canting over to one side.
4410. How far are these subsidences from the river? Maitland and Stockton Streets are about 120 yards, and where the other fall took place, between Clyde and King Streets, the distance varies. Some part of the street is on the hundred feet reservation, and in other places the streets would be from 10 to 20 yards off high-water mark.
4411. *President.*] Did you get a written opinion on this matter? Yes, from Sparke and Millard, and also from the Municipal Association.
4412. Can you let us see that opinion? Yes, we can send you a copy. I will see the Council Clerk about it. [*See Appendix V.*]
4413. *Mr. Curley.*] Was the mine very wet or damp where you used to work? Some places were wet, and some places were dry.
4414. Did you notice if the water was salt? Yes, it was all salt.
4415. Did the mine dip or rise from the shaft? The No. 2 heading was rising very fast.
4416. How deep is the shaft? 350 feet.
4417. Is there water all round it? Yes; I worked in the No. 2 heading a good deal, and it was rising very fast when I worked there. I have heard since that it is dipping, but I do not know how far this is true.
4418. Do you say that several buildings were affected by these subsidences? Yes; seven or eight buildings are affected to a large extent; and of course there are several minor things that could be mentioned.
4419. Has the Council applied to the company for something for the renewal of these streets? Yes.
4420. And do you say that that communication has never been answered? Yes. We also asked the company to receive a deputation, but they refused to do so.
4421. Do you think the manager of the company would have a full knowledge of all these things? The management says that it is the dredging of the harbour that is causing the landslips on the surface—that the dredging of the harbour is causing these streets to come down.
4422. Would the dredging of the harbour cause these thuds and sounds like thunder? I can hardly see that it could.
4423. Do you believe that the dredging of the harbour has anything to do with it? No, I do not; I think the foreshore has not been affected at all.
4424. This is near the water? Yes. At Stockton the surface is all composed of sand, and I do not see how it could possibly slip.
4425. Will you look at section [30] 28, sub-section 3, on page 14 of the Bill (*see Appendix A*)? Yes.
4426. Do you think that a provision of that kind should be embodied in this Bill? Yes; I think so. The people living on the surface should, I think, have the right of knowing what is going on down below. A case in point is that part of Stockton-street is supposed to be on the 100-feet reservation, and we have not the slightest doubt that that has gone down 2 feet, and this 100 feet of coal is supposed to be left in there.
4427. Is that not a matter that you could have referred to the Minister? I am not sure whether we did not write to the Minister. There is a clause in the Municipalities Act that gives power to refer to the Minister, and to ask him for an inspection of the mine. I think we wrote to the Minister; but I forget the reply we received. I remember the matter being talked about. The question would arise whether the Stockton Company had a right to take this coal out or not, and we, of course, think they had no right to take the coal out.
4428. Could you not ascertain from the Minister whether they had that right or not? I forget the nature of the correspondence on the subject. I think we wrote and asked the Minister, but I forget the answer we received.
4429. Will you look at the 38th section of the present Act:

38. Upon the affidavit of any person taken before any Justice of the Peace or Commissioner of the Supreme Court for taking affidavits claiming to be legally or equitably interested in any mine or in any land adjoining or near to any other mine that the owner of such last-mentioned mine is or is by the person making such affidavit believed to be encroached upon such first-mentioned mine or land the Minister may by writing under his hand authorise the examiner or inspector together with a mining surveyor or experienced miner to enter upon such last-mentioned mine or land for the purpose of ascertaining whether any such encroachment has been made and if so the extent thereof. But before granting such authority the Minister shall require the person making or lodging the affidavit to deposit such a sum of money not exceeding one hundred pounds as shall be necessary to cover the cost of such inspection. The persons so authorised may thereupon enter on the mine or land described in such order and descend any shaft or enter any mine and for such purpose use the engines and other machinery ordinarily employed for that purpose by the persons whose shaft or mine shall be descended or entered and make such plans and sections of the mine or land entered upon and of any drives or other works therein as shall be necessary for the purpose aforesaid. And the owner or agent of the mine to be entered upon shall render all necessary assistance to the person so authorised. And every such examiner or surveyor or miner shall before entering on such mine or land make a statutory declaration before any person authorised to take the same that he will not (except as a witness in a Court of Justice) without the consent in writing of the owner of the mine or land to be entered upon divulge or cause to be divulged to any person whomsoever any information obtained upon or by such entry save only as to whether such

such owner is encroaching on such first-mentioned mine or land and every person who shall act contrary to such declaration and any owner or agent who shall refuse such assistance as shall be necessary to enable the persons authorised by the Minister to descend the shaft or enter and examine the mine shall forfeit and pay a sum not exceeding ten pounds. Provided always that the Minister may out of the sum deposited as aforesaid defray the cost of such inspection and if such owner or agent render such assistance as shall be necessary for the purposes aforesaid and if there be no encroachment may out of such sum award to such owner compensation for any loss or expense to which he may be put by reason of such inspection.

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4430-1. Do you think that section touches the case in point? Yes; that applies to entering a mine. There is also another difficulty we could see. We had two or three persons in our Council who had a very fair idea of how this thing had been worked, and there was a difficulty in getting an inspection, knowing that they knew the state of the pillars, and also that very little care had been taken in this respect. We thought there would be some difficulty in getting in there, even if we wanted to.

4432. Has the Council done anything beyond appealing to the Company? Nothing beyond asking legal advice.

4433. Will you now look at Rule 25, on page 29 of the Bill—"Coal not to be wrought under roads." [See Appendix A.] Do you believe in a provision of that kind being in the Bill? Yes; I think there should be a provision not to allow the bord to be driven if it was running parallel with any street. In course of time, through the coal being of a soft nature, and the pillars crumbling away, there is danger of the streets being affected. I think a provision should be made to carry the workings, if possible, free from streets, or in the event of their driving under streets, that the cut throughs, or headings, shall be driven as provided in this rule.

4434. *President.*] Supposing this is the case, that the owner of the Stockton estate grants to you the right to get all the minerals under the estate, and he grants to me the mere surface of the land, I knowing well enough that at the time I take the grant of the surface that you have the right of the minerals, does it not seem hard that you are not to get your coal because of that; if people choose with their eyes open to make a village or a little town, and then get it made a municipality, because they have done that, are they to deprive others of their rights? I think there is a lot to be said on both sides.

4435. *Mr. Curley.*] Is this not a matter that the Municipal Councils could take up and deal with themselves? I do not think the Municipal Council has any right to interfere with private property. They have only the care and construction of the streets.

4436. *President.*] Can you say whether these streets were dedicated to the Council? Maitland-street was dedicated by the Stockton Estate, and Stockton-street which coincides with part of the Stockton to Raymond Terrace Government road by the Government by the proclamation of incorporation. Some time after the Council was formed, the Government asked the Council to take the road over, and gave them a grant of £120 a year for three years. It was aligned before the disturbances took place, but not before the coal was taken out; and it was pointed out that the important point was whether the coal had been taken out before the street actually became the property of the Council. There is another question with regard to Government ground. The Government have sold a portion of the land, and the people have paid a very high price for it, and the question is, is it right to allow the Stockton Coal Company who have taken up the right to mine under Government ground to let this ground down.

4437. *Mr. Curley.*] Would you kindly point out the Government land on this plan? Yes. [See Appendix U.]

4437½. When was that Government land indicated on the plan sold? About seven years ago.

[Witness withdrew].

Thomas Adams sworn and examined:—

4438. *Mr. Curley.*] What are you by occupation? A miner.

4439. Have you had much experience in mining? Seven years experience.

4440. Where have you worked? In Queensland and in the Newcastle district.

4441. Have you been long in the Newcastle district? About six years.

4442. What collieries have you worked at in Newcastle? At the Newcastle Coal Company's mine.

4443. Have you worked at the A and B pits? Yes.

4444. What pit are you working in at the present time? The B pit.

4445. Do you know the number of men employed in each pit? I cannot say the number of men in each pit, but I know the number in both pits.

4446. Can you form any idea of the number of men in the B pit? I should say there were about 200 miners in the B pit.

4447. How many miners are there in the A pit? 270.

4448. What is the width of the bords in these collieries? Eight yards.

4449. What is the size of the pillars? They vary. Some are 6 yards, some 8 yards, and sometimes they go more.

4450. Have the pillars always been that size since you went to that colliery? Yes.

4451. Are you paid at that colliery by average weight? By the standard weight.

4452. What is your standard weight? Twelve cwt; no weight is recognised above that.

4453. I suppose a record is taken by the check-weighman occasionally, to see what weight men are getting;—if a skip weighed over the 12 cwt., would it not be recorded? No, the company will not weigh. If it goes 12 cwt. they leave the machine. They only recognise 12 cwt.

4454. Are you sure of that? Positive.

4455. How does a man know when he fills over 12 cwt? The check-weighman guesses at it.

4456. Do you consider that standard weight should be abolished? I do.

4457. Are you paid by the average at that colliery? No.

4458. Do you not get the average of the skips that are weighed? If a skip gets weighed to-day 12 cwt., you get paid for the full amount of skips that day as 12 cwt. If to-morrow, it is 11 cwt., you get all the skips at 11 cwt.

4459. What would be done, supposing you were weighed twice in a day? In that case the skips are averaged. If you get weighed twice in one day you stand on the average.

4460. Do you think that where there is the standard weight, the miner gets a fair average? No, he does not.

4461. Does that not arise from this, that probably one skip may be over 12 cwt., and another under the 12 cwt? If you get a skip 12 cwt. 2 qrs., and another skip 11 cwt. 2 qrs., they do not recognise that half cwt; they only recognise the 12 cwt., and the 11 cwt. 2 qrs.

4462.

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- Mr. T. Adams. 4462. What is your opinion with regard to the number of skips that are weighed? I think that every skip should be weighed. I have had experience in England, where we were weighing from two pits, and we had every skip weighed there.
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4463. What number of skips came out of that mine per day? I cannot say the number of skips.
4464. Was it a large output? Yes.
4465. And every skip was weighed? Yes.
4466. Where was the weighing-machine? Between the two pits. It had a face like a clock, and with every skip that went over, a finger pointed to the weight.
4467. Was it a self-registering machine? Yes.
4468. Were these machines very costly? I cannot say.
4469. What mines were these machines used in? This was in Staffordshire, England.
4470. Did you work in any of these mines as a coal getter? No.
4471. What were you doing there? I was weighing for the masters, against the check-weighman.
4472. From the experience you have had in England, you know that it is possible to weigh every skip without interfering with the output of the mine? Yes.
4473. Do you think these machines are costly items? I have not the least idea.
4474. Do you know the average number of skips that are weighed at the Newcastle Company's colliery in a day or a fortnight? There are about between thirty and forty skips weighed daily at the A pit, and I should say, about thirty skips per day at the B pit, that is as near as I can judge.
4475. How many skips will be drawn from these two pits in a day? They reckon to draw at the A pit about 900 skips.
4476. Is that a day's work? Yes.
4477. How many skips would go to the waggon? About fifteen skips.
4478. Can you say exactly what the number is? I cannot give you the number any nearer.
4479. Do the men ever make any complaints about the number of skips that are weighed there? Yes; very often.
4480. Do you consider that a sufficient number of skips to weigh in proportion to the day's work? No, I do not.
4481. If an increased number of skips were weighed, do you think that would give more satisfaction to the men than what is given now? It might give more satisfaction as regards myself, but from what I have heard the men say they would sooner have every skip weighed.
4482. Is that the opinion of the men so far as your colliery is concerned? Yes; that is my experience, from what I have heard the men talk about.
4483. They think that every skip should be weighed? Yes.
4484. Is the company's weighman at the weighbridge all day? Yes.
4485. Has he any other duties to perform? Not that I am aware of.
4486. Has he any clerical duties? Not that I am aware of.
4487. Has he anything to do with looking after screenmen, waggons, or anything of that sort? No.
4488. Has this question of an insufficient number of skips being weighed ever been referred to the manager? It has not been referred to the manager while I have been in office; but when the other secretary was there I believe it was referred to him.
4489. Do you hold the position of secretary to the lodge? Yes; I have held the position of secretary to the lodge for four months.
4490. Have you ever examined any of the provisions in the proposed new Bill? No, I have never seen it.
4491. Have you worked in different parts of both these collieries? I have worked in all sections of both pits with the exception of one.
4492. What section was that? The No. 9 section.
4493. Have you ever noticed any defects in connection with the ventilation of that colliery? Yes; I have filled the position of check-inspector, and I have very often found defects in the ventilation.
4494. Were you the check-inspector for both pits? Yes.
4495. In what districts have you found these defects in the ventilation? In a district called No. 2, in the A pit; and also in a district called No. 1, in the same pit. There is very good ventilation in the B pit.
4496. What was the nature of the defects in the ventilation you refer to? Bad air. I have known the thermometer range up to 79 degrees. I have here the check-inspector's report for the 16th and 17th of October, 1893. It says: "We found the air deficient in No. 7 heading, 109 pillar, through want of a canvas, which the deputy promised to put up at once. We also found it slack in No. 2, at 47 pillar. In fact it was not up to the previous inspection in any of the headings in No. 2 district. The air-ways and travelling roads were in fair condition, and we found a fair supply of timber on the various flats." That report was signed by Thomas Oswald, and Thomas Adams, check-inspectors.
4497. Was that on the heading? Yes.
4498. If the air was bad on the heading, how would it be with the men working in the face? I have known the men have to come out of the face, and go into the heading for a breath of air.
4499. Have you made any report since this report? Yes.
4500. Do you notice any further deficiencies in the ventilation? Yes. On the 2nd and 3rd April, 1894, we found the air-ways and travelling-roads in good condition, and plenty of timber on the flats. We also examined the ropes and cages. And in our opinion the cages at the A pit are in a bad state of repair owing to the rivets and bolts being loose. We found the B pit cages in a much worse condition, and we think that the wire that is attached to the middle chains should be removed, and the chains substantially repaired. And the cover on the south side cage wants replacing by a new one, the present one being full of holes, and patched with timber. We attribute the cause of not being able to get a reading in No. 3 Heading, B pit to the following:—Firstly to no one being in attendance at the furnace after 2 p.m. Secondly, to the door leading to the pick-rack being left open at times. We would recommend that another door be erected, one door not being sufficient to meet the requirements. We also draw the overman's attention to what is known as the stable door, as it was in a very dilapidated condition which he promised to rectify.—(Signed) Emanuel Rigby, Robert Wells, Check inspectors.

TUESDAY, 1 OCTOBER, 1895.

[The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.]

Present:—

FRANCIS EDWARD ROGERS, Esq., Q.C. (PRESIDENT).

JAMES CURLEY, Esq.

JESSE GREGSON, Esq.

Thomas Adams' examination continued:—

4501. *Mr. Curley.*] I think you were referring to the Check Inspector's reports when we closed last night? Yes.

4502. Are there any other reports that have been made, subsequent to the one you referred to, that show further defects in connection with the ventilation? No, I don't think there are. I may state that we have had no inspection since the one in 1894.

4503. You have never been authorised to go round? No. The last inspection is in the book.

4504. Is your experience, where you have noticed any defects in the ventilation, that the air was not conducted up into the working place? Yes, always. In my experience I have never seen it conducted up to the working face—it is always in the headings.

4505. Do you think it should be turned into the bord? Yes.

4506. And kept well up to the face? Yes.

4507. Have you seen the proposed Bill? No.

4508. Will you look at sections 50, 47, rule 1, page 23 (*see Appendix A*). You will see several erasures in the clause there where lines are struck out. Those lines that you see run through in the clause, and also the larger letters that you see inserted, represent the amendments by the Legislative Council, and the clause without those erasures and larger letters represents the clause as it was originally in the Bill, and as it left the Legislative Assembly. Do you believe that there should be a minimum quantity of air provided—of 150 cubic feet—for each miner? Yes, I do; and I believe if the thermometer runs over 70° the air ought to be condemned. From my experience, I do not think the air is pure after the thermometer ranges over that.

4509. You think a high temperature shows a defect in the ventilation? Yes, it does.

4510. Is this a matter that you have studied and thought out? Yes, it is.

4511. What would you consider a medium temperature? I would say between 60° and 70°. I have seen it in the Newcastle Company's B Pit as low as 59° and 60°. Of course it is very good air there.

4512. Do you believe in the shorter cut-throughs, from 35 to 25 yards? I do not know that that would make much difference, providing there was good air, or if the air was taken up to the men with brattice.

4513. Is there much refuse in the Newcastle Company's seam? Yes, a good deal.

4514. Is there what is known as a Jerry-band in the seam? Yes, in some sections of it.

4515. Does it run right across the seam? Yes.

4516. How thick is it? From 16 to 17 inches.

4517. Is that worked? Yes, on some sections.

4518. Have the men to put it on one side, and clean it from the coal? Yes; clean it from the coal, and put it on one side.

4519. Do you think some of this refuse could be utilised in certain cases for the conducting of the air by packing it at the side of the road? Yes, I believe it could be used to pack up all the old bords. It would make a very great difference to the air, and save the expenditure of buying brattice.

4520. Is there any fire-damp given off in that mine? I never saw any in my experience.

4521. Did you notice much waste in connection with the air when you have made check inspections? Yes; on account of these old bords not being stopped up.

4522. As a rule, did you find a fair quantity of air on the intake? Yes. I have found it deficient in a certain section in the Newcastle Company's Pit No. 1. I have seen the time when we could not get a reading at all, and at other times you could get good readings.

4523. In a case where you could not get a reading, would you consider the air very slack and stagnant? Yes.

4524. Do you believe the air should be conducted in a mine in splits? Yes, provided there are not too many men on each split.

4525. Do you know the limit the Act proposes with regard to the number of men? Sixty.

4526. Do you think sixty a fair number of men to be in a split? Yes, I should say so.

4527. Have you given any attention to the question of hours that the men work? At the Newcastle Company's Collieries the miners work eight hours as nearly as possible. The first shift goes down the mine at 6 a.m. and knocks off at 2 p.m.; the back shift goes down at 8 a.m. and knocks off at 4 p.m. I may say that the wheelers go to work at 7 a.m. and stop drawing coal at 4 p.m., and then very often fill slack till 6 p.m.

4528. Do you believe that there should be a uniform starting time in the mine? I do.

4529. And also a uniform time for casing work? Yes.

4530. Are you in favour of the proposal to fix the hours at eight by legislation;—do you believe in the hours being legislated for? I do.

4531. Is there any security for the present working hours;—could not a manager alter them, if he thought fit, at any time, and request the men to work longer? Yes; I believe he could.

4532. Do you think eight hours long enough for a man to be in the mine? Quite sufficient.

4533. When you have been making your inspections have you ever inspected the shafts? No, I never have.

4534. Do you think they are worthy of consideration? Yes, I do. I consider that the check inspectors ought to examine ropes, gauges, shafts, and everything—provided they understand them.

4535. If a man saw any loose stones in a shaft do you think he would understand what that meant? Oh, yes.

4536. Do you consider that the shafts should be at a reasonable distance from each other? Yes; I believe they should be.

4537. The Bill proposes that they should be fifty yards apart;—I think the Legislative Council proposes something like ten yards, and the Legislative Assembly has suggested thirty yards;—what do you think of it? I should think thirty yards is a fair distance.

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4538. Is your colliery working anything like full time? No; about half time, as nearly as possible.
4539. Do you think working only eight hours would interfere very much with the output of a colliery? No; I don't.
4540. Do you think the cost of bratticing to regulate the ventilation in a mine would be a very serious item, or would it be merely a nominal charge? No; I do not think it would be very serious. Of course it would cause the expenditure to be a little higher in working the mine; but I consider that they could utilise the refuse instead of brattice.
4541. Could they do this in a great many instances? Yes.
4542. *President.*] Do you mean build it up? Yes; I may say that sometimes they do this in the Newcastle Co.'s A pit. I have seen it done. We were making an inspection in this section I am speaking of, and we could not get any readings; we therefore pointed out to the overman that he had better stop up those old bords, and he had them stopped with refuse, and the next time we went round we could take a reading.
4543. *Mr. Curley.*] Do you think managers should see numbers of these things without the men having to point them out to them? Yes; I believe they know about it without the men pointing out the defects to them.
4544. Can you understand why this is not done without the men having to point it out to them? No; I cannot understand it at all. I have seen times when we have found defects and pointed them out, and no notice has been taken of them.
4545. How are these two collieries ventilated? By furnaces.
[Witness withdrew.]

Alexander Mathieson sworn and examined.

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4546. *Mr. Curley.*] What profession do you follow? That of colliery manager.
4547. What colliery are you now in charge of? The Hetton Colliery.
4548. Have you been manager for some time at the Hetton Colliery? I have been manager of the Hetton Colliery from the start, but I have not had the full management of it all the time. I have had the management of it for all the time except about three or three and a half years.
4549. *Mr. Gregson.*] How many years have you managed the colliery? Four years this last time, and a little over two years when they first started to sink.
4550. *Mr. Curley.*] Were you in charge of the sinking operations? Yes; looking after them on behalf of the company.
4551. Have you one or two shafts? Two.
4552. Where is the pit situated? At Carrington.
4553. Can you point it out on this plan? [*Plan handed to witness.—Witness marks location in pencil.*]
4554. Are you pretty well acquainted with the deposits that were gone through in the sinking of these shafts? Yes, pretty well.
4555. What were they? Sand, clay, and shale.
4556. What shale had you at the down cast shaft? Shale and blue metal—about 50 or 55 feet—I am not sure which.
4557. What had you with regard to your up-cast shaft? About 90 or 95 feet.
4558. Can you outline on the plan where the leasehold extends. Is it leasehold? Yes. This plan does not give it all.
4559. Does it not give a portion of it? No; it only gives two of the leases and part of the third.
4560. Don't you work this portion (*indicating on plan—see Appendix W*)? Yes.
4561. It does show a considerable portion? Yes; it shows three of the leases. The middle lease is 14. The others are 13 and 12 (*see Appendix W*).
4562. Is the principal portion of your work under the harbour? Yes.
4563. What is your method of working? Bord and pillar.
4564. What is the width of your bords? Six yards.
4565. What is the size of your pillars? Six yards.
4566. Have you seen the report of the Royal Commission on Collieries adjacent to Ferndale? It is a long time ago now.
4567. Have you seen any intimation from the Examiner of Coal-fields in regard to any recommendations the Commission made for the regulation of collieries under ocean leaseholds and tidal waters. Has any official communication been sent to the managers, do you know? No; not that I am aware of.
4568. Will you look at these recommendations here on pages 128-9 of the report of the Department of Mines, 1887—Tidal Leaseholds and Ocean Leaseholds (*see Appendix Q*)? I have not seen these before. We do not comply with the 7 feet in thickness.
4569. What do you mean by the 7 feet in thickness? The thickness of coal to be wrought not to exceed 7 feet.
4570. That means, I presume, that it is intimated that there is to be some top coal left;—is that what you consider from the recommendation? That is what I would consider from that, but leaving top coal up would not make us safe.
4571. Would it not help to do so? Not in the slightest, because it would not stop up. In fact, in the biggest part of our lease, leaving top coal up is a danger instead of a safety, because after being thoroughly wet and left to itself to dry, it is likely to catch fire when it falls and lies after the waters draw off it.
4572. Have you known top coal to stand for years? Some; some does not stand for many months, in fact, not for many weeks.
4573. What section of the coal are you referring to as falling? The top band.
4574. How thick is it? About 3 ft. 10 in., or 4 feet in most places; in some places only 3 feet.
4575. Do you mean to say that the coal, without being worked, will fall of its own accord? Yes; it will.
4576. In a six-yard place? Yes.
4577. Where have you noticed that? In our mine.
4578. In what section of the mine? In different sections.
4579. I suppose your sections have local names,—can you tell us the local names of the sections? It falls in what we call the back of the shaft, and it falls in No. 2 section.
4580. Of its own accord? Yes.
- 4581.

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4581. What do you attribute it to? The freeness of the coal; it is very free and brittle in places.
4582. Would that be in particularly soft places? No. The coal is a tender coal in places.
4583. Is it anywhere near the fault? No; nowhere near it. In fact, as far as the fault is concerned, we get our strongest coal alongside the faults.
4584. Does your mine make any quantities of water? No; not extra quantities.
4585. Did you report in your last half-yearly report that the mine was giving off the usual quantity of water? About the usual quantity.
4586. What is the usual quantity? I am sure I could not say. I never bothered to make it up to see what it is. It has never been excessive, and therefore it never troubled me.
4587. When you have come to any fault, has any given quantity of water come off additional to what was being made in the mine? We do get places where we get a little more water than at other places, and when we get it at those places it usually takes off somewhere else. I do not think we are pumping many more gallons now than we did at first.
4588. Is that where you are working under the harbour? We are getting none under the harbour—to the dip—at all to speak of.
4589. Have you any idea of the thickness of the rock overhead as you are going to the dip? The rock overhead, going to the dip, I suppose, will be 220 or 230 feet.
4590. How did you arrive at that calculation? Because they have got the rock in the harbour over our head. They are blasting in the harbour at the present time.
4591. Are they boring down or sinking? The Government is blasting it out.
4592. Is that overhead where you are working? Yes, we are working there too.
4593. Do you think a six-yard pillar is sufficient to meet all exigencies there? Yes,—any quantity—in fact, it is a waste to leave six yards.
4594. *President.*] Is that under the water? Yes.
4595. *Mr. Curley.*] How many yards would you like to leave? I think it is right to leave six yards, but five would carry it quite comfortably—in fact four would carry it.
4596. Where the coal is brittle and free, like that to which you have just referred, don't you think that in order to carry a given quantity of weight you would require some large pillar of some reasonable dimensions? No; I don't think so.
4597. Would the coal being brittle and free, or solid and hard, make any difference? No; it does not seem to affect the stone overhead.
4598. I suppose you will admit that it will have to carry weight, a considerable quantity in time, as the mine gets worked? The stone will have to carry the weight.
4599. Will the stone stand of its own accord without being supported? Yes.
4600. Even if the pillars were taken out? No; if you have all the pillars out, away it will come.
4601. Then you do admit that the pillars keep the stone up? Yes; certainly.
4602. In your leading drives do you keep bores in advance for a given distance? Yes.
4603. How far? No particular distance. It sometimes just depends on the time the man is in. He bores them not less than 12 feet, and sometimes 18 feet, to save him from coming back again next shift.
4604. What is the least distance you keep them in advance? He never bores them less than 12 feet. If he has time he will bore them 16 or 18 feet to save him from coming back next shift.
4605. Does your leasehold extend at all under the cranes? No, except that there are 4 acres going out under the cranes for the connection. That is the only thing we hold under the wharf.
4606. Do you leave the requisite pillars there in the same way? No; we have only got two drives through.
4607. Does your leasehold extend much northward up the harbour from your mine? Yes; a good distance north.
4608. Are you working up that way? Yes; a little.
4609. Do you think the rock will run out there or get thinner as you go north? No; I think it holds about the same as far as any bores that have been put down are concerned.
4610. Have you had any indications of the roof breaking down going north? No, none whatever.
4611. Or in any other part of the mine? No; not in any part of the mine.
4612. If at any time there was the slightest indication of the roof coming down in any part of the mine in that way, would you encourage an immediate report being made to you of such occurrence? Certainly I would, and report it to my directors.
4613. Would you encourage a report being made at once from the workmen where any circumstance of that character occurred? If the workmen made a report I would go and see to it myself.
4614. Do you have any discussions on these matters with your officials, such as your overmen or deputies, at any time? No; because we never need to have it.
4615. You do not think it necessary to talk these matters over? No.
4616. Not in a colliery situated such as yours? No; because both he and I travel the places sufficiently often to see these things.
4617. Are you down in the mine pretty frequently? Yes.
4618. Do you propose to work out any pillars? No; in fact our lease would not allow us, therefore there is no use in our proposing it.
4619. Is there a stipulation in the lease that you are not to work the pillars? Yes.
4620. Do you ventilate your colliery by furnace or by fan? By fan.
4621. What fan is it? A Guibal fan.
4622. Is the ventilation well sustained throughout the mine at all times? Yes, at all times.
4623. Have you ever heard any complaints? No. When I say "No," I mean there are complaints sometimes, but very rarely.
4624. What do you consider a compliance with the Act of 1876 with regard to the air? There is any quantity of air so far as the 1876 Act is concerned.
4625. That is, is it either large or small? It is quite sufficient air for our mine.
4626. How do you define the Act with regard to supplying a given quantity to each miner? According to the Act we are supposed to have 100 feet sweeping along our airways for each man or boy, and 150 feet for a horse. That is the quantity according to the Act, and you have to keep it up.
4627. The minimum quantity? Yes.

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4628. Do you consider that you comply with the Act if the minimum quantity is there? Yes.
4629. The Act does not prevent you from giving more? No.
4630. Do you aim at giving more than that? Yes, I think we do, as a rule.
4631. Do you do anything to carry it into the bords with brattice or anything like that? No, not without we have a place going to the rise, and we do not see our way to putting in a cut-through.
4632. At the 35 yards? Yes. Going to the rise we may cut them a little shorter.
4633. You say you leave no top coal in the colliery? In some places we do, but in very few places.
4634. Have you ever made a computation of the ventilation circulating throughout the whole of the mine, to ascertain how far you are exceeding the minimum quantity stipulated in the Act? Yes, we do at times—in fact, we are always above it as far as that is concerned. So far as I am aware, I do not think we have ever been below it.
4635. You say that you do not conduct it into the bords by brattice or anything? No.
4636. Is it not possible that you may have a fair quantity of air on the heading, and that the man in a bord who is pretty well up his 35 yards may have very defective ventilation? No; I have never found it so.
4637. Do the miners use powder for blasting in your mine? Yes.
4638. Cannot they get the coal without it? Yes, they could if they would do a little more work; they use too much powder.
4639. Do you think practical men like to waste powder? There are some practical men who do not, but others do.
4640. Is that not the exception;—would you say that, as a rule, men use far more powder than is required? They do, as a rule.
4641. Do you think practical men, after years of experience, would not know how to gauge the powder? A great number of them use the powder on purpose to save a little labour.
4642. Have you any regulated distance that they have to hole before a shot is fired? No, we have not. All we do is to make them hole it, but no certain distance, and cut one side if possible. We make them hole it a fair distance. We have no certain distance fixed.
4643. There must be some understanding? The understanding is that they are to go about 3 feet. Some places we do not get the facing, but most places we do.
4644. Is that fairly well carried out in the colliery? In most cases it is.
4645. You go round the colliery pretty frequently, and I suppose you have full opportunities of judging of this matter? Yes; but they sometimes watch us.
4646. I suppose you watch them? Yes.
4647. Do you know the provisions in the proposed Bill for increasing the minimum quantity of ventilation? Yes; I have gone through the new Bill.
4648. What do you think of the provisions? It depends upon which provisions you refer to. We can hardly tell how the Bill is now.
4649. Will you look at section 47, rule 1, page 23 (*see Appendix A*)? Yes; the way the Bill is sought to be passed now it says, "an adequate amount of ventilation."
4650. Are there not two opinions on the matter? Yes, there are at present.
4651. One opinion is that there should be an adequate amount, and the other that there should be 150 cubic feet as a minimum? Yes.
4652. Which would not prevent you from providing more? No.
4653. It also stipulates that the cut-through shall not be more than 25 yards before the current of air? Yes.
4654. Do you approve of that? No; I think 35 yards is quite near enough.
4655. Seeing that you do not put brattice into those places, do you not think that the 25 yards would be a considerable improvement—it would be 10 yards less? Yes; but the miner suffers nothing at 35 yards, except it is a rise place.
4656. Then you do admit that in a rise place he is suffering? We generally put them a little closer in a rise place.
4657. You put the cut-through over a little sooner? Yes.
4658. If you did not, what would be the result? I do not know that there would be a great deal of difference, but we do it for convenience sake for the men and for ourselves as well.
4659. Are you opposed to putting brattice in the place at all to give better ventilation? Yes; I am opposed to it because it is money thrown away where there is no gas.
4660. Do you think men want ventilation in mines even where there is no gas? Yes; they are getting sufficient ventilation at the present time in the mines, and we have got men there who are as healthy as any men going, and they work in the mines to quite as big an age as any other class of men.
4661. How far is your mine in underground at present? Fully a mile in some places.
4662. You still intend to go further, I suppose? Yes; we have no intention of stopping.
4663. What is your objection to bratticing? The expense.
4664. Could you not utilise some of the refuse in the mine? If we do, it is expensive.
4665. Have the men to stack a good deal of this refuse behind them? With us they have not.
4666. Have they not to throw it behind them in the gob? No; very little.
4667. Would that be where there is no jerry to work? We have very little jerry in any part of our mine now. We have morgan, but that we work with our shift men.
4668. What would be the extent of the additional cost in the event of your being willing to conduct the air with brattice? That depends upon what seam of coal it is. Our seam differs from others. There would be a wide difference in the expense.
4669. Take your seam, for instance? Take it all through, I suppose it runs 2d. a ton.
4670. Is your seam a very thick seam? Yes.
4671. How thick? In some places, taking stone and coal in all, we work about 25 feet.
4672. How much refuse would you have in that thickness? Ten or 11 feet of refuse.
4673. Do you work that? Yes.
4674. Where you have it that thick? Yes; most of the places we do.
4675. Do you not think 2d. a ton is an excessive estimate? No; because the brattice cloth that we got out here lasts no time.
4676. Not even in the dry workings? Not even in the dry workings.

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4677. How long? I could not say. I don't think above three or four months.
4678. Do you think it would last as many years? It won't with us.
4679. Have you tried it to any extent? No; just in a few places.
4680. I presume that even in the case of requiring to brattice it would not ruin the Company in any shape or form if it was put to that cost? If the Company was put to that cost it would simply amount to this—that as far as they are concerned at the present time they could not suffer it.
4681. Why? Because they are not getting sufficient returns for the coal.
4682. Whose fault is that? That I do not know anything about.
4683. Is that not owing to internal competition amongst the proprietors themselves? I could not say.
4684. Do you think it is? No; I don't think it is as far as that is concerned. I suppose it is because we have more coal than we have a demand for, and other places competing with us.
4685. What other places are competing with you? We have the Southern collieries competing with us. Japan is competing with us, and Victoria is competing with us.
4686. What have been your worst competition periods during the last two or three years? About the present time, except we go back a great many years ago. There was one time before when it was very bad.
4687. What has your colliery done in the last three years in the way of profit making? That I could not say.
4688. Don't you know? No, I don't.
4689. Are you a shareholder in the colliery? I am.
4690. Do you mean to say that you know nothing about that? I don't know exactly what we made.
4691. Do you get a balance sheet? Yes; I got one from the Newcastle company, but I have not looked at it.
4692. Is that your last half-yearly balance sheet? [*Balance sheet handed witness.*] No; this is not the last half-year.
4693. What date is it? This is December, 1894. We have had one since that.
4694. What does the balance sheet of 1894 show;—what was your reserve at that time? As far as reserves are concerned they are generally a matter of figures.
4695. Have you paid off a liability of £30,000 during the last three years? Not that I am aware of.
4696. Was any dividend paid to you last half year at all? I believe there was something paid; what it was I could not say.
4697. Have you not drawn it? Yes; it was banked by me as far as that is concerned. I believe it was drawn almost before it was banked.
4698. You got a balance sheet, I presume? Yes; I have got a balance sheet in the office.
4699. Have you looked at it? No, I have not gone through it.
4700. *President.*] Are you a shareholder yourself? Yes.
4701. *Mr. Curley.*] If you can make profits in competition periods such as you are passing through now, would a matter of bratticing hamper you? Yes, it would; in fact, every farthing you put on the coal hampers us, especially when it is of no service.
4702. *President.*] What do you mean by "no service"? For no service in this way: The air at the present time, according to our present Act, is good and clear enough. I know that the air in our bords at the present is better than it is in one half of the warehouses in Sydney.
4703. *Mr. Curley.*] You have admitted already that when a bord is going to the rise, you occasionally put brattice there to carry the air up? Yes, certainly we comply with these things without being forced to do so.
4704. You may do so, but if you were not to do so, would you still consider that you were within the meaning of the Act if you were not to put the brattice there? We don't go by the Act altogether; we generally use a little consideration.
4705. Could you do so? We could do so. We could go 35 yards according to the Act.
4706. Is it not possible for a manager to sail on the minimum quantity? I don't think there are many managers who do it.
4707. Do you believe that ventilation is one of the chief features to be regarded in connection with mining? Yes, and we give it too.
4708. *President.*] That is to say, you always have more than the minimum? Yes, except in very rare cases, and at rare times when we may not be exactly up to it. That will sometimes occur in the best regulated mines you can get.
4709. *Mr. Curley.*] What did you say the size of your fan was? 30 ft. x 10 ft.
4710. What number of revolutions does it travel at? From 40 to 45.
4711. When does your fan-man go to work? Five o'clock in the morning.
4712. When does he cease work? Ten at night.
4713. Have you only the one fan-man? Two.
4714. Is there a night fan-man as well? Part night and part day. There are two of them for that time.
4715. Are they there from 5 o'clock in the morning till 10 at night? Yes.
4716. Do the two fanmen work this period of time between them? Yes.
4717. Have you men working in the mine occasionally during the night? Two or three water-bailers.
4718. No miners? No.
4719. Have you never any men working at any driving—special places? No; they are done at that time.
4720. What time do the miners go to work in the morning? Six o'clock.
4721. Have you two shifts of men? Yes, a front and a back shift.
4722. What hours do you work the miners and the pit? The front shift goes down at 6, and leaves off at half-past 1, and the back shift goes down at 8, and leaves off at 4.
4723. Can the men come out of the pit when they please? No. If they want to come out when they please, we can draw them up the air shaft.
4724. Do they do it? No; they wont go.
4725. Do you know the provision with regard to the regulation of hours in the proposed Bill? Yes; that is eight hours, and twenty minutes out of that for food.
4726. Do you approve of that? I don't. I don't think that there should be an Act at all to say what time a man shall work. A man's labour is his capital.
4727. May he not be compelled under certain conditions to work longer occasionally? I do not think he would be compelled at any time.

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4728. Not by a manager even? It is very seldom a manager can compel them if they don't wish to work.
4729. Do you know of any requests that have been made by managers to men to work longer time—an hour or two longer in the day? No.
4730. You don't know of any? No; not to work an hour or two longer.
4731. Would you be surprised to know that it has been done? Yes, I would.
4732. Do you think it should be done? Yes; I think we have a right to do so if we require the coal.
4733. You think you have a right to ask the men to work as long as you please? To work a fair number of hours.
4734. You said just now that a man's labour was his capital? I say so still. I think a man should not be restricted by Act of Parliament.
4735. He should be permitted to work as long as he likes? Yes.
4736. On the other hand may he not be compelled to work against his will under certain conditions? No; I don't think it. You might just as well limit a man with his capital, and say that if he had a few thousand pounds he must only speculate a portion of it, and keep the rest of it idle. It is just the same with a man's labour.
4737. Do you know that when conditions change at one mine as against another mine these conditions make a reason why the same conditions should prevail at the other colliery? They do not give us much reason to change.
4738. Do you know that it is very often quoted by the colliery managers themselves, that because something is done at another colliery that is a reason why something should be done at theirs as well? Yes; but it is not often that we get these chances.
4739. Don't you think it would settle a very much vexed question if the matter was legislated for? I do not. I believe in every man having his own free will to do with his labour as he chooses. Why should we have eight hours in a Coal-mines Bill more than for any other class of work.
4740. Do you think coal-mining is superior work to other classes of work? I do not think it is superior, and I do not think it is inferior—the majority of it.
4741. You do not consider it is a precarious calling do you? It is not if care is taken. It is like every other calling. You can go to any trade you like, and there is danger in it if you do not look out for it. It is the same in coal-mining.
4742. Is it not regarded as a precarious occupation? Yes; but there is a great deal more danger made out of it than there is in it.
4743. Have you worked as a coal-miner? I have not. I have worked at every other position in the mine except at the coal, but I have seen plenty of work.
4744. You are not speaking then of your own personal experience? No; but I can tell when a man is working the coal.
4745. Do you think if there was no provision in the Bill with regard to the hours the managers would impose conditions against the will of the men with regard to the length of the hours? As far as the manager imposing conditions is concerned they have never had the chance to impose very much on the men.
4746. What do you mean by that statement? The men keep them ground tight enough to the wall without anything else.
4747. Do you mean to say that the men take any undue advantage in any way? They have always done so.
4748. In what particular respect? In all respects.
4749. Can you point to any instances? There are plenty without pointing to them. The Newcastle district speaks for itself.
4750. In what respect? You are as well aware as I am that at all times if the men thought a colliery was in difficulties they would impose whatever they thought fit on the company.
4751. Have they done that with regard to your colliery? They did not get much chance to do it with regard to us. They did at one time. They kept us pretty well to the grindstone at one time.
4752. You have not given a direct instance yet, although I have asked you several times;—have you not kept them to the grindstone just as well? No; we have acted very fairly and reasonably with them all through.
4753. Have they not done the same with regard to you? They have lately.
4754. Has it not been a matter of mutuality? Yes, lately; I will say that.
4755. How is the weighing conducted at your colliery? At the bottom of the screen.
4756. Do you pay on an average weight? Yes.
4757. Have you a standard weight? Yes.
4758. What is the standard? 12 cwt.
4759. Have the men objected to that sometimes? Yes; some years ago.
4760. Do you think their objection was reasonable? No, I don't.
4761. Is that a condition of things that you impose? Yes; standard weight.
4762. You insist on that? Yes.
4763. Why do you fix a standard weight? For many reasons; because by fixing a standard weight we know what our hauling and lifting are. If we have no standard weight, we do not know what they really fill. We have all our machinery ordered in proportion—ropes and everything else.
4764. If the men were to fill their skips level and full to the wood of the skip, would you be satisfied? Yes; they have been repeatedly told to do it.
4765. Is there any gauge that you allow them to fill over the top of the skip? No; we do not fix them to any gauge.
4766. You know that is done, I suppose? At some collieries it is.
4767. Is it done in your colliery? No; we have no gauge.
4768. How high are your skips filled above the wood of the skip? You may say about 6 inches is an average.
4769. Do you think that is a fairly reasonable distance to fill above the wood? Yes.
4770. Is there much fear of the coal falling off the skip? No; not if it is properly packed, but it does even fall off at that height.
4771. Seeing that the men fill in that way, don't you think they are entitled to all the weight they do fill? No, I don't; because in some places the coal is that easy to be got that they could fill higher.

4772. What quantity of weight do you gain by a process of that kind beyond what you pay the miner? A. Mathieson; Esq.
That I could not say; I don't think we gain any.
4773. Don't you gain the excess that is filled beyond that in any case? There is very little excess filled with us. 1 Oct., 1895.
4774. But is there not some? Very rarely now.
4775. Is there any? Some times a skip may go above 12 cwt., but there are not many now that do, and there have not been for years.
4776. You mean to say that you know nothing about this excess weight? No; I never make up my weight as far as that is concerned—in fact, I don't know what our shipping weight is.
4777. Do you know the number of tons you handle in a given time—a quarter or a half a year—from the colliery? Yes; the miners' tonnage.
4778. The quantity of tonnage paid to the miners? Yes.
4779. You say you do not know the quantity of shipping tonnage? No, I don't.
4780. Does your shipping manager ever intimate to you that he wants a given quantity of tonnage? No.
4781. Or ask you if you can load a vessel of a stipulated size, and whether he can have so many waggons of round coal? Oh, yes, as far as that is concerned.
4782. You know nothing in that particular respect? No, I don't.
4783. Do you never get the shipping tonnage for the satisfaction of knowing whether you are gaining or losing in weight—and making comparison of what goes away? No, I never do. They sometimes grumble at my items losing.
4784. Do you know for a fact that you are paying for less than you are sending away? I am very confident we are not.
4785. Do you weigh every waggon? No.
4786. Is every waggon weighed that goes away? The Government weighs them, we do not.
4787. You insist on every waggon being weighed? Yes; the Government get their weight.
4788. Is your weighman kept at the bridge all day? Yes.
4789. How many skips in the day do you weigh? I think he gets through about sixty.
4790. Do you employ many miners? Yes, we have got about 265 or 270.
4791. Are the men's places inspected previous to their starting work in the morning? Yes.
4792. Has that to be done according to your instructions? Yes, we have a man for that purpose.
4793. *President.*] With regard to that quantity of air. Is there such a great difference between 100 feet and 150 feet. Even under the present Act there has to be an adequate amount of ventilation with a minimum of 100 feet. Surely the collieries must now be in a position, in case 100 feet is not sufficient to give 150 feet? 150 is one half more; there are plenty of places where they are not in a position to give the 150 feet I am confident.
4794. Is 100 feet enough for the men? Yes, quite sufficient if it is conducted round the mine.
4795. Would you have it conducted into the working places? Not into the bords.
4796. Why not? It would be too expensive.
4797. Might not men be working in these places and nearly smothered for want of air? There is not the slightest fear of that.
4798. Don't these men work in the bords with hardly anything on? Yes.
4799. And they are perspiring very freely are they not? Some of them—very few; not so much as a man in a warehouse as a rule.
4800. Do you say you would not have the air conducted into the bords? No more than at present.
4801. How much is that? According to the Act 35 yards.
4802. Do you say that for 35 yards the men should not have air conducted into the place at all? There is quite sufficient air in the place then. The air is quite good enough in the place without it is a place going very much to the rise; certainly the air is a little foul then. At the present time we put our cut-throughs a little closer in these places.
4803. How close do you put them? We have got some as close as 30 yards. There may be some closer than that, but in a place going to the level or going to the dip 35 yards is close enough.
4804. *Mr. Curley.*] Do the inspectors occasionally draw your attention to matters in the mine? They have had no occasion to do so, I think, for a long time.
4805. Have they ever done so? I think they did shortly after I took charge.
4806. Do you appreciate a matter of that kind when they draw your attention to it? Yes; or even if the men were to draw my attention to it.
4807. You do not resent it as anything like undue interference? No; I do not. I thank the inspectors or the men if they have anything to say. I am only too pleased to know about it.
4808. Who is the inspector that visits your colliery? Inspector Humble, and Inspector Dixon occasionally.
4809. Do you look upon them as efficient officers? I do.
4810. *President.*] Do you say that a man can do his work properly 35 yards before the air? Yes.
4811. Is the air not conducted into the working place at all? No.
4812. You do not think it should be? No.
4813. Except, I suppose, in case of gas? Except in case of gas; you are bound to do it then.
4814. I suppose some men might prefer to have gas so that they would get better air? No; I think they get very fair air in these mines. It is very seldom we hear the men grumble about the air.
4815. They do grumble sometimes, I suppose? Oh, yes.
4816. I suppose they will stand a great deal before they will grumble? Not as a rule; if they find the air slack or anything like that they will soon direct our attention to it.
4817. When they grumble what do you do? We see to it, and force a little more air round in that district.
4818. How do you force it round? By taking it off from the other districts with our regulators. Perhaps in some districts we have got too much air going round, and we regulate it by our regulators.
4819. When they complain of want of air in a bord for instance? If it is going round the headings and cut-throughs, you will never hear them grumble in the bord, or very rarely.
4820. Very rarely you hear them grumble? Yes.
4821. When they do grumble, do you do anything in the way of sending the air in? If there is not sufficient air we, perhaps, close our regulator a little bit on the one side and open it on the other. That will cause more air to go round the district.

- A. Mathieson, Esq.
1 Oct., 1895.
4822. You do not send it into the bord by any means? No; sometimes we put a brattice across the heading.
4823. If the air is not going into the bord, do you put brattice in? Yes, we put brattice across the heading to drive it up the bord to come down through the cut-through. They have merely to turn it to put it down the cut-throughs. That is done in every colliery at the present time. We either put brattice up or put a door in. We do that at the present time; but to take a brattice down the bord is a different thing altogether. According to this Bill every bord would need brattice down it. The Bill says:—"Brattice within 15 yards of the face."
4824. What is the meaning of "single headings"? We have to brattice single headings.
4825. Would there be no cut-through in a single heading? No. We have to brattice them.
4826. As a matter of fact in single headings don't you have to brattice? Yes.
4827. Why does the Bill say any more than you do? The Act refers to bratticing down the bords.
4828. The Bill says, "In single headings, or where gas is known to be generated, it shall be bratticed up within three yards of the face of such working place,"—is a working place the same as a working face? We call them all working places as far as we are concerned.
4829. Do you say that if the air is conducted into the bords in some other way, either by brattice before the cut-throughs, or in any mode you like, that there would be any material extra expense in giving air into these bords so that the men may have a proper atmosphere to work in? To carry it according to the provisions of this Bill would cost us nearly 2d. per ton extra.
4830. What is that for? For bratticing up.
4831. Is that the cost of the material and the labour? Yes, the material and the labour.
4832. What do you get a ton now? Seven shillings and sixpence, I think.
4833. You would get 7s. 4d. instead of 7s. 6d.? Yes. It would take 2d. per ton off it.
4834. You say there is no close, bad air in these places? No.
4835. You say you would let them have 100 feet? Yes; I have no objection myself—in fact I see no objection to that Act.
4836. That air only comes along the air-way, not into the working place? We are never supposed to take it into the working place.
4837. You are not bound, you say, to take it into the working place? No.
4838. No matter how bad it may be? No.
4839. No matter how bad it may be the Act does not compel you? No, it does not.
4840. Supposing a manager is neglectful of the health of his men, don't you think that the Act ought to compel him to give more air if he does not give them sufficient? If they compel him according to the old Act to carry 100 feet of air round they will all get sufficient.
4841. The miners say not? Only a few of the miners say that.
4842. *Mr. Gregson.*] Please read through clause 21, sub-clause 5, p. 8 of the Bill, and state whether you are in favor of a provision giving the Inspector power to withdraw the men from the mine (*see Appendix A*)? No, I am not, as far as I am concerned.
4843. Under any circumstances? Not under any circumstances.
4844. Suppose imminent danger exists? If there is imminent danger I think the manager should have a say in it.
4845. I asked you whether you favor a provision in the Bill enabling an inspector to withdraw the men under any circumstances? No; it is giving him too much power.
4846. Supposing that an inspector in making his visit to the mine saw that the men were in imminent danger what is your opinion as to the course that he would take at the present time? There is no doubt that at the present time if he saw there was danger to two or three only he might tell them to come out for a few minutes till he sent word to the manager, if the manager was not with him.
4847. That of course you would look upon as a fair exercise of his judgment? Yes, as a caution.
4848. It is not that he would have the power to do it, but that it would be reasonable? Yes.
4849. Seeing the position the men were in he would give them a caution? Yes.
4850. Does the Inspector ever give you notice when he is coming? No.
4851. Does he often come without your knowledge? Yes. We never know when he is going to hop in on us.
4852. I presume he generally finds some one in charge of the mine? Yes.
4853. If you are not there, is the overman there? Yes.
4854. If the overman was not there, or the deputy, would he not come against somebody in charge of the place? Yes.
4855. Supposing that he had seen a place where imminent danger existed, would he not under those circumstances say to the official, "My opinion of that place is that you had better have the men out of it?" Yes.
4856. That is the course you think he would adopt now? Yes; that is what he does now.
4857. Under those circumstances, would the official of the mine take immediate action do you think? Yes; I think he would. Certainly, as far as we are concerned, we have never had occasion to do it, but that is what he would do.
4858. *President.*] Supposing there was imminent danger, and the manager did not take the men out? In that case the manager renders himself liable to the Act. He would be liable to be punished if he lost any men through his action. He would be taken up for manslaughter.
4859. *Mr. Gregson.*] Would he be taking a great responsibility? Yes.
4860. A greater responsibility than most managers would accept? Yes.
4861. No matter what the urgency was? Yes.
4862. From your knowledge of the inspectors, are they men whose advice and counsel you are willing to accept? Yes.
4863. Are you glad to accept advice and counsel at all times? Yes.
4864. If you had a doubt about any particular workings or any question was being debated, and the inspector was there, would you put the question to him, "What is your opinion in reference to so-and-so"? Yes; I would as far as I am concerned.
4865. Would you be glad to have his advice? Yes.
4866. Is it your opinion from what you know of the general conduct of affairs, that managers, as a rule, try to do what they know the inspectors would require or wish them to do? No; I don't think so.
4867. You don't think that the managers, as a rule, try to do what they know the inspector wishes them to do? I think, as a rule, they generally do everything that the inspector wishes them to do in reason.
- 4868.

4868. Supposing they know the inspector would like a certain thing done, would they not put themselves out of the way to do it? I don't think there is one man in the Newcastle district that would do so.
4869. That would refuse to do it you mean? That would refuse to do it.
4870. Supposing that the manager knows that the inspector would like a certain thing done, is it not your opinion that the manager would try to do it? If he thought it was requisite he would. If he thought it was not requisite I don't think he would do it.
4871. Not even if the inspector wished it done? No; not if he thought it was not requisite.
4872. You don't think that the manager attaches any value to having the inspector's confidence? If there was any danger he would.
4873. But in a general way—apart from danger? As far as I am concerned I have never had to require it, therefore I cannot say.
4874. Between yourself and the inspectors there is a feeling of confidence, I suppose? Yes.
4875. You believe he has confidence in you? Yes.
4876. And you know that, from his knowledge and ability, he is a man in whom you can place confidence? Yes; as far as I am individually concerned; I put every confidence in our present inspector.
4877. And notwithstanding that, you think that the sub-section to which I have drawn your attention should not be in any Act of Parliament? No; it is giving inspectors too much power.
4878. *President.*] You say it is giving inspectors too much power? Yes.
4879. If the clause merely allowed them to withdraw the men in cases of imminent and immediate danger, with power to send to the Minister at once, and see whether a continued withdrawal should exist, which should be determined by arbitration, would that be too much power? That would be too much power, because the mine would be at a standstill during that time, therefore I think that if the inspector sees imminent danger, he should call in the manager, or the next in authority, and consult with him.
4880. I take it that before he withdrew the men he would consult with the manager;—I suppose you have confidence in the inspectors? Yes.
4881. Assuming you have an inspector who knows his business, do you think that, unless there was imminent danger, he or any other inspector—no matter who he was—would dare to withdraw the men, because it is a very serious step to take? It is a very serious step, but one man's opinion might lead him to think there was imminent danger, yet if he called a second man in he might be able to show him that there was not.
4882. Why should you suppose that the inspector would exercise this power improperly any more than that the manager would behave improperly? I do not think either of them would behave improperly; but you must bear in mind what some inspectors may do, and especially if they are at variance with the manager.
4883. Are they ever at variance with the manager? Not that I am aware of, but you sometimes do get arbitrary men in.
4884. Suppose there is a manager who is more anxious about the profits of his mine than the lives of the men under him, do you think it would be a good power to give him;—don't you think he might be very unwilling to withdraw the men? I don't think so.
4885. Might he not minimise the amount of danger in his mind in certain cases? As far as that is concerned I do not see that it should be left to any one man to withdraw men out of the mine.
4886. But it is left to one man if it is left to the manager to withdraw them in case of danger? The manager is better able to judge than the inspector because he is continually there, but the inspector coming in haphazard, and a little trouble being on, he might think there was more danger than there really was.
4887. Surely he would make inquiry and find out whether it was a case of imminent danger? He might not. Some men are more timid than others.
4888. If he was a capable man he would? Yes.
4889. You would not mind the power being put in the hands of a capable man? I do not believe in putting it in the hands of any one man. I don't think one man should be allowed to withdraw men out of a mine.
4890. *Mr. Curley.*] Do you know of any case where men have lost their lives in consequence of not having been withdrawn in time? No; I cannot say that I do.
4891. Do you know of a case in the Northern district? No; I cannot say that I do.
4892. Do you know anything about the Hamilton Pit disaster? Yes.
4893. Do you know that there were men who left the mine that morning of their own accord and came out? Yes; I believe they did.
4894. Do you recollect that in that case a number of men lost their lives? Yes; it was an exceptional case.
4895. Do you recollect, too, that the night previous to the Bulli explosion there was a small explosion in the mine? No; I could not say that I do.
4896. In case of imminent danger presenting itself to an inspector don't you think that he should exercise his judgment with regard to the safety of the workmen in the mine? I do not think it should be left with the inspector.
4897. Why not? Because, as I said before, he is very seldom there, and if there is any danger the manager would know it far better than he would know it.
4898. Then I understand you to say that you would not leave it to one man? No; but certainly the manager can take it on himself, and would take it on himself, because he has the whole charge of the mine, and has the responsibility of the men. Even in the Northern district I have worked myself where a place was working, and we have kept the miners out, and we have worked till she has come in and had just time to get away.
4899. Anyway, you do not consider it is a power the inspector should have? No; I do not.
4900. Don't you think it would be a provision which would be the means of providing for greater safety if the inspectors had this power? I don't think so.
4901. *President.*] Do you suppose it would be ever exercised corruptly? You cannot tell. It might be. It depends on the class of men you have to deal with.
4902. *Mr. Curley.*] The inspectors have no interest in mines, have they? I believe not.
4903. Have you any proprietary interest in other collieries than Hotton? A little interest in Newcastle.

[Witness withdrew.]

James

A. Mathieson,
Esq.
1 Oct., 1895.

James Fletcher sworn and examined :—

- J. Fletcher,
Esq.
1 Oct., 1895.
4904. *President.*] What are you, Mr. Fletcher? A mining manager.
4905. At what mine? The Wickham and Bullock Island Colliery.
4906. *Mr. Curley.*] How long have you been manager there? About nine years in November, I believe.
4907. What is your system of working? Bord and pillar.
4908. What is the width of your bords? Six-yard bords.
4909. What is the width of the pillars? Six-yard pillars.
4910. *President.*] Are you working under the water at all? Yes; the whole of the present workings of the colliery are under water.
4911. *Mr. Curley.*] What is the depth of your shafts? The winding shaft is about 215 feet, and the air-shaft is about 263 feet—that is, on to the coal-head.
4912. Are your main workings going towards the north or coming south? We have worked towards the north and south-east, and both east and west.
4913. Do you work under Throsby's Creek? Yes.
4914. Do any of your workings go under the harbour? No; we have no workings underneath the harbour.
4915. Do they go underneath the basin? Yes.
4916. The basin at Carrington? Yes.
4917. Does your colliery make much water? Very little water.
4918. Are you aware that you have a very limited quantity of rock in that down-cast shaft? I consider we have a very good cover of rock. We have somewhere about 50 feet of rock there.
4919. In the down-cast shaft? Yes, I think so.
4920. Are you sure? I do not think it will be much under 50 feet. We have more than that in the air-shaft any way.
4921. Have you seen the report of the inspection that was made at your colliery by Mr. Turnbull and myself in connection with the last Commission (*see Appendix Q*)? No; I have not seen that before. I think that would be before my time.
4922. Have you not read that before? No, I have not read that before. I have read some of it. I have always been under the impression that there was a greater thickness of rock than that. You would not be able to get the top of the rock for the cylinders. I was not there at the sinking of that shaft.
4923. Taking your up-cast shaft and your down-cast shaft, do you think that the indications are that the rock is thinning out as you go north? Yes; but we have put down two bore-holes at the north end of the island, which have proved that we have a very hard conglomerate and sandstone in that direction.
4924. How far is that pit away from your down-cast shaft? I should think a mile or over from our down-cast shaft northwards. In the air shaft the rock is much thicker. We have also a greater thickness of clay in the air shaft.
4925. What is the quantity of rock in that bore that you put down? I think there is about 90 feet of hard conglomerate and sandstone in the bore we put down—in fact, we put two bores down.
4926. Can you indicate on this plan where you put the bores down? [*Witness marks the location of the bores Nos. 1 and 2 on the plan. See Appendix X.*]
4927. What did you say was the thickness of the rock there? About 90 feet.
4928. What other deposits did you pass through? Sand was the first, and then we passed through some clay and gravel.
4929. Who put these bores down for you? Mr. Harper had the contract, and Mr. Allan Wild had the diamond drill there to do the boring.
4930. What year was that in? It was during 1888; I know it was during the strike.
4931. Have you any leading-places going northward at present? At present we are not driving.
4932. Not northward? No. We have sufficient work opened out to last a time, so that we have discontinued driving any further. We were not making much water in that direction when we were driving north, considering it is a maiden cross-cut.
4933. Have any of the places going northward at any time broken down in the roof when you were driving? Only when we took the full height of the seam out, and then the fall was only a kind of shale. You can walk over the falls in any of the bords with safety—in fact, in all parts of the pit. They merely arch themselves, and I consider it has made a splendid roof. It has never gone through any of that rock. It is a kind of shale mixed with coal bands. Above what we call band coal there is a seam mixed with refuse that is not workable.
4934. Would those falls take place in a 6-yard bord? They have done so sometimes.
4935. What height did the fall go up to? I suppose 4 or 5 feet above the top of the seam in the north workings, and down in the dip side much about the same.
4936. Did any sand or gravel ever come down when you had a fall like that? No; not in any place I have seen.
4937. In none of your headings, or bords, or cross-cuts? I never saw any falls in the headings or cross-cuts.
4938. Do you keep any bore-holes in advance of you in the leading places? We have done so in the northward direction, but we have not done any work there for a long time in driving cut-throughs. I have cut several places up through the morgan and through the seam. I have put a bore up to see what kind of roof there was there for my own private information.
4939. I mean in the coal straight ahead? Yes; we have had bore-holes in it.
4940. Do you keep them going in? No; we have no winning places now.
4941. With regard to the dip workings—have you anything of that kind there? No; not since we got into the basin. We did before we commenced to go into the basin.
4942. Have you any leading places going there at present, or are they standing? No; we have driven down to this boundary A [*indicating*]. Of course, we have driven a heading along to this boundary B [*indicating*], and the same up to that C [*indicating*]. We are driving below that again to work these bords, D and E, up the bank. It is not necessary there now. [*See Appendix X.*]
4943. Then you have kept the bores ahead of you? We never kept any bores ahead of us in the basin, but we did in going down towards the Bullock Island bridge.
4944. Have you got to your boundary down that way yet? Down to the bridge—yes. Of course when
we

we get out to the boundary we have two more sections of the seam to work. We work the big tops second up to the boundary.

J. Fletcher,
Esq.

4945. Do you propose to work the whole of the coal, both big top and top band, right through to the roof? Yes; we do that now.

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4946. Do you intend to do that right through the mine? Yes.

4947. No matter in what direction you are going? Yes. From these bords and our air shaft, and the winding shaft, we have pretty well tested the whole of the royalty, and I do not see where there is any danger, considering the roof we have, and leaving a 6-yard pillar.

4948. Do you recollect the creep that took place at Linwood some time ago? Yes.

4949. Was that part of your estate? We leased it to Walker, and then he formed it into a company. The creep was here, F [indicating on plan. See Appendix X].

4950. Was your mine not holed to that in any way? Yes; we had a connection, but we now have two brick and cement dams put in.

4951. That creep took place in what is known as the Linwood, didn't it? Yes.

4952. That you leased to the Linwood Colliery? Yes.

4953. Will you mark where the Linwood Colliery was? I think it was down here somewhere, G. [Witness marks location on plan. See Appendix X].

4954. Where do you say the connection was between Linwood Colliery and your colliery? There was a drive from the Linwood pit down by the railway siding to our colliery.

4955. Where have you put those dams in those drives? The dams are put here somewhere, H. [Witness marks location on plan. See Appendix X.]

4956. Have you an accurate plan of the workings of Linwood? No; we have not.

4957. Will your workings approach those workings later on? No; we won't come near them. We have done all we intend to do in that direction, but we have not gone anywhere near them.

4958. Is it possible that mine might accumulate a lot of water? I don't think it will. I think the water percolates through the bottom now from the workings along this part, I. [Indicating. See Appendix X.] I believe if the dams were taken out it would be perfectly dry behind. I have had the Government Inspector up there several times, and we have looked at it, and that is my opinion.

4959. Do you think that the system you are now pursuing under these waters is perfectly safe? Yes; I do.

4960. Have you carried out that system ever since you went to the colliery? Yes.

4961. Was it in vogue when you got there? Yes; 6-yard bords and 6-yard pillars.

4962. Do you intend to work the pillars out at all? The Government lease won't allow us.

4963. Is it a condition in the lease? Yes; I think so.

4964. Are you sure of it? If we attempt to work the pillars they can cancel the lease at once.

4965. *President.*] It is one of the conditions of the lease that you shall leave them? Yes; I think so.

4966. *Mr. Curley.*] Have you seen the lease yourself? No.

4967. You have not seen these conditions? I have not seen whether we are allowed to work the pillars, but I am certain the Government would not allow us to do so. The present inspectors have written that if we attempted to widen the bords out from 6 yards they would cancel the lease. Of course we have never attempted to do it.

4968. What is your system of ventilation;—have you a fan or a furnace? A fan.

4969. How is your mine ventilated;—is the ventilation kept up to the Act? Yes; we have no complaints from any of the inspectors. We have sufficient ventilation.

4970. Have you any difficulties with the ventilation in certain sections of your mine? Our northern workings are the most difficult to ventilate, because the air has further to travel; still we have sufficient ventilation.

4971. What do you call sufficient? We have more than what the Act states we ought to have.

4972. How do you read the Act? That every man, boy, and horse shall have 100 cubic feet of air per minute.

4973. You think that if every man, boy, and horse gets that quantity of air the Act is fully complied with? Yes.

4974. Does not it say that that is to be the minimum quantity? Yes, of course it does.

4975. If you provide the minimum quantity you consider the Act is complied with? We never do that; we generally give them more.

4976. Is that how you read the Act? We have not had any check-inspectors in our colliery for about two years. We have had no complaints from the inspectors of the ventilation being deficient.

4977. Do you care very much about the men's inspectors exercising their duties? I don't know what you mean.

4978. Do you like to see them exercise their office? It never makes any difference to me what they do; I always afford them every assistance when they are busy—in fact, I always send the overman or the deputy belonging to each district to go round with them, because, as you know, a check inspector does not know the way round the workings. I may say that sometimes men are appointed as check inspectors who never should be check inspectors. I suppose they are appointed simply because they have plenty of tongue when they are at the meetings.

4979. Do you like a man to be dumb? I do not like a man to be dumb. I would not like to be dumb myself. My meaning is that sometimes men go to the meetings and make a noise about ventilation who do not know when a place is properly ventilated.

4980. Those are matters of opinion, I presume? Whether it is an opinion or not, it is a fact.

4981. You have your view of the matter? Yes.

4982. And I presume the men have their view of the matter? Yes. A man who has been working in a pit for twelve or eighteen months has not had sufficient experience.

4983. *President.*] Do you mean that men without sufficient capacity obtain appointments by making themselves prominent? Yes. I like to see a man who is appointed to that position know something about a place being safe.

4984. You mean to say he may get appointed and yet know nothing about it? Yes.

4985. Because he makes himself either popular or prominent? Yes.

4986. *Mr. Curley.*] Do you think men have a right to education;—there must be a beginning somewhere? I did not get my education in mining in eighteen months. I do not call a man working on the face

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face a practical miner. Only a man who knows how to do different work is a practical miner. If you bring a man back from the face and ask him to do other work outside of getting coal he is unable to do it. You will find hundreds of men in the north of England where they are not supposed to set their own timber—the deputy does it—and when they come back to set a prop they cannot do it.

4987. Do you know of hundreds and thousands of men in England who can set props? It all depends on whether they were brought up as miners. In Staffordshire the men have to set their own timber.

4988. In the north of England don't they set their props? They are not supposed to set them. The deputy does it.

4989. Are they not supposed to set an occasional prop if there is danger? I suppose they do.

4990. Don't you know they do? I never saw them do it. I have been underground manager in the north of England, and when I would be going round the men would complain that the deputy had not been in to set the props.

4991. Don't you think a man would set his prop if the deputy had not been round? I don't.

4992. Do you think he would exercise fair judgment? I don't know that he would.

4993. Don't you think a man learns in a mine after a certain time? Certainly; but he does not learn to be a timberer, and to travel round old places where he has been getting coal all his life, and know they are safe to pass in.

4994. Don't you think your opinions are an indication that you resent these men exercising these functions? I never object to the check inspectors. I afford them every facility for making an inspection. In fact, I have travelled round the pit with them myself. You may put an air crossing, or you may alter your split and they would not know anything about it. I have known check inspectors measure the same in-take twice over. I do not condemn them all. I know some of them are very good men. When I require a deputy I always like to take a man from amongst the men that have been working there.

4995. Do you usually find him a capable man? Yes; if he is not he soon has to leave.

4996. *Mr. Gregson.*] He would not be chosen unless you thought him capable? No.

4997. *Mr. Curley.*] Then you do come across a miner occasionally who knows something? I did not say that I came across miners that didn't know anything, but some of them get appointed to these positions who are not able to do the work.

4998. Anyway, have you any objection to their exercising the functions? Not at all, and I think it says a great deal when the miners have not had a check inspection in our colliery on their behalf for the last two years or so.

4999. Do you discharge many men from your colliery? Yes; very often for breaches of the special rules—such as holeing without sprags—not having sufficient timber in.

5000. How many have you discharged recently? I suppose I have discharged fifty men during this year for breaches of the special rules. I do not say that I have discharged them for ever. I have put them on again, but they were discharged all the same.

5001. Are there some whom you have discharged for ever? I do not think so.

5002. Have they appealed to you to get back to work? I suppose they have.

5003. And have you put them on? No.

5004. For the time being, have you discharged them? Yes.

5005. With regard to ventilation, have you any objection to the men making complaints about any defects at any time? No, certainly not. I am always pleased when they do.

5006. With regard to the mine generally, you know that you work under tidal waters;—if the men, at any time, noticed anything that was likely to lead to danger, would you be very pleased if they were to mention it to you? Yes, certainly.

5007. Or report it to your deputies? Yes.

5008. Is it one of your conditions, in connection with the special rules, that they should do so? Yes; I think there is something in the Act about the miner notifying to someone in charge if there is anything wrong.

5009. You have no objection? Not the slightest. I am always pleased.

5010. Have you looked over the proposed Bill? Yes.

5011. Do you know the provision with regard to ventilation, section 47, rule No. 1, page 23 (*see Appendix A*)? Yes.

5012. Do you understand those lines that are drawn across to be alterations proposed by the Legislative Council? Yes.

5013. And that the clause as it originally stood was the condition in which it left the Legislative Assembly? Yes.

5014. Do you believe in the provision for 150 cubic feet of air as a minimum? No; I believe in the amendment as it stands here with the other part crossed out.

5015. *President.*] Without any minimum? Yes, without any minimum.

5016. *Mr. Curley.*] Who would be the judge in regard to the minimum if you had no stipulation in the Act? I could not say who would be the judge. I should think the manager would be able to judge.

5017. If the manager said there was an adequate amount, and the miners said there was not—what then? The inspector would interfere then, I suppose.

5018. Do you object to the men asking the inspector to come? No; not at all. That is what the inspector is there for, I suppose.

5019. Have you any objection to the minimum quantity of air, as stipulated in the present Act? No, I don't object to that either; but I think the other is something similar to the English Act, which seems to work well in England.

5020. Don't you know that the great bulk of the mines in England are gaseous mines? Certainly they are.

5021. Have not the proprietors there to ventilate for the protection of their own property? Certainly they have to.

5022. And for the safety of the men as well? Yes.

5023. Do you think there is not the same impelling motive power where you have no gas? I suppose that if this was really the ventilation clause, and the men said it was not sufficient, the inspector can cause you to give them more. That is what the inspector is for, I should think.

5024. Does not the present Act say something about an adequate amount of ventilation? Yes; but, of course

course, it says that an adequate amount of ventilation shall be constantly produced in every mine; but it shall not be less than 100 cubic feet per minute as a minimum.

5025. *President.*] Have they not construed that to mean they are quite satisfied when 100 cubic feet is there? The inspector cannot interfere with you if you have 100 cubic feet.

5026. They give the go-by altogether to the words, "As a minimum," because it is quite plain that the supply of air must be adequate, and that if 100 feet is not enough there must be as much more as is necessary? If a complaint was made to the inspector, and he came and inspected the colliery, and took the quantity of air passing in that district, and found that it only gave 100 feet, and he then ordered more, I should think you would be obliged to give more.

5027. *Mr. Gregson.*] Have you of your own knowledge ever known a case in which that has been done? No, I have not. I know for my own part that we measure our ventilation ourselves, and if we find that we have not just over the 100 feet we always put more in. That is speaking for myself.

5028. *Mr. Curley.*] Do you think 100 feet is rather limited in quantity? No; I think 100 feet is very good.

5029. Considering that the cut-throughs are 35 yards away? Yes; if you were to put 100 feet into every bord the men would not be able to work, because they cannot work with their clothes on, and I should think it would be injurious to their health.

5030. *President.*] Why not? All miners work with their shirts off.

5031. Is that because of the want of air? Not so much that, but because they can get about their work much better.

5032. *Mr. Gregson.*] Do they work with their shirts on in England? No; in longwall I have seen them work with their shirts on, but in bords they do not.

5033. They do not strip to their drawers? In bord and pillar work they do.

5034. *Mr. Curley.*] What county is that in? County of Durham.

5035. What colliery? I could mention six collieries—Trimdon and Deaf Hill collieries.

5036. What is the depth of these collieries? 150, 160, or 170 fathoms.

5037. That is 900 or 1,000 feet deep? Yes; I do not remember exactly the depth. It is a long while ago now—Coxhoe Collieries. I know, however, that when I work I always prefer to work with my clothes off, although I have not done such a great deal.

5038. *Mr. Gregson.*] In England? Yes. In New South Wales as well.

5039. Do they use much brattice in the mines at home? Yes; in all mines where there is gas given off they are bratticed up.

5040. Is the air well conducted up to the face? Yes.

5041. *President.*] By brattice? Yes.

5042. Then if they would get cold if the air was conducted up, how is it they do not get cold there, because the gas does not have any effect on their not getting cold? They may work in their shirts in a place where there is an extra quantity of air, but if you brattice every place up the last places in the section must be very warm, and all that air is conveyed to each man; you must reduce the velocity, I should think, by having it bratticed up so much, because you cannot make a very large intake where there is a seam that contains dirt, as it must be built up in some portion of the bord, and to run the brattice up it has a sort of a crawling road up in many places.

5043. *Mr. Curley.*] Can you not utilise some of this refuse to conduct the air? Yes, you could; but you would require bricks and mortar as well, and that would be a great expense.

5044. Is brattice very cheap stuff? You can buy it cheaply, but it does not last very long. If you want to put a good brattice up, especially where skips are filled the way we fill them here, you must have a good brattice cloth, otherwise it would be torn down by every skip that went through.

5045. If it was in the side of the bords, the skip would not rub against it? But you must have it in the main bord as well.

5046. You do not require a large quantity for screen doors? It all depends on the thickness of the seam. I know that only last week I had a brattice stopping put in one of our bords, and it took two men a half day each to fix it up properly. Of course we have a very thick seam.

5047. That was where it was necessary to close the bord end up? Yes, and leave a road for the horse to pass through as well.

5048. Do you think that the bords should be bratticed? Where there is no gas coming off I do not consider it necessary to brattice a bord up.

5049. Not to conduct the ventilation? No; because the air in passing along the heading will always strike a certain distance up. A man is never 35 yards away from it; even if the bord is up 35 yards the air will always strike into the bord.

5050. In your experience in collieries in the Colonies, and in England, have you never seen that in the bord end there is a length or two of brattice put up to give the air a slight sweep into the place? Yes.

5051. Have you noticed that to be fairly frequent at Home? Yes; where there was no gas given off they had simply hanging screens and a little brattice into the bord, and where the gas was coming off they would brattice it right up into the face.

5052. *Mr. Gregson.*] That is doing without the door in the heading? They would have the door in the heading as well—the canvas door—and formed round into the bord.

5053. Bringing the brattice close down into the heading and doing without the door? They would be only able to do that where there were no horses or boys travelling.

5054. If there was room between the end of the sconce and the opposite wall of the heading? You would not get much ventilation in that way.

5055. You have not seen it? No.

5056. That would only take a part of the air up? Yes.

5057. *Mr. Curley.*] Would you prefer a shorter cut-through, or the brattice. To have your cut-through put in sooner instead of bratticing up. Instead of having it 35 yards, would you rather reduce it by a few yards? I do not think it is necessary where there is no gas given off.

5058. I am not asking you that. I am asking you as between brattice and the distance. If it had to come to that, would you prefer the shorter cut-through or the brattice? I suppose you would do with the one that was the cheaper. Of course, I could not say which would be the cheaper.

5059. Have you not formed an opinion upon this matter? I have not.

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5060. Have you made any estimate as to what you think the cost of bratticing would be, provided brattice had to be adopted? I know that with the thick seam we have in our mine it would be not less than 3d. per ton.
5061. Is your colliery the adjoining colliery to Hetton? Yes.
5062. The seams are practically the same? No; they are not.
5063. Identically the same in thickness? No; they are not.
5064. Where do they differ? They are not the same in thickness, because we are working 15 feet of coal in our dip workings, and they are not working 15 feet in any part of their mine.
5065. Are you sure of that? Quite certain.
5066. If they are working the whole seam where it is 25 feet thick don't you think that in some places they would have as much coal as you? If they are they would have, but I don't think they are.
5067. If the manager had made a statement to that effect would you think it was being done? He ought to know better than I do. Mine is only outside hearsay.
5068. Then you cannot say definitely what they are doing in that respect? No.
5069. Their mine might be as thick as yours? Yes, it may be, about the shaft; but on the North side and the South side, where they are working now, I do not think the coal is so thick as ours.
5070. Don't you think 3d. per ton is an extraordinary estimate? No.
5071. Will not an estimate of that kind nearly cover the whole of your underground account with regard to paying full wages and everything else? Yes, I daresay it would; but I am speaking of an extra cost with the bratticing. How could we brattice up a bord the day we work the bottom section—that is, including the Jerry, and the Jerry-bands and Morgan, and we worked the top portion of the big tops. It would require two or three men to keep them going—to brattice it up.
5072. Within 15 yards of the face? I am calculating on it being bratticed up to the face.
5073. The Act says "within 15 yards of the face"? It would be a great cost. It is a very high seam.
5074. The 46th section of the proposed Bill, sub-clause 3, says, "which shall be taken to within 15 yards of each working face by brattice or otherwise";—there you could utilise your refuse if it was possible to do so;—in some cases I daresay you will admit you can partially use it? That would be entailing a greater cost, too, if we had to utilise the refuse there.
5075. Why? It would have to be built properly, or it would not stand.
5076. Could not the *débris* as it is thrown back there in many instances be partly utilised as it is lying? If you must put a wall to carry up ventilation, you must put it on a proper foundation.
5077. Is it not air-tight in many instances where the larger *débris* is thrown and the smaller *débris* is thrown on top of it? After we took the first section and commenced the second, we would have 6 or 7 feet high to brattice up, unless we got down to the refuse lying at the bottom section of the seam and shovelled it up, and built a wall. To do that would take a couple of men in every bord.
5078. In that case, would you prefer the shorter bord or cut-through to the bratticing;—wouldn't that dispense with any idea of bratticing? If the cut-through was shorter, there would be less brattice to put up.
5079. That would get rid of the objection in that respect? Yes.
5080. You believe ventilation should be one of the main features of a mine? I think ventilation is the first point in pit law.
5081. Is that one of the things you aim at yourself in your mine? Yes.
5082. To keep a vigorous current of ventilation? Yes, I do.
5083. Would the cost in any way be a serious matter to you if you had to resort to bratticing? It would. It would be a serious matter to the miners too, because any extra cost that is put on must be shared by the miners. We must make some profits, otherwise the collieries would be closed and the miners would be the sufferers in the end. The miners would have to come down in their hewing rate to meet these extra demands.
5084. Do you think the miners should pay for everything? I do not say that, but you are not going to employ men and pay them a wage and not get anything out of it yourself.
5085. I daresay you will admit that there is many a year that the miner gets very little himself? Yes, I am very sorry to say they are getting very little now in consequence of bad trade.
5086. He scarcely gets subsistence wages? The men in our pit do well when the pit is at work. They make a fair average.
5087. Are they not likely to be cavilled out any time that you please to resort to a system of cavilling out? If I had a colliery I should certainly close it or any part of it if I thought fit; but I do not see that any of the miners have anything to do with that.
5088. Will you not admit that if an occurrence of that kind takes place it materially affects their earnings? Yes, I know that if it were passed in the new Mining Bill that each miner should have 150 cubic feet of air, we could do with less men than we have.
5089. You think so? I do not think so. I am certain of it. We could still maintain the same output, and give those who remained 150 cubic feet; but if we are going to give every man, boy, and horse 150 feet it means driving our fan at a great speed.
5090. What sort of fan have you? We have one of Walker's patents—a 16-ft. fan.
5091. Is the fan 16 feet in diameter? Yes.
5092. What is the width? Six feet.
5093. What revolutions do you run it at? About forty when the pit is at work.
5094. When does your fan-man set it in motion? It never stops.
5095. Neither night nor day? No.
5096. Do you keep two men there? No, one man—8-hour shifts.
5097. There is one man in the day-time and one man at night? Two men in the day-time; three men for the twenty-four hours—8-hour shifts.
5098. Do you think that the ventilating apparatus of a colliery should be kept going the whole of the time? It all depends on circumstances; it is not necessary in some cases.
5099. Why? There are some mines where there are no men or horses in during the night; in that case there is no necessity to run a fan, because, in most of the mines where they have water to attend to, the pumping of the water and the exhaust from the pump will cause a good circulation. We can get from 18,000 to 20,000 cubic feet of air now in our mine, without the fan going, when the pump is working; but it does not always suit me to work the pump; I try to work it through the day.
- 5100.

5100. In every mine are there not generally a number of men employed at night time? Yes, in some mines there are. J. Fletcher, Esq.
5101. Does your mine give off any gas? No.
5102. No fire-damp at all? No.
5103. Have you many men working at night time? We have not many in the night time. What we call the night men are the men who go on the afternoon shift at 2 o'clock.
5104. When do they cease? They finish about 10; sometimes before. Of course these men on the afternoon shift have an advantage over the day men; they get their skips in better for them; the skips are provided and the driver simply takes them in, and when they get their quantity they come out.
5105. Have you men to inspect the mine every morning? The mine is inspected every morning before the men go into their working places, and always has been.
5106. Do you believe in a rule of that kind? I do.
5107. Do you think it should be adopted in all mines? Yes; I think it is quite necessary. It is a benefit to the proprietor, the manager, and everybody. I think it is carried out at most of the collieries in the Newcastle district. I know it was carried out in the A. and A. Co.'s pits when I worked there.
5108. Have the last few years been rather trying for your company? Yes; I should think the companies have all suffered a great deal during the last few years.
5109. Has your company declared its usual dividend? Not within the last two or three years, I am sorry to say.
5110. Did it not declare an 8 per cent. dividend on the last half year? Yes; I believe it did.
5111. And the usual dividend on preference shares? Yes.
5112. Do you hold any proprietary interest in the mine? I do not; nor in any of the mines. I have an interest in a few gold mines which I would like to sell out.
5113. Have you thought over the clause with regard to working hours? Yes; I have considered it.
5114. How many hours do your men work? The front shift men go down at 6 o'clock in the morning and return to the surface at 2; the back shift men go down at 8 and return at 4.
5115. Do you think eight hours long enough for a man to work in a mine? They do not work eight hours. I think if a man works eight hours it is a fair day's work.
5116. Do you consider that the inspector should have power to withdraw the men from the mine in case of danger? As far as I am concerned if the inspector saw danger and withdrew the men I should think he would be taking the responsibility off my shoulders a great deal; it would not, therefore, hurt me in that way.
5117. Do you believe he should have the power? Yes, I do not see why he should not; the inspectors are all competent men, and I do not think they would withdraw the miners unless there really was danger.
5118. I suppose you understand that the withdrawal of the men does not necessarily mean the closing of the mine? No, you can employ them in other parts if they are all right.
5119. They might be only withdrawn for a limited time, until it was seen what was going to be the outcome of anything that was transpiring in the mine? Yes.
5120. You think there is no harm in an inspector having that power? I don't think there is.
5121. You do not look upon it as a dangerous power to place in the hands of competent men do you? No. I think it takes a great deal of responsibility off the manager, because there is many a time when a manager likes a little advice and if he knows that he is getting it from men who are competent to give it it is a benefit to him.
5122. Do you find the present inspectors fairly intelligent men as far as you have met them? Yes.
5123. Have they made any recommendations to you occasionally with regard to any incidental matters? No; they have never had occasion to draw my attention to anything wrong in the mine. Of course, when I first went there I was summoned for not having sufficient ventilation. I had not been there five months before that occurred.
5124. Was that in the early stages of your taking the management of the Company? Yes.
5125. Mr. Gregson.] Were you convicted? Yes, I was fined.
5126. Mr. Curley.] What was the trouble on that occasion? Not having sufficient ventilation. Of course we had no fan then. We were simply getting our ventilation from the Linwood shaft. It was a very hot day when the inspector came, and he did not get his proper reading. Of course, the inspector told the magistrate straight that I had improved the ventilation since I had been there, but that still it was not up to the Act.
5127. Mr. Gregson.] What did you do? I took the men off the day shift and put them on the afternoon shift. The men themselves were quite willing to go on working until such time as we got means of ventilation.
5128. Are your night shift men and day shift men down together any part of the day? No. The night shift men come on at 4 o'clock.
5129. Mr. Curley.] The fact of the men being willing to continue working, I suppose, impressed you with an idea of their reasonableness? Of course it did. I do not know whether it was reasonableness or to shirk getting on the night shift, because there are not many men who like the night shift. They said they were quite agreeable to continue working of course.
5130. They said they were willing to adopt anything that was reasonable? Yes.
5131. Did you cavill men out some time ago? Yes.
5132. Was that in consequence of want of ventilation? No.
5133. How many men did you cavill out? I think there were about 60, but they have all been reinstated since with the exception of one or two who left the Colony.
5134. President.] Do you say 150 cubic feet of air is too much? I do not think it is too much. You can give them 500 if you have got it.
5135. Would giving them 150 feet of air cause very much extra expense? It would cause extra expense. Another thing is that in order to keep your machinery right to supply that ventilation you would reduce your number of hands.
5136. Would you reduce the number of hands working in the mine? Yes, at the present time, so that you would be able to give those left 150 feet, and still be able to maintain your output. All collieries put a number of men on. Men come and ask for work, and they give them a start on account of bad times, and if such a thing became law the proprietors would say, "We cannot go on breaking machinery; we must reduce the hands." A manager would not do it. He would say "We must reduce the hands."

J. Fletcher,
Esq.
1 Oct., 1895. For my own part, as far as the ventilation clause is concerned—in fact, the whole of the clauses—should prefer the English Act, because the mines in England turn out as much coal in a week as we do in a year, and it seems to work right with them.

5137. *Mr. Curley.*] Have you not the gas operating there? Well, there is gas operating in this Colony.
5138. *Mr. Gregson.*] Are there mines in England which have no gas? There are. There is no manager who will run the risk of not having plenty of ventilation if there is gas coming off, because it means putting his miners on with safety-lamps, which is a disadvantage to a mining proprietor, because the miner cannot see to do his work so well with the safety-lamp, and there is the risk of filling dirty coal. It is a great point to-day to have your coal clean.

5139. *Mr. Curley.*] Is not that one of the reasons why you should have a good current of ventilation? Yes.

5140. Because it will sweep out the powder smoke? Yes; if you have a good current of air passing along the heading there will be very little smoke left. There is a great deal of powder smoke made through a miner's own negligence. Sometimes he over-does the thing and gives it too much powder, and does not do his work as he ought to do it.

5141. Does not a practical man always try to gauge his powder within a reasonable limit? Yes; but sometimes you find them the other way; in fact, I think a good clause that ought to be enacted in the new Bill would be to do away with shooting.

5142. *Mr. Gregson.*] Do you not find that the young men use more powder than is necessary? Yes. They have got these drilling machines, and a man can put a hole in in five minutes; whereas if he had to jump it, he would wedge it down. We have men in our pit who never use any powder.

5143. Do you prefer the English Act in all matters? Yes, I do.

5144. Were you working under the 1872 Act in England? Yes; I left England in 1885—this month.

5145. Do you know anything of the English Act of 1887? No; I do not remember much about it. I was out here then.

5146. Have you read it? Yes, I have read it.

5147. Do you know what it enacts pretty well? Yes.

5148. Are you content to accept that? I am.

5149. Do you think an inspector should have power in case of imminent danger to call out the men? Yes, I do. It takes a great deal of responsibility off the manager.

[Witness withdrew.]

James Henry Ronaldson sworn and examined:—

J. H.
Ronaldson,
Esq.

1 Oct., 1895.

5150. *Mr. Curley.*] What is your occupation? I am a mining engineer.

5151. Are you manager of the Mount Kembla Colliery at present? Yes.

5152. How long have you been in that position? Six years.

5153. Have you been manager at any other collieries? Yes; in Scotland and England.

5154. In what districts? In Ayrshire, in Scotland, and in Cumberland, in England.

5155. Have you had a good deal of mining experience? Yes; I have had experience in Scotland, England, Wales, Belgium, and Australia.

5156. What is your system of working at Mount Kembla? Pillar and bord.

5157. Have you been long-wall working there in certain cases? Yes.

5158. Has that been abandoned? Yes.

5159. What is the width of your bords? Eight yards and 12 yards.

5160. Have you a double road in these 12-yard bords? Yes.

5161. What is the size of your pillars. Sixteen yards. Some of them are 12 just now, but we are increasing them to 16, and some are 16 now.

5162. Do you enter the mine by a tunnel? We do.

5163. Do you go under a mountain? Yes; under a range of hills.

5164. Is your coal-seam situated in a mountain range? Yes.

5165. Is there much surface strata above you? It varies from a few feet to 400 or 500 feet.

5166. Do you believe in the larger pillars? I do.

5167. Do you think they are the best method of mining? Always.

5168. Do they give more protection to your roadways? Yes.

5169. Do they give better security in working the mine, taking the pillars out later on? Within certain limits, yes. It is not an unlimited safety. I mean that it is possible to have them even too large for safety.

5170. Do you think 12 or 16 yard pillars are too large? No.

5171. Not for 400 or 500 feet of cover? No.

5172. *President.*] What do you mean by having them too large for safety? In the subsequent pillar working these are split up. You get occasionally such a long spread of open gob that they may be standing so much on props as to add an element of danger on account of the extent.

5173. *Mr. Curley.*] Still there would be always signs, even in that case, of a breakaway if it was likely to come? Yes.

5174. The men would always have time to get into safe roadways with a large pillar? They would; but other things being equal, going beyond a certain length there would be greater danger.

5175. Going an unreasonable length? Yes; I do not know whether your second last question meant to imply that I thought these pillars of 12 or 16 yards were absolutely necessary under that cover or not, if so, I do not think them absolutely necessary.

5176. Do you think a 12-yard pillar and a 16-yard pillar in that way would give ample security to the workmen? Yes.

5177. And I presume they are the most economical for the Company? On the whole, they are.

5178. I do not suppose you would do it if it was not? No; safety is our chief object at Kembla.

5179. Still you have an idea of economy at the same time? Yes, certainly.

5180. Have not all managers this object in view as well? They would be very foolish if they had not.

5181. Do you think safety should be the first consideration? Yes, certainly.

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5182. That should stand paramount above all others? Yes.
5183. Do you go on to the boundary with your coal as a rule, and work the pillars back? We have never reached the boundary in any part of our property.
5184. You have a very wide area? Yes.
5185. Where you do take the pillars out in any sectional districts; I presume you always leave very substantial pillars near your main roadways? Always.
5186. What size? Forty yards at least from the back-headings—frequently more.
5187. What pillars have you open between the back and the front heading? From 8 to 10 yards; in a few cases 16 yards.
5188. Do you look upon that as an essential principle of mining—this large pillar near your roadway, where you are taking out sectional pillars in that way? Yes. One wants to get to the coal beyond with the pillar and stall work.
5189. Do you think your roadway should always be above suspicion of anything of that kind? Yes.
5190. What method of weighing have you there;—do you pay the men by weight? Yes.
5191. Do you pay on a system of average? Yes.
5192. Have you any standard weight? No.
5193. Is the weigh-man continuously at the weigh-bridge? Yes.
5194. Has he any other duties? Yes.
5195. What are they? He attends to the letting of houses during the day, and in his spare time, after hours, he has other clerical duties.
5196. After the working hours? Yes. He also sees that any new men are provided with rules in accordance with the Act.
5197. Has he anything to do with overlooking the screen-men? No.
5198. Have you a foreman for that particular work? Yes.
5199. Do you know anything like the average number of skips that are weighed there in a day? About forty-five skips a day, speaking roughly.
5200. What number of skips do you bring out in a day? About 1,000 large and small skips.
5201. Skips to be weighed I mean—round coal? About 950 would be a fair average.
5202. Do you think the men are satisfied with the average? Yes.
5203. Do they make any complaints? Not to me.
5204. Have they ever made any representations to you to weigh more? No. Some days we weigh loss, but that is a fair thing so far as I recollect.
5205. Are there any days when you do not weigh at all? No.
5206. Do you weigh every day you work? Yes.
5207. What are your working hours—your drawing hours? Seven till 5.
5208. When do the miners go to work? One shift goes in at 6; the other at half-past 8.
5209. When does the shift that goes in at 6 come out? From 2 to half-past 2.
5210. And the other shift? From half-past 4 to 5.
5211. Have you ever worked that mine longer than that? We have on one occasion in 6 years.
5212. What was that done for. To fulfil an order. A large boat came to the jetty, and by working longer we were able to complete her that night, and let her away—one of the intercolonial boats.
5213. Have you ever requested the men to work on what is known as pay Saturday? Frequently.
5214. Have the men complied with your request? Latterly they have.
5215. Do they work on the pay Saturday? They do.
5216. When did this start? Within the last four months I should think—about four months ago.
5217. Do you recollect posting a notice up at the colliery dated 15th June, 1895? I do. I cannot say the date. I remember posting a notice anyhow. [*Notice handed witness. See Appendix Y.*] The 15th June, 1895, is right.
5218. Did you stipulate in that notice that the men should work for such number of hours as the exigencies of the trade demanded? Yes.
5219. What did you mean by that;—did it mean that you wanted them to work till 12 o'clock at night—did it mean anything like that? As I told them at the time, it meant anything within reason. We do not demand unreasonable things at Kembla.
5220. Is the pay Saturday an old historical institution in connection with mining? Not within my experience until I came to Australia.
5221. Were you ever in the north of England? Yes, in Cumberland.
5222. Were you ever in Durham county? I have been there, but I was never employed there.
5223. Do you know that there are several thousands of miners employed in that county? I do.
5224. How many thousands would you think? I do not know; I am not up in the numbers in the north of England, having never been employed there.
5225. Were you ever in the county of Northumberland? Yes.
5226. Do you know that there are several thousands of miners employed there? I do.
5227. Do you know if the pay Saturday exists there? I believe it does. There are many thousands employed there, but they only form a small portion of the total number in the United Kingdom.
5228. Do you think there are anything like 70,000 or 80,000 miners in the two counties? I should not think there would be quite so many. I should not dispute it, however.
5229. Have the Mount Kembla miners always had this pay Saturday as a holiday as far as you know;—was it in existence when you came there? Not when I knew Mount Kembla first, but it has been since I went there permanently.
5230. I am speaking of you as manager;—have they had it for the five or six years you have been there? Yes; they have.
5231. What is the arrangement now;—the men did not acquiesce in the demand that you made upon them, did they? I do not think they did at the time; they did afterwards. The arrangement is that when the trade requires it they shall go in at 6 o'clock in the morning and work till 12.
5232. Six-hour shifts? Six-hour shifts. We do not often ask them to do it, but it has occurred I think twice, to the best of my recollection, in order to fulfil important orders.
5233. *President.*] Was that on a pay Saturday? Yes; I may say that previously when they did not work on pay Saturdays I have seen the mine idle for three or four days of that week, and the men have been

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been requested to work on the pay Saturday in order to fulfil some order, and they have refused up to this time I have mentioned.

5234. *Mr. Curley.*] Have you many men employed there? About 165 miners.

5235. Have you a large plant? Yes.

5236. Waggon? Yes; a large number of waggons—200.

5237. Do the waggons carry many tons? Six and a quarter tons.

5238. Then you have over 1,200 tons standing? About that.

5239. Have you at any other time requested the men to work beyond the stipulated hours during the day? On one occasion we did, which I have previously mentioned.

5240. You have not done it since? No.

5241. Have you not requested the men since to work longer? No.

5242. What hours do you consider they work at the face? Seven and a quarter hours at the face—longer sometimes; there are individual exceptions.

5243. I understood you to say that they came out about half-past two? I said from two to half-past two.

5244. That they went in at six and came out at from two to half-past two? That is so.

5245. Do they not go in before this occasionally? Some of the men do occasionally; it is very rarely though.

5246. The great bulk of them? No; it is very rarely.

5247. Are you at the mine to see them go in? No; the firemen always are.

5248. Is your mine a good distance in? The straight tunnel is a mile and a third.

5249. Do you think that these hours are quite long enough for the men? If they work hard I dare say it is a fair number of hours, but I would rather see them work a little longer sometimes.

5250. Do you think a man can tire himself in that time? He can tire himself in eight hours if he works hard at the face, but it greatly depends upon the man, and how he works.

5251. Do you recollect an accident occurring some time ago at Mount Kembla where you were approaching some work—an explosion? Yes.

5252. Were you manager at the time? Yes.

5253. How did that occur? It arose from a working coming on an old working which had been out of use for several years in which there was a small accumulation of gas. One man holed through, and instead of going out and reporting the occurrence to the fireman he went into his neighbour's heading, and the two of them proceeded to the face where they had gone through and discussed matters. The gas came through the hole and exploded, burning these two men to some extent.

5254. *President*] Was anyone killed? No.

5255. *Mr. Curley.*] Had you a bore in advance at the time? No; no bore.

5256. Did you know you were approaching these workings? Yes.

5257. Do you think bores should be kept in advance in approaching old workings? When there is supposed to be any danger—yes.

5258. Could you know what danger there would be there? We had reasonable grounds to suppose there was no danger.

5259. Was your judgment mistaken in that case? Yes—or knowledge. In connection with that particular accident we had taken very special precautions to eliminate any danger as we thought, and having done so we thought the bore was not necessary.

5260. How do you ventilate the mine? By furnace.

5261. Is your mine fairly well ventilated? Yes; very well.

5262. Have you had any complaints from the men at any time? We never have had any complaints that I can recollect.

5263. Has the inspector ever complained? No.

5264. Does the mine give off any fire damp? Very rarely, in cracks.

5265. It does give off a little? Yes, from fissures rarely.

5266. It either gives it off or does not give it off? It gives it off rarely.

5267. In what section of the mine is this? All sections.

5268. Have you a system of inspection every morning before the men enter the mine? Yes; the fireman examines every place.

5269. Does he indicate that he has been there by any mark on the place? He always chalks it, in accordance with the Mining Act as embodied in our special rules.

5270. Do you know the proposed Mining Bill,—have you looked over it? I have only seen it this forenoon with the amendments.

5271. Do you use much brattice in your mine? Not a very large amount.

5272. You do use it? Yes.

5273. In the bords or headings? Headings.

5274. Do you use it in the bords? Occasionally.

5275. Is there a portion of your mine which goes to the rise or dips? It both goes to the rise and dips.

5276. What are these places where you have to put in the brattice? Where, perhaps, on account of some fault or dislocation in the strata, we are induced to go further than the 35-yard regulation.

5277. Do you put it in for that purpose? Yes.

5278. To conduct the air up to the working face? Yes.

5279. Do you think the air should be conducted up to the working faces of the mine? In every case, no.

5280. As a rule? No.

5281. Do you ventilate to reach the minimum quantity, or to get over it, or what? We try to get the largest quantity of air possible.

5282. What is your average? From 60,000 to 70,000 cubic feet per minute.

5283. What is the average per man? About 250 cubic feet, I think, for horse and man.

5284. Are the men compelled to blast to get the coal in your mine? In some places they are.

5285. Cannot they get it without blasting? In some places they can, but as a rule they use powder.

5286. Do you say the average per man, boy, and horse is about 250 feet? I think it must be about 250 feet.

5287. Do you agree with the proposed minimum in the new Bill of 150 feet? I think there should be no definite figure stated.

5288. *President.*] Merely adequate? Merely adequate,

5289.

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5289. *Mr. Ourley.*] Why do you state that? Because, in the first place, it provides a loophole for very bad ventilation.

5290. *President.*] Why? 150 cubic feet per man in certain cases may be much too small a quantity to ventilate a mine thoroughly. The manager might say, if he is found fault with about it, "Well, I have the requisite quantity according to the Act."

5291. How can he say that, if it has to be not less than that, and as much more as is necessary? If it says the minimum is 150 without anything else.

5292. Suppose it says this: "An adequate amount of ventilation, not in any case less than 150 cubic feet per minute for each man and boy, and as much more as may be necessary";—what would you say to that? The excuse then would not hold good.

5293. Do you mean to say that if you put a minimum it gives a loophole to a negligent or inconsiderate manager to give that amount and no more? Yes; I do.

5294. *Mr. Ourley.*] Is that the reason why you wish to dispense with it? That is one reason.

5295. *President.*] Can you give us any other reasons? I don't think there is much objection to that clause—that there should be a minimum of 150 feet, and that there should be adequate ventilation.

5296. Is 150 feet too much? No.

5297. As the Council left it, it reads, "An adequate," &c., down to word "therein" (*see Appendix A, clause 47, rule 1, page 23*)? That, I think, fulfils all that is required.

5298. "And no place shall be driven," &c., down to word "mine" (*see Appendix A, clause 47, rule 1, page 23*)? I think it is a very short-sighted idea altogether which suggested any such thing as the 35-yard cut-through. Mines in this Colony must inevitably go deeper and deeper as time goes on; and to limit the pillars, as is done here, by insisting on having a cut-through every 35 yards, is folly, because in a very deep mine you would require larger pillars than 35 yards in many cases—35 yards square even.

5299. Then you mean to say you might have to go a great deal more? A great deal more. In certain cases the pillars would require to be a great deal more than 35 yards square.

5300. Therefore you think that part of the clause should come out altogether? Yes; that part of it. It is too hard and fast a rule altogether.

5301. You do not see any objection, do you, to a minimum, provided it does not allow the loophole you mention? Not the minimum of 150 feet.

5302. You would not have that minimum? I do not object to the minimum of 150 feet.

5303. Suppose it read this way, "an adequate amount of ventilation not in any case less than 150 cubic feet of pure air per minute, and as much more as may be necessary for each man, boy, and horse, shall be constantly produced in every mine and shall sweep undiminished along the airways and into each working place to dilute and render harmless noxious gases to such an extent that the working places of the shafts, levels, stables, and workings of the mine, and the travelling roads to and from those working places shall be in a fit state for working and passing therein"? I don't approve of that, for this reason—that if that be attempted it will act as a tremendous drag on the general current of ventilation, and by trying to improve it at one point, they will do more harm at other points—that is to say, they would decrease the general quantity of air passing through the mine by increasing the friction very much. It is like a man trying to walk up this street and down another street in the city; he must tire himself out. There is a great deal of energy expended in that. In the same way there is a great deal of energy expended in trying to pass a current of air round these courses in the mine.

5304. Supposing you were in a deep place, and you say it is unwise to have the 35 yards cut-through,—how would they ventilate this place? They must merely accept the evil. They must put in a brattice if there is gas, and they go beyond a reasonable distance.

5305. Don't you think 35 yards is a good distance for a man to be away from the air;—you have gas in your mine? We do not take it into account at all.

5306. *Mr. Ourley.*] You do not treat it with contempt, I suppose? No; I don't.

5307. *President.*] Are there any means of satisfying the men by giving them a minimum, and still not doing any harm to the Bill? I think there should be no minimum mentioned with regard to the distance.

5308. Don't you think it better to have some provision saying that the men shall be supplied with air in some way or other? Yes.

5309. Suppose you have not a good man as manager, and the men are left without sufficient air, if no minimum is mentioned his view of adequacy and their view of adequacy might be entirely different? I would not object very strongly to this 35-yard distance, though I don't like it; I would not object to it provided it were made quite clear in the clauses following that where a greater distance is gone it should be sufficient to take the end of the bratticing up to within 35 yards of the face, and not to within 3 yards of the face.

5310. *Mr. Gregson.*] Would not you prefer to take the English legislation? Yes.

5311. Without any of this humbug about cut-throughs, or bratticing, or anything of that kind? Yes; that is, take the English Act *in toto*.

5312. That is, as the Council have left this clause, strictly in accordance with the wording of the English Act, eliminating this last paragraph about the 35 yards? Yes.

5313. *President.*] Do you say this from a strong objection to giving a minimum. Supposing you provide that they cannot make a loophole of the minimum. The English Act says:—"That a constant amount of ventilation shall be produced under the control of a certificated manager"? That appears to my mind to fulfil all that is really required; at the same time I say I would not object very strongly to this 35-yard clause if it were made quite clear that in the event of more than 35 yards being driven, it should be sufficient to take the bratticing up such a distance that the air would be conducted to within 35 yards of the working face.

5314. Do you say a man has to work 35 yards before the current of air? He may in certain cases do so, especially going to the dip.

5315. *Mr. Gregson.*] Does not the decision as to what is requisite rest with the inspector? I should not dispute his ruling in such a case.

5316. If there was any dispute between the men and the manager as to whether there was an adequate quantity or not, would not the inspector be called in? Yes.

5317. Would he not say whether it was adequate or not? Yes.

5318. And there is an end to it? Yes. I would take that as an end to it. If it was stated, say, that the ventilating current should be taken as near to the working faces as reasonably, practicable I think it would go

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go very far to meet the case without making a very hard and fast rule. The inspector, if complaints were made, might then come in and say, "This current is not taken as near as is reasonably practicable," and of course that would be a point if a dispute arose which would be subject to arbitration. We want, if possible, to get a rule, which, while being a good rule, is to a certain extent elastic.

5319. *Mr. Curley.*] In that case do you not throw the onus of complaint on to the miner as to what may be reasonably practicable? Yes, and on the judgment of the inspector.

5320. In the first place, must not the miner originate the business himself? Yes, and it is quite right that he should do so, if there is any ground to do it. Should he be afraid to do it?

5321. I do not say he should be afraid to do it, but you know that there are numbers of men who do not like to make these complaints? If a complaint is made to the inspector it is made perfectly anonymously so far as the management is concerned; that is to say the management does not know who is making the complaint. In no case do I know of any complaint ever having been made at our colliery, neither do I in any case know the name of any man who has made a complaint, if indeed any complaint has been made.

5322. Do you believe that a man should complain anonymously? No; to the inspector they ought to send their names. It would be absurd to complain anonymously because he could not investigate the particular instance if the complaint were made anonymously.

5323. *President.*] If they said such and such a place is unfit to work, could they not complain anonymously in that way? Yes, in that way. I do not object to any man making a complaint, and sending it to the Inspector if he has any ground for complaining. What I mean to say is that I have no doubt complaints have been made about Mount Kembla, as I have no doubt they have been made about other mines to the inspectors, but I do not know any man's name who has ever made a complaint, so that apparently it is with perfect safety a man can use his right to complain to the inspector.

5324. *Mr. Curley.*] You appear to object to bratticing generally? I would not brattice every bord unless there was apparent danger.

5325. Would you shorten the distance of the bord and put the cut-through in sooner? No.

5326. *President.*] Would a cut-through make a pillar 35 yards square? No; you start with the thickness of your pillar first. It may be 8 yards, as is common in Newcastle, or 16 yards, as it is with us.

5327. You say that so far from being 35 yards you may have pillars of very much greater area than that? Very much larger indeed.

5328. *Mr. Curley.*] In the case of having the larger pillar will you not then have to use the brattice? Yes. What I say is that I would be content if the Bill asks that the air should be taken by means of brattice within a reasonable distance of the face, but not within 3 yards of the face.

5329. The Bill says 15 yards by brattice or otherwise? No; I still say it ought to be taken within a reasonable distance of the face by means of cut-throughs or brattice.

5330. With regard to that previous section that you have been referring to, do you object to its being taken within 3 yards of the face of the work where gas exists. Do you not see that that applies to gas there? I think that that is perfectly useless because you are not allowed to work where there is gas forming a certain cap on the lamp, and if the brattice is taken up to within a distance sufficient to adequately ventilate the place, that is quite sufficient.

5331. When you say you are not allowed to work where the gas is forming a cap on the lamp, what do you mean by that—who prevents you? The Act, or common sense. I think the Act does; I know common sense does. I think I am wrong in supposing there is anything in the present Act.

5332. Then the statement that you make is not correct with reference to the present Act not allowing you to work where there is gas forming a cap on the lamp? I suppose I am in error in stating that; at the same time the place must be safe. The Act provides for withdrawing people from the work if the place is unsafe from gas or otherwise.

5333. Do you know that the Bill states that where gas exists the place has got to be bratticed up to within 3 yards of the face? Yes; but I object to that.

5334. If you will look at sub-section 4 of section 12 you will find that that is in the present Act? The same objection applies to that as to the other.

5335. Have you heard tell of the Bulli explosion? Yes.

5336. Do you know the Commission said something about the neglect to brattice in that case;—have you read the report of the Commission? I have read it, but it is a long time ago.

5337. Do you not know that a reference was made there to bratticing? I do not know for certain.

5338. *Mr. Gregson.*] Do you not think that in Great Britain they know a great deal about mining? A great deal more than they do here.

5339. Do you not think that on the whole we had better be guided by their experience? I think so entirely. I have said so all along. I stated to Mr. Reid, who was talking to me about the matter, that if we accepted the English Act we would be doing very well. It was after seven years of hard work of the best men in the Kingdom that the Act was formulated. The Royal Commission sat for seven years. Statistics show that the list of accidents in New South Wales can stand comparison very well with the list of accidents at Home and on the Continent also, including France, Germany, and Belgium. I know the statistics here have been used to put an altogether different complexion on the position, because this Bulli disaster, occurring in a small community such as ours, swelled the average very much indeed; but if that year was left out, and the average taken from that year on—1887, I think it was—it will be found that the average number of accidents per 1,000 men in this Colony is considerably less than per 1,000 men at Home.

5340. And these lists even eliminate from the Home figures the accidents from fire-damp, from which we have very little trouble here? Possibly so.

5341. I suppose you recollect enough of the Bulli accident to form some conclusion as to what was wrong there? I was not in the Colony at the time.

5342. *President.*] Suppose there is a minimum of 150 feet;—that is not too large a minimum, is it? No; I think no one would object to that minimum.

5343. There has been some talk about more machinery being necessary to produce half as much more air as is required by the present Act; Mr. Fletcher and Mr. Mattheson both spoke about it;—do you think there is anything in that? I do not think there is, unless the appliances are very small. If you have a given resistance, and want to increase the air, you must simply increase the power.

5344. *Mr. Curley.*] Will you look at the Report of the Commissioners on the subject of bratticing, p. 23 :—

Fourthly.—That the person or persons to whom blame is attachable for this disastrous accident is the man Westwood, or his mate (both deceased), who at the moment were working at the face of No. 2 heading, and who prepared and fired the shot, which, in the opinion of the Commission, was the immediate or primary cause of the explosion. The Commission are, however, of opinion that the deputy, Robert Millward (deceased), Richard White, overman, and to a less extent (except in the matter of providing bratticing, for which he was alone responsible), Alexander Ross, manager, were guilty of contributory negligence.

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Do you see that the Commission attach some importance there to bratticing? Yes, I do. Of course, though I was not in the Colony, I read the report some years ago, and did form some idea as to how the Bulli accident originated.

5345. Has that not to be done in England where they have gaseous mines to contend with? Yes.

5346. And all these matters have to be reckoned with? They have.

5347. What is the height of your seam? It runs from about 4 ft. 6 in. up to about 7 feet at present.

5348. Do you think that the inspector should have power to call the men out in case of danger? No.

5349. Why? I think that the manager being responsible for the safe working of the mine, is the man who ought to do that, and that his powers and responsibilities should be delegated to no one else, or overruled by no one else. At the same time I think that if the inspector made a strong representation to a manager that a mine or part of a mine was unsafe, no manager would go against the opinion of the inspector.

5350. You think not? I think not, and if he did, then it is very easy to refer to some one else.

5351. *President.*] Supposing a manager did differ with the inspector and declined to call the men out, and that there was some dreadful catastrophe, what satisfaction is that to the survivors of the men, or the men themselves, if they are not killed but injured very much? No satisfaction at all.

5352. Would there be any harm in giving the inspector power to call out the men in case of imminent danger, with a provision in the section that the withdrawal could not be continued, or if the withdrawal were continued, with power to send at once to the Minister and have the matter referred to arbitration? If the first part of the clause were adopted, it would be most necessary that some higher power than the inspector ought to be referred to, so that the matter might be referred to arbitration.

5353. Do you see harm in that. Is it not rather an unlikely state of things we are thinking of; is it likely the inspector would order the men out of the mine? Unless there was very good cause, I think he would not.

5354. Would you not have as much faith in the inspector as in the manager? No.

5355. Why? Because he does not know all the peculiarities of the mine as thoroughly as the manager does. The manager, you may say, lives at the mine, and has all the features of it at his fingers' ends; and the inspector, however good a man he may be, necessarily cannot have all the details so thoroughly at his fingers' ends.

5356. What imminent dangers could there be;—clause 21, subsection 5, p. 8, of the Bill reads as follows: "To require the manager to withdraw the men from the mine if at any time he finds that by reason of inflammable gases prevailing in any mine, or any part thereof, or of any cause whatever, the mine or the said part is dangerous." Inflammable gases are no doubt one thing that might prevail, and be the cause of imminent danger? A creep or a crush would.

5357. Would not that be a thing occurring suddenly? As a rule, yes.

5358. Then is it not a thousand chances to one whether the inspector would be there at that moment? It is extremely unlikely.

5359. If there is any real necessity for the section I should think that the power should only be given in cases of imminent or immediate danger, with a proviso that the men, with the mine owner or manager, shall have power to protest to the Minister against the continued withdrawal, and have the matter settled by arbitration? Yes; I think that might fulfil the requirements.

5360. Would there be any harm in such a section, then? No; I think not—that is, where imminent danger exists.

5361. I should put in both words, "imminent" and "immediate" danger so as to make it quite plain that there should be no arbitrary power, and to prevent an inspector saying "Oh, I think there is danger, you must come out"? Exactly, I think that would meet the case.

5362. Do you think there is a necessity for even what I have suggested. Do you think that it is a proper power to give. Can you understand a case practically occurring in which there would be that imminent danger apparent, and the manager would not take out the men himself? I cannot imagine it occurring but still it might occur if the manager was a fool, or incapable, or incompetent. The last part of your question is very necessary, because it appears that at present an inspector may object to men working in some place which is dangerous, after it has been reported to him, and until he gives his opinion that the place is perfectly safe for men to work in, the manager if he sends the men to work there is under a penalty, as I read the proposed Bill. There was a case like that at Stockton; a danger occurred there; the manager thought it was safe as I understand it; the inspector never passed it as being safe; the manager, if I remember rightly, was prosecuted, or was to have been prosecuted, because the men started work.

5363. Do you think if the clause is to go in at all it should go in with the proviso for referring the matter to arbitration? Yes, certainly.

5364. That you think would not be very much harm? No, not if it were done immediately and promptly.

5365. *Mr. Gregson.*] Would you be in favour of anything that would relieve the manager from the general sense of responsibility? No, I would not.

5366. With those qualifications, which the President has put to you, would it, to a certain extent, relieve the manager from his feelings of responsibility? Yes, it would.

5367. Would not that be obnoxious and prejudicial? Prejudicial. That was the one idea running through my mind that it would relieve him to a certain extent of the feeling of responsibility, and that is an undesirable thing. Goodness knows there is enough responsibility on him, but he is the right man to bear it.

5368. *Mr. Curley.*] Have you a knowledge of the occurrences which have taken place at the different collieries for a number of years—I mean the subsidences, collapses of main roads in collieries over a wide area—not at one colliery, but at several? I know of only one particular instance.

5369.

J. H.
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1 Oct., 1895.

5369. Where is that? The Hamilton Pit. I think it is somewhere at Newcastle where a crush occurred.
5370. If you knew of several collieries where internal derangement had taken place over wide areas of the collieries, would not that convince you that there was some reason for this distrust you speak about in relying on managers? Certainly not—not necessarily.
5371. Not when they have been left with a free hand to look after the matter as they pleased? Not necessarily at all. It is a very strange reflection on the system of inspection when you say that.
5372. You turn it off on to the inspection, and yet you advocate that the manager should have the whole responsibility; now when I put it before you, you put it off on to the inspector, and want to saddle him with the responsibility? I do not, but with the powers he has under the present Act I say that if those conditions exist they reflect very seriously on the inspectors, as well as on the management. I mean to say, however, that these accidents, crushes and creeps, all may occur in well regulated mines.
5373. *Mr. Gregson.*] In spite of all the Acts of Parliament that have ever been printed? Yes, that have ever been printed, or ever will be printed. We can do much to diminish the risk of these accidents, but still it is possible for them to occur in well regulated mines.
5374. *Mr. Curley.*] Do you mean main roads can come down when a main road breaks down over the pillars, and shuts up the men so to speak for the time;—how do you look upon a circumstance of that character? I should not like to defend such a condition of affairs speaking generally, but I should like to have all the circumstances before me. For instance, if it were pillar work close alongside, and this main road was being abandoned, there would be nothing in that. The crush might extend for a considerable distance back on the road during pillar work.
5375. I asked you some time ago if you thought that substantial pillars should be left along the main roads in order to secure them? Yes.
- 5375½. You said you believed in that? Yes.
5376. Can you realise that a fall would come over these pillars if they were left in that way? I have seen crushings and creeps come for a long distance over what were supposed to be substantial pillars.
5377. Where was that? In Scotland.
5378. Where in Scotland? In Ayrshire.
5379. What were the circumstances? A creep occurred in that colliery.
5380. What was the thickness of the pillars? The pillars were stoops as they call them there—about 20 yards square.
5381. What was the depth of the mine? I suppose the depth, counting the dip, was 300 or 400 feet.
5382. What was the name of the mine? Barleith.
5383. Did it come over many pillars of that description? Yes.
5384. How many? I cannot say; I was not managing that colliery. It is a case, however, which occurs to my mind.
5385. Did you see it? No, but I was in the colliery afterwards and the circumstances were detailed to me.
5386. It was a matter of hearsay? Yes, from reliable parties.
5387. *Mr. Gregson.*] Amongst the circumstances you would like to be informed about before you pass an opinion on any of these matters I suppose the nature of the floor would be one? Yes.
5388. It would be very little use to leave a big pillar if you have a bad floor? Yes.
5389. Supposing you do not know the floor is bad—that you assume the floor is good, and that you have no reason to assume anything else—then your pillar might be forgiven if it gives way? Yes, if the floor is bad. I think it is hardly fair to take a hypothetical case unless all the conditions are given.
5390. *Mr. Curley.*] If you knew this system had been a 4-yard pillar business, and the depth about 200 feet, and the floor hard sandstone, and the roof a strong roof, and the width of the bords 8 yards with the pillar working? I think these pillars are too small.
5391. You think the Inspector should not have this power to withdraw the men from the mine? I think not, except with such limitations as have been suggested by the President.
5392. *President.*] And even then you are doubtful about it—you hardly think that it is practically of use? I do not think it is practically of use.
5393. *Mr. Curley.*] Have you ever compared the weights paid to the men at your colliery as against the weights in any other way in connection with the waggons? Yes, I have.
5394. Have you noticed any variation? Yes, from time to time.
5395. How does it run? Sometimes we have had a loss; at other times we have had a gain.
5396. Taking it all round? Taking it all round for the year's working we run pretty close.
[Witness withdrew.]

George Errington sworn and examined:—

Mr. G.
Errington.
1 Oct., 1895.

5397. *Mr. Curley.*] What occupation do you follow? Mining.
5398. Where are you working? I have worked in the Hetton Company's mine.
5399. Where are you working at the present time? New Lambton.
5400. Have you worked at any other collieries in the district? Yes.
5401. What collieries? Hetton, Stockton, and the Lambton mines.
5402. How long did you work at Lambton? Three years.
5403. During your experience in working in that mine did you ever notice any defective ventilation? Yes; any amount of defective ventilation.
5404. In what section of the mine was this? What is commonly known as the straight down, and another flat commonly known as Pairish's Flat. Pairish's Flat is the worst ventilated flat in the whole of the mine.
5405. Is that mine a considerable distance in? Yes; a considerable distance.
5406. Was the defect that the air was not conducted into the working place, or was there a defect on the heading? There was a defect in some headings, and in others there was plenty of air, but it was not conducted properly into the working place; it swept past the working places instead of being conducted up to the working face.
5407. Do you think that the air should be conducted into a man's working place? Yes, I do.
5408. How long were you at the Hetton colliery? Between three and four years.
5409. Did you notice any defect there? Yes.
5410. In a similar way? Yes.

5411.

Mr. G.
Errington.

1 Oct., 1895.

5411. What defect? What they call the third right hand, particularly.
5412. Did you work at both these collieries as a practical miner? Yes.
5413. Did you notice anything like that in the Stockton colliery? I did not notice it so much there because I was a wheeler there.
5414. Have you read the proposed Bill? Yes, I have read a little of it.
5415. Do you know the proposal to increase the minimum quantity of air? Yes.
5416. Do you consider that is a necessary provision? Yes, very necessary.
5417. Do you think the cut-throughs should be shortened? Yes, I think the cut-throughs ought to be shortened, and that there ought to be proper appliances to conduct the air into the working face.
5418. Do you know what the condition is in the present Act—that the bord is to be driven before the cut-through 35 yards? Yes.
5419. Do you think that distance should be shortened, as proposed in the Bill? Yes.
5420. Do you know that it is proposed to shorten the distance to 25 yards? Yes.
5421. Do you know that the Legislative Council proposes to strike out the minimum quantity, and simply to leave the clause to be defined by the word "adequate"? Yes.
5422. Do you think that that would meet the requirements of the condition? No; I do not. The amount must be stipulated.
5423. Do you believe in a definitely-stipulated minimum quantity? Yes.
5424. Does that prevent the manager from supplying more if he thinks fit? No.
5425. Does it prevent him, under our present Act, from supplying more than the 100 feet? No.
5426. Do you know anything about the question of hours;—have you given any attention to that? Yes; I gave a little attention to it.
5427. Do you believe that the hours should be legislated for? Yes.
5428. Do you believe in the regulation for eight hours? Yes.
5429. Do you think this is a general opinion among the men? Yes; the majority of the men hold that opinion.
5430. Do you think the inspector should have power to withdraw the men in case of danger? Yes; I do.
5431. *President.*] You are being asked now about a proposed Bill. Do you believe in it as it left the Assembly? Yes.
5432. Do you not believe in the Legislative Council's amendments? No, none of them.
5433. *Mr. Curley.*] Will you look at the 28th section of the Bill which is here before you, page 14, sub-section 3. [*See Appendix A.*] Do you think that there should be a surface plan provided at the different collieries, showing the streets, roads, buildings, creeks, rivers, bays, swamps, navigable waters, and limits of any tidal waters within the said boundary? Yes, I do. I think there is no borough in the Colony which suffers more than the one I represent at the present time by under-mining.
5434. What borough? New Lambton.
5435. Do you hold any official position? I am the Mayor of New Lambton.
5436. Have you lived about New Lambton for any considerable time? Twelve years.
5437. Do you know the locality well? Yes.
5438. Has there been any under-mining carried on there? Yes, to a considerable extent, by the Scottish-Australian Mining Company and the New Lambton Company.
5439. Has this been on the streets in some cases? Yes, we have got subsidences on the main road.
5440. Do you know the names of any of the streets? Yes; Regent-street, our principal street, subsided to a considerable extent, and damaged the public school—split the gable end of the public school between four and five years ago. The Education Department has had to repair it at considerable expense through the undermining.
5441. Have any of the buildings been affected round about the place that you are aware of? Yes, several. Several people have had to remove their houses on account of them being dangerous to live in.
5442. Here is another section, page 29, Rule 25 [*See Appendix A.*]. Do you notice that "The coal shall not be wrought under any proclaimed or made road without the sanction in writing of the Minister";—do you think that is an absolutely necessary provision? Yes, absolutely necessary. I understand that the Minister has stopped two or three places now from undermining in our borough.
5443. Have representations been made to him? Yes, by the Council and by deputations.
5444. *President.*] How has he stopped them? On account of their taking the pillars out from underneath the main road.
5445. Under what power has he stopped them? From the report of his inspectors. He said he had power to prevent them from mining under the main road. We had subsidences in close proximity to the Government tramway, or within 9 or 10 feet.
5446. Where is that at? At the Borough of North Lambton.
5447. *Mr. Curley.*] Has it put the Council to any considerable expense? Yes, considerable expense.
5448. To repair some of these streets? Yes, filling in.
5449. Do you know whether the Companies contributed in any way to assist the Council? Not a cent. They have only paid ordinary rates, the same as any other ratepayer.
5450. Have you ever taken any legal advice in connection with this under-mining? No.
5451. You have not found it necessary to do that yet? No. We have always appealed to the Minister for Mines.
5452. *Mr. Gregson.*] Has he always helped you? Yes. He stopped two shafts from being put down within the last two or three months. These shafts were being put down to work out a few pillars that had been left in. These pillars were the main support of the main road from Newcastle to Minmi. They were within 120 feet of the Board's water-main, and within 50 feet of the tramline. He considered it dangerous to allow them to undermine and take those pillars out, and he stopped it.
5453. Did he do all you wanted? In those two particular instances he did. Before the borough was incorporated the Scottish Australian Mining Company had the right to mine for coal there. I think they had a lease at 5s. per acre, and before the place was incorporated they had worked out the coal. The people were living on a commonage land at that time; but now they have a right and title to allotments, and the Minister, to prevent depreciation of the allotments, has stopped it. I may state that Mr. Smith a few days ago stated to the deputation that waited on him that he would like to see provision made in the Mining Bill to prevent them from mining under roads and streets.

Mr. G.
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1 Oct., 1895.

5454. He has got the power now, for instance? Yes; wherever it comes under his jurisdiction. In some cases he has the power; in others he has not.
5455. In New Lambton the coal had been worked, and they proclaimed streets over the worked out ground? Yes.
5456. Who did that? The Government. It is nearly all Government land.
5457. Did they sell allotments adjoining the street over worked out coal? Yes; some people have removed their houses, because they were afraid to live there.
5458. *Mr. Curley.*] Have they permitted under-mining in some cases on this ground since? Not to my knowledge; the lease of the Scottish Australian Mining Company expired, and then the Government sold the allotments. They aligned the streets, and sold the commonage allotments, and since then people have made applications for vacant allotments to take out these pillars to mine for coal. The Minister is preventing them from mining now in order to prevent them from depreciating the value of adjacent Crown allotments.
5459. In this particular instance that you have now cited with regard to the Government giving out these leases to take out the pillars, they are doing it with the full knowledge of having sold these lands? Yes.
5460. Cannot you make a protest against this kind of thing? Yes; we protested against that, and I may state that wherever we have made out a good case against their taking out these pillars to let down the road Mr. Smith stopped them in a very prompt and effective way on our representations.
5461. When you worked at Lambton did you know anything about the payment-for-weight business that was going on? Yes.
5462. The average? Yes.
5463. Was there a standard weight there? Yes; a standard weight of 14 cwt. 2 qrs.
5464. Did the men ever try to get this abolished? Yes; we made several attempts to get it abolished, but we could not.
5465. Do you think the men are satisfied with getting an average number of skips? We would like to see every skip weighed. That is the men's idea on the matter.
5466. Do you think there is a feeling in that direction? Yes; it is the fairest way too.
5467. Is that your opinion? Yes.
5468. In the absence of that, do you think that there should be a fair number of skips weighed? Yes; as many skips weighed as is possible in the absence of not getting every skip weighed.
5469. *President.*] What would be a fair proportion? It would all depend on the output.
5470. One in twenty? More than that.
5471. One in ten? More than that; four or five in ten. Every other skip would be a fair proportion.
5472. Nearly all of them? No; one-half of them. I have seen weighing done in the old country, and the work was not stopped at all.
5473. *Mr. Curley.*] Have you done much work in the old country? A little.
5474. What part? In the county of Durham.
5475. Did you ever set any props there? Yes.
5476. Could you set them? Yes.
5477. Could the miners, as a rule, set props? Yes.
5478. What kind of a statement would you think this to be—that a miner could not set a prop? I should think it to be a very absurd statement indeed to make. Every man that has been employed as a miner has had to put timber up for his own safety.
5479. Occasionally? Yes.
5480. Were deputies employed in that district? Yes; deputies were employed. Sometimes when a man wanted a prop in his own place for his own safety, and the deputy was not near enough, he had to put it up until the deputy arrived.
5481. Was it not a rule that the props were cut to the proper length? Yes; the stone was of such a hard nature that they could not sink the props, and they had to be cut to the proper length.
5482. Is it quite an easy matter to set a prop? Yes; if the prop is the proper length there is not much difficulty.
5483. What would be the height of the seams? The seam I worked in was 5 ft. 6 in.
5484. Would those props be very easy to handle? Yes; handy timber.

[Witness withdrew.]

WEDNESDAY, 2 OCTOBER, 1895.

[The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.]

Present:—

FRANCIS EDWARD ROGERS, Esq., Q.C. (PRESIDENT).

JAMES CURLEY, Esq.

JESSE GREGSON, Esq.

James Henry-Ronaldson re-examined:—

J. H.
Ronaldson,
Esq.
2 Oct., 1895.

5485. *Witness.*] Yesterday I was asked if economy was an object in the working of a mine, and I replied that it was. One of the objections which seems to obtain to some extent to the proposal to brattice every bord in a mine must be the expense, because in trying to make out what might be the cost I arrived at the following figures. The average width of bords, counting the narrow headings and the bords themselves, might be put at 6 yards. If we reckon up the cost of the material and the cost of putting it up, I do not see how it can come to less than 3d. per ton.
5486. *President.*] For bratticing every bord? Bratticing every bord. Then I notice that it is proposed to make compulsory the working of the mine for eight hours only per day. As I understand it, that means both for hewers and for shift-men. If we decrease the working hours of the shift-men we must in most cases decrease the out-put, with a proportionate cost to some one, or decreased wages to the shift-men. For that item alone I think the cost would be increased by about 7d. per ton.

5487.

J. H.
Ronaldson,
Esq.

2 Oct., 1895.

5487. *Mr. Ourley.*] On what item? On the shift work. Then capital must also lie idle during the same time, if instead of working ten hours, we work eight hours, or whatever the proportion might be. The capital involved must be idle a proportionate time. That, in our case, I do not estimate at less than 4d. per ton. Those would be the first results, and as the working of collieries just now is attended with next to no profit—in some cases with loss—I do not see how some collieries could continue to work. If they are not closed, it must inevitably mean a reduction in wages. Some prominence seems to have been given to the notice requiring the men to work on pay Saturdays at Kembla. I should be glad to state why we are anxious that work should go on at Mount Kembla on pay Saturdays when required. In the South all our shipping is dependent on the weather. We ship in an open roadstead. We have no shelter whatever. No Government money has been spent in that district, except at Wollongong, as it has been in some of the other ports. In Newcastle, for instance, large sums of money have been spent. We, however, have no harbour except at Wollongong, which is most inadequate for any large shipping, so that we are entirely dependent on the weather for our constant work.

5488. *President.*] Where do you ship? At Port Kembla, an open roadstead, at a jetty made by the Company itself.

5489. Out into the ocean? Out into the ocean. There have been two jetties there. They cost the Company £28,000. We have a railway from 7 to 8 miles long over very difficult country. It has cost about £30,000. I have heard it so stated. I should certainly put it myself at £25,000. To cover that long line of railway, and to work that colliery regularly, we have been at the expense of providing 205 waggons at present. It all amounts to a very large capital. If the weather is bad the mine is kept idle for days, and occasionally it has happened that the weather has moderated towards the end of the week on a pay Saturday, and we have been anxious to work then both to keep the capital in operation and to supply our customers, who may have been waiting, and in some cases have waited, a long time for the supply of their order, so that down in the south we have really very serious disabilities to work under as compared with other districts, and we think it altogether unreasonable that on account of any custom which has been imported from the old country, or which has grown up here, we should be debarred from exercising what seems only a reasonable power in working on the days on which we are able to work. In addition to these 205 waggons, we have three locomotives. We have the up-keep of our line; we have the up-keep of the jetty, which may be put down as having a life of from eight to ten or twelve years according to circumstances. The life of it may be put down at that time.

5490. Have the men been willing to work on these pay Saturdays? They were not up to within about three and a half months ago.

5491. Are they willing now? Yes; they are willing now. They have acquiesced in our request. Individually, I know for certain that many of the men have been quite willing to work on the pay Saturdays; as a body they have not been. To a large extent I put that down to the union, and to those who lead the union. Three years ago delegates of the men admitted to me privately, after discussion between them and directors of the Company, that the *raison d'être* of not working on pay Saturdays had entirely disappeared; that it was an old custom.

5492. What was the reason originally? Originally, trade was very good; I remember the time when at Kembla they worked twelve days in the fortnight. Men naturally under those conditions had very little time to themselves. They wanted a rest, and they wanted time to execute their own commissions or business. We have always said that had we been fortunate enough to have trade such as that we would have been only too glad to be idle on pay Saturday. For repairs alone to machinery we would be glad to have one free day as a rule. We looked at it as being a very strong evil, and an evil that required a strong remedy, considering the times.

5493. *Mr. Ourley.*] You stated that the fixing of the eight hours would impose an additional cost to the management of 7d. per ton. I think so.

5494. Is that what you say? Yes, that is what I mean.

5495. How do you arrive at that? The oncost is 3s. per ton.

5496. At the present time? At the present time—oncost—and fixed charges.

5497. That includes the payments to the miners? No, that is not oncost—that is by contract.

5498. *President.*] What do you mean by oncost? The shift work, and everything that is paid by day wages; also some standing charges are included in that.

5499. *Mr. Ourley.*] Do you mean that 7d. per ton would be added to the expenses of the working of the under-ground account? No, to the whole oncost, under-ground and above-ground, and standing charges.

5500. What do you mean by standing charges? Charges which are always divided by the output to arrive at the cost per ton.

5501. What are they? There are shipping charges, railway men, managerial expenses, and office expenses.

5502. Do you say that your under-ground account, and your upper-ground account at the present time cost you 3s. per ton? Yes, and standing charges.

5503. How do you arrive at that? By these costs which I mentioned—managerial and office.

5504. That includes the manager's salary? Yes.

5505. The overmen's? Yes.

5506. And all the shift-men? The oncost, yes. I mean everything but the hewing of coal. That is the meaning of it.

5507. What are you paid yourself? I think it will be sufficient to give the general charges.

5508. What is your salary? I decline to answer.

5509. What are your overmen's wages? Fourteen shillings per day.

5510. How many deputies have you? Three; firemen we call them.

5511. What are their wages? Eight shillings per day.

5512. Do they work full time? Yes; sometimes over the twelve days.

5513. Do they ever work under it? They have not for a long time, to the best of my recollection.

5514. Have you deputies apart from firemen? No.

5515. Road men? Yes.

5516. How many road men? We pay somewhat differently from Newcastle. We have a man who contracts for that work. He contracts for the wheeling, and the road-men's work, repairs, taking up roads, and the various oncosts of that kind about the pit.

5517.

- J. H. Ronaldson, Esq.
2 Oct., 1895.
5517. Have you only one road man that contracts for this? No; we have others that do other contract work in the mine.
5518. What are the terms of this contract? We pay so much per ton.
5519. Do you pay this man so much per ton? Yes.
5520. What is it? At the present moment, 11d. per ton.
5521. You say that he contracts to wheel and take up roads in the mine? Yes.
5522. Lay down the roads, and keep the roads in repair? Yes; that is the bord roads. Outside of his contract there is a large amount of work which the Company does itself in the laying of main roads, extending engine planes, putting in rope haulage, making over-casts, providing for drainage.
5523. Do you do this by shift-men? Yes.
5524. How many are there? It just depends upon the work. Sometimes there may be twenty, sometimes half a dozen. It is irregular. These are little things that come in only occasionally in the life of a colliery.
5525. How many permanent shift-men have you? We have three permanent shift-men. Two I should put it.
5526. What wages do you pay them? Seven shillings and sixpence. For instance, we have expended, I suppose, about £2,000 recently on the extension and improvement of the rope haulage in order to diminish the standing cost of wheeling and hauling.
5527. But that is not a permanent cost? It must be distributed.
5528. It is not a cost that will take place next week, or anything like that? Certainly not. Those are things which must be put down against the coal, and which only the coal can meet. It is difficult to estimate them in the way you are doing by trying to get at the number of shift-men employed per day.
5529. The books are always there to prove it. These men's wages are paid whether they are engaged one week or two? Yes.
5530. You say the laying of these main roads, rope extension, over-cast, &c., is a work which is done by the permanent shift-men? No, sometimes by the permanent shift-men, and sometimes by special contract with other men. You have got to add pumping charges, furnace-men, stoking, engine-men.
5531. How many furnace-men have you? Two.
5532. Engine-men? Two pump-men, one engine-man.
5533. What is the furnace-men's wages? Five shillings and sixpence.
5534. Engine-man? Eight shillings.
5535. Pump-men? I think it is 8s. and 7s. 6d.
5536. Do any other men come into this account—either under ground or above ground? Add prop wood.
5537. The eight hours has nothing to do with the timber, has it? It is a standing charge. It has not, so far as the division is concerned. We have got to add the timber to the cost of our coal.
5538. What is your cost for timber? For pit props I suppose about 1d. to 1½d. would be fairly accurate. Then there is sawn timber, which comes into the general accounts of course.
5539. What is your charge for that? That must come to about 1d. too.
5540. What do you do with the sawn timber? Making and repairing skips, and all the different things about the colliery erections.
5541. Is there anything else? Blacksmiths.
5542. How many? Three.
5543. What are their wages? Two at 9s. 4d., one at 7s. 9d. There are also strikers; one at 6s. 6d., one at 5s. 6d. I will not guarantee every figure. It is perfectly impossible to do that from memory, but those are figures as near as I can remember. One pick-sharper, 6s. 6d. Four carpenters.
5544. Are they not included in this sawn timber for making and repairing skips, erecting buildings, &c.? No; that is material alone I gave you.
5545. You use the words "making and repairing skips"? You asked me what the material was used for, and that was my explanation.
5546. That 1d. per ton was not included in the wages? No.
5547. What are the carpenters' wages? One at 9s., one at 8s., one at 7s. 6d., and one at 6s. 6d. There are also engineers, one at 11s., one at 9s. 6d., and a boy at 2s. 3d.
5548. What is this boy? He is in the engineers' shop—an odd boy. There is also a brakesman.
5549. Is not that the engine-man? No.
5550. How many? One at 8s. 6d.; assistant, 5s. 6d. There is also an incline-man at 6s. 6d. and an incline-boy at 2s. 9d. One weigh-man at 8s. Two loco-drivers, one at 9s., and one at 8s. 6d. Two stokers, one at 7s. 6d., and one at 6s. 6d. Cleaner, 6s. 6d. Weigh-man, £3 per week.
5551. Is he employed by the week? Yes.
5552. Is he fully employed? Yes. Fettleers, one at 8s. 6d., two at 6s., three at 5s. 9d. Wharfingers, one at 11s., four at 6s. 6d. As far as I recollect that is the shift time. To that you have got to add an indefinite amount, which I cannot particularise, for overtime, in nearly every item. Frequently when we work six, six and a half, or seven days, a large number of these are employed full time, and sometimes overtime. There are also all the colliery accounts, which with us are very heavy.
5553. What is the average number of men your colliery worked with within the past twelve months? I could not tell you with accuracy without referring to documents.
5554. Can you tell us the quantity of tonnage raised in the twelve months—for 1894? I prefer to refer to the documents, if you will allow me. The Blue Book, probably, would tell, therefore it is unnecessary for me to say.
5555. Your quantity of output is represented as 127,155 tons for last year. Does that represent round and small coal? It must.
5556. What is your percentage of small to round? About three to one.
5557. You get three of round to one of small? We get more than that. Only about 25 per cent. of the total output is small.
5558. Can you give the number of days worked last year—the average per fortnight? No, I cannot.
5559. What do you think it was? I prefer not to say until I can state accurately.
5560. Approximately at present? I prefer not to state.
5561. You cannot give any approximation? I prefer not to give an approximation.
5562. Do you think it was half time? More than half time.

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5563. Much more? I do not think I can answer that any further. I will give you accurate information if you wish it in a day.
5564. With regard to these items that you have given me here? Have you put down colliery accounts?
5565. What do you mean by colliery accounts? Accounts paid to merchants for materials.
5566. I have put down the item for props, and the item for sawn timber? The sawn timber is included, but you have also to put down the colliery accounts.
5567. What is included in those? Iron, oils, greases, waste—all material which is used at the colliery.
5568. What is the cost of that? I cannot give you that accurately.
5569. Can you give it approximately? No.
5570. You never go into these things? I go into a certain amount; but there is a certain amount which does not pass through the pay sheet, but goes through the Sydney office only, and that is not in my department at all.
5571. I presume that from your long experience with collieries you have some idea what the cost is? I know that occasionally it amounts to 6d.
5572. I want a general average? I would rather not give a general average.
5573. Are these things not calculated at the end of the year to see what has been the permanent cost of the different items? I have no doubt they do it at our Sydney office, but it does not come within my sphere.
5574. Do you know that it is done to ascertain these charges? I am not certain.
5575. Not from your long experience with collieries? I speak of Mount Kembla Colliery at present.
5576. Do you know this has been done in other collieries with which you have been connected? Yes.
5577. You know that it is done? Yes.
5578. You cannot state anything with regard to it? Not definitely; I might only mislead you.
5579. Would that not come into the estimate which you have already given? No.
5580. With regard to the on-cost business? Yes; in the 3s. of course. You were trying just now, as I understood, to arrive at how this 3s. is made up.
5581. *Mr. Gregson.*] Do you include colliery office expenses in the 3s.? Yes.
5582. *Mr. Curley.*] With regard to several of these items which you have given me here, numbers of them, I presume, can only be calculated for the days that the men are at work. Take furnace-men for example. If the pit is idle are they there? Sometimes they are—more frequently than not.
5583. Engine-men? Pump-men are always there.
5584. The engine-man? His time is nearly full—not quite.
5585. These pump-men? They are always there. They have frequently overtime in addition to the twelve days.
5586. Blacksmiths? Usually full time—occasionally overtime?
5587. Does that "Usually full time" not also mean occasionally not full time? Quite so.
5588. Strikers? Very much the same as the smiths.
5589. Pick-sharper? Not full time, but more than the pit time.
5590. Carpenters? Nearly full time. One of them has full time, and the others are nearly full time, with sometimes overtime.
5591. Engineers? Full time and over.
5592. Boys? The boy is full time.
5593. Brakesman? Full time.
5594. Assistant? More than pit time considerably, but not full time.
5595. Incline men? Considerably more than pit time; boy, ditto; weighman, usually over the twelve days; engine-drivers, considerably in excess of full time. To be as accurate as possible, they are usually full time at least, and sometimes considerably over full time. Stokers, same as drivers; waggon weighman, full time; fettlers, nearly full time; wharfinger and men, full time.
5596. You said something this morning about unions. Have you an objection to unions? Not to a well regulated union.
5597. Do you wish to be the judge of a well regulated union? I want to form my own opinion about it.
5598. Do you want to manage the union yourself? Certainly not; I should be very sorry to.
5599. Are unions exceptional matters at different collieries? No.
5600. Are they not almost universal? They are in this Colony.
5601. And almost all over the world? I believe that unions are very common at Home, though the proportion of unionists at Home is comparatively small. I do not suppose there are more than 25 per cent. of unionists at Home in the whole labouring community.
5602. Are they very strong in the mining districts at Home? They are.
5603. Do you know that they are legalised—have the right of association? I believe they have.
5604. Have the proprietors a combination—any association? Yes, frequently.
5605. Have they any association in the southern district at the present time? For vend they have—some of them.
5606. Is your colliery identified with the association? Yes; with the selling association.
5607. The Proprietors' Association? No. It is identified with the Southern Coal Owners' Agency for selling coal.
5608. That is a combination amongst colliery owners? Yes; for selling coal.
5609. For mutual purposes of trade? Yes.
5610. Or any other purposes there may be joint action upon? No, I believe not.
5611. Did you discharge the president of the district union from your colliery some time ago? Yes, I did.
5612. Without notice? Yes, for breaking the colliery rules, and he came to me and begged to be allowed to work another fortnight, in order to make arrangements whereby he might leave Mount Kembla. Having given him that permission, he at once stood for the position of check-weighman.
5613. Did he not, previous to standing for the position of check-weighman, sue you in the local police court for wages? No; he stood for the position of check-weighman, which at once showed that he did not intend to leave the mountain if he could remain on it. As I took his action in coming to me, and asking to be allowed to stop a little longer in order that he might get away from the mountain, simply to be a subterfuge to be allowed to enter the colliery again, I immediately discharged him. He then took me to court, and won his case for a fortnight's wages.

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5614. Did you wish him to leave without this fortnight's notice? I did, after he applied for the position of weighman, which showed that he did not want to leave the mountain, but that he had only been trying to get the better of me.

5615. You assumed he was trying to get the better of you? I knew it. I know it now.

5616. Had he not a perfect right to accept the position of check-weighman if it was open to him to do so? Not under the circumstances.

5617. You wished to get him away from the place altogether? I did. The subsequent action shows that I was right in trying to do so.

5618. Either with or without notice you wanted to get rid of him? No.

5619. Latterly you did? I did latterly.

5620. And legally he was right in the matter of his wages? I believe that legally he was wrong.

5621. And yet he got a judgment? He did.

5622. *President.*] Where? Before the Police Magistrate.

5623. *Mr. Curley.*] You did not test the legality of the decision any further? I do not think we could—it was such a small sum. I think it was final, if I understand the law aright. It was under the "Small Debts Act."

5624. In that case you will admit he was legally right? Technically, we will say, he was legally right; otherwise, I think he was not.

5625. Were you sorry that he was elected check-weighman? Under all the circumstances I was.

5626. *President.*] Under the present Act must a check-weighman be an employee of the mine? Yes. He was not really an employee when his term of office began, or for some time before his term of office. We protested, but it was such a small matter we did not go any further.

5627. *Mr. Curley.*] I suppose a ballot was taken for the position? Yes, before the duties began.

5628. Did you endeavour to influence the ballot? Not to my recollection, except by giving two of the miners, who came to us as delegates, my version of the story.

5629. Have you seen the Check Weighers Act which has been passed in England (*see Appendix E*)? Yes.

5630. Do you approve of an Act of Parliament of that description? Yes; there is no objection to that.

5631. *President.*] Do you know that under the present English Act the check weighman need not be an employee of the company? I know that.

5632. Do you know that the Upper House has put in that he must be an employee of the company? Yes.

5633. What do you say to that? I am inclined to think he should be an employee of the company.

5634. But you have no strong objection? As I said yesterday, I would adopt the English Act as it stands. I would adopt the Act as a whole; still I think it would be better that he should be an employee.

5635. *Mr. Gregson.*] Is that one of the things you would like to see altered? Yes.

5636. *President.*] But you are not very strong about that? I would not raise any great objection if I could get a good Act otherwise. It is a minor point really.

5637. *Mr. Curley.*] Do you think an endeavour was made to influence the ballot in connection with this man? No.

5638. Either by yourself or the overman? I think not.

5639. But you did when he was appointed as check-weighman? We protested against his appointment in court in that case; that was all we did.

5640. What was your objection to him? I prefer not to raise a libel case. There was a personal difference connected with the work.

5641. Is not a personal difference liable at all times to arise even with other men, and will not personal differences exist as long as the world lasts? Yes; still it had a connection with the work.

5642. There will be different views upon these matters, I presume, as long as the world stands, as between manager and men, and do you not think that the men have a right to their views? A perfect right.

5643. And the right to express them? A perfect right.

5644. You have no objection to that? None whatever.

5645. I presume you know that if this man did not act as President of the Association somebody else would act in his place? I am sure of that.

5646. If you were not in the position of Manager of the Mount Kembla Colliery I suppose somebody else would be? Yes; that goes without saying.

5647. I think you told us the height of your seam? Yes; I said from 4 feet 6 inches to 7 feet.

5648. What area of the mine is the thinnest portion of the seam in all directions—take it in the aggregate—what proportion of thin coal is there throughout the whole mine, as against the high coal in other portions of the mine? Where do you draw the dividing line? I do not call 4 ft. 6 in. thin coal. In many districts in England it would not be.

5649. Four feet six inches is in comparison with 7 ft.? We must have a dividing line.

5650. In what district or section of the mine does this 4 ft. 6 in. coal exist? The shaft district.

5651. How many places have you going into that district? About twenty-five or thirty places; not all in thin coal, though. Some of that coal is fairly thick, though it is in that district that the thin coal occurs. Thin coal occurs in the shaft district chiefly.

5652. How many places are there going in the thin coal in the shaft district? Would you call a thin coal,—up to 5 ft.

5653. Yes, if you like, up to 5 ft. Say twenty places. Then throughout the mine places occur, even in thick coal, where you have got to give thin coal measurement on account of the rolls that come in.

5654. You have thin coal in other places? Yes, from time to time.

5655. Do these rolls run a large distance? Many yards.

5656. How far? Fifty and seventy yards occasionally; sometimes only a few yards long. They are very variable.

5657. What would you consider to be the average height of your seam all through, taking the thin and the thick coal together? I should say about 5 feet 6 inches.

5658. Five feet 6 inches throughout the whole mine? As we are working at present. Might I add in connection with the cost which you have taken down that you have got to add the colliery accounts, which I think you have done already, and all the depreciation on plant.

5659. What do you mean by colliery accounts? Accounts for all the material that is got for the colliery—iron, greases, wastes, oils, &c. Then there is the cost for the depreciation of plant and material, which is a very serious item with us.

5660.

5660. What is it? For instance, the jetty, which cost £16,000, we estimate has a life of perhaps from eight to twelve years. We have a second jetty now, and the Colliery has been in existence for fifteen or sixteen years, I believe. We had the end of it washed away entirely during one storm, and it had to be renewed at a very serious cost.

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[Witness withdrew.]

Andrew Nicol sworn and examined:—

5661. *President.*] What are you? I am check-weighman at the Coal Cliff Colliery.
5662. *Mr. Ourley.*] How long have you been check-weighman there? About thirteen months at Coal Cliff. Previous to that thirteen months there was no check-weighman for a little over four years.
5663. Have you worked at the colliery long? About three years.
5664. Do you know anything about the system of weighing there? Yes, certainly.
5665. What is the average number of skips weighed—do you weigh every day? No; it is sometimes weeks on a stretch before we weigh. I have complained repeatedly to the management of the method of weighing the miners' coal.
5666. Are you paid by the average weight? Yes, we are.
5667. What does the weigh-bridge register? Since I was elected check-weighman the management put up a standard weight of 13 cwt. 2 qrs., which was never at that colliery before.
5668. Will the bar not go any higher;—can you make any higher register than 13 cwt. 2 qr.? Certainly. Previous to the four years I am alluding to, when I was elected check-weighman, the average at the colliery used to run about 15 cwt.
5669. And has the standard been fixed at 13 cwt. 2 qr.? Thirteen cwt. 2 qr. He stated to me his reason for fixing that standard at 13 cwt. 2 qr. was to save his rolling-stock; but I have no doubt he meant something by that, because I never saw him complain yet, no matter how full the skips were, so long as they went over the 13 cwt. 2 qr.
5670. Have you tried to get the standard weight put to one side? Certainly; I have tried to get it not put up at all.
5671. I suppose you did that at the request of the men? Certainly.
5672. Do you go a considerable time without weighing? I have a statement here which I have taken for the fourteen weeks, from May 20th to August 24th, 1895,—from audit to audit. The number of days worked is forty-seven out of eighty-four working days.
5673. Those are the days the weighing-machine was at work? No; the days the miners worked. Number of miners' skips tipped, 6,894; number of times weighing done during that period, twice. That was on June 12th and June 24th they weighed during that fourteen weeks.
5674. *Mr. Gregson.*] They did not weigh at any other time? At no other time. Number of skips weighed, 16.
5675. *President.*] Out of 6,894? Yes. On June 12th they weighed nine, and on June 24th they weighed seven.
5676. *Mr. Ourley.*] Does the weighman have the control of the weighing there? The weighman is supposed to have the control; but I think Mr. David McGeachie, one of the lessees, has got the control.
5677. *Mr. Gregson.*] Was the check-weighman standing by all this time ready to see these skips weighed? Yes, I was.
5678. Were you standing by the whole time? Yes.
5679. *President.*] Did you ask them to weigh any more? I repeatedly complained at the loose method of weighing miners' coal.
5680. Did you say you were standing by all this time during those fourteen weeks—were you there on these forty-seven days? Yes.
5681. Did you ask to have any more weighed? I asked repeatedly the same question.
5682. Did you ask the Company's weighman to weigh more? Yes.
5683. You did on this occasion? Yes, and on several other occasions.
5684. But you did on this occasion? Yes.
5685. *Mr. Ourley.*] Do you know anything about the number of hours worked down there? Every full day that we work is a day of ten hours, both men going in together to be at the face at 7 a.m., and leaving the face again at 5 p.m., excepting on several occasions when men have left the face at 4 o'clock, after being in the pit for nine hours, and then they have been chastised for doing it.
5686. How do you know they have been chastised? They have told me so, and two of them I heard the management chastise myself. They told these two that it must not happen again, or else they would have to abide by the consequences.
5687. Is this a regular matter? It is a regular thing.
5688. *Mr. Gregson.*] What is a regular thing? Both men working ten hours a day.
5689. *Mr. Ourley.*] Are you speaking from what you see yourself? I am. There are three days in this fourteen weeks that I have just given you in which the working hours ranged from fourteen to sixteen hours—June 18th, 19th, and 20th.
5690. How do they range from fourteen to sixteen hours? By starting at 12 o'clock and 3 or 4 o'clock in the morning.
5691. Twelve o'clock at midnight? Yes, 12 at midnight till 5 o'clock in the evening. It would be half-past 5 o'clock before they would be outside.
5692. Do the men stop in from 12 o'clock at midnight till 5 o'clock the next evening? Yes, they have done that repeatedly—not only on this occasion.
5693. Did the manager request them to do that? Yes; when he wants the men to work these hours, he generally sends a boy round in the evening between 8 and 9 o'clock to tell the men to start at 12 o'clock, or 3 or 4, whatever the time may be.
5694. How long ago is it since he did this? This was in June.
5695. Has he done anything of that kind later on? Only an hour once or twice. We started at 7 and worked till 6, but it is occurring every day in a full day's work to work both men from 7 o'clock till 5. I have got the names of those that he has chastised if you wish to have them.
5696. Do you think the men as a whole want to stop in the pit that length of time? They do not want to stop in the pit, but they dare not say anything for fear of being victimised. I have got a minute taken out of the Minute-book of the Lodge which I shall read to you. It will show you that the men do not

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not

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- not believe in working more than eight hours. The minute is to this effect:—"That we, the Coal Cliff operatives, believe in working no more than eight hours, and wish the same to become a legal day's work." That was carried unanimously at a full meeting.
5697. How long ago was that? That was carried last week. I have not got the date. The feeling of the men when they are in a body is that they shall not work any more than eight hours; but owing to the depression, and the way in which they have been tyrannised over, they are in fact afraid to say one word for themselves.
5698. Do you think that if the men were to make much of a protest that they would be requested to leave the colliery, is that what you mean? They would. I know they would. I have got enough proof that men have been practically told if they did not work they would get somebody else to do so.
5699. Is that one of the reasons that makes you think the hours should be legislated for? Yes, certainly. I think there should be a hard and fast law legalising eight hours as a day's work. On Monday, September 16th, I, as one of a deputation, waited on Mr. John M'Geachie *re* the reduction that is on at present, and we wished to have an agreement drawn up.
5700. Mr. Gregson.] Are you out on strike now? Yes, on a reduction of 2d. per ton.
5701. Mr. Curley.] You are not working now? No; Mr. M'Geachie distinctly stated to that deputation that whoever was employed at the Coal Cliff Colliery would be required to work as long as he wanted them to work, and as long as he required the coal.
5702. They would have to stop in the pit during his pleasure? Yes; that is what he practically meant.
5703. That was the answer he made to a deputation? Yes.

[Witness withdrew.]

William Thompson Philpot sworn and examined:—

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5704. Mr. Curley.] What occupation do you follow? Coal-mining.
5705. President.] You are a coal-miner? Yes.
5706. Mr. Curley.] Are you coal-mining at present? Not at the present time.
5707. President.] Are you out on strike? No, I am a check-weighman.
5708. Where? At the Corrimal Colliery.
5709. Mr. Curley.] Have you been check-weighman for long there? Since the 15th March, 1894.
5710. Mr. Gregson.] About 18 months? About 18 months.
5711. Mr. Curley.] What is your system of weighing? We average the weights every fortnight.
5712. Do you average the number of skips? We average the number of skips.
5713. Have you any standard weight at the colliery? No standard weight.
5714. What is the number of skips weighed daily? They differ. Sometimes we have weighed sixty, and sometimes eight; some days we weigh none.
5715. Could you weigh sixty every day the mine works if the weighman was at the bridge, that is when you work a full day of 10 hours? It would be heavy work to get them through. That day that we weighed the sixty we had an extra man there.
5716. Does the coal want much cleaning at the bridge? There is not much dirt comes down amongst the coal.
5717. What was the trouble then? The coal has shovelled when on the screen. There is a gate across the screen, and it is held down by a handle. Of course when the skips are tipped into the screen the coal stops against this gate, and the weighman lifts up the handle to let it fall gradually down the screen, and what is left up has to be scraped down with a shovel. The weighing-machine is a Pooley spring-balanced machine with a pan attached. It is so fixed that it will lift out of its place, so that they can use the screen when they are not weighing.
5718. Do they miss many days occasionally when they do not weigh in this way? It is not regular. Some days they do not weigh at all. We have not weighed I think for the last three weeks that I have been on. We have not weighed any in that time.
5719. Have you worked much? We have not worked much this last fortnight. We have been three and a quarter days on coal, and four days on slack in the last fortnight.
5720. That is for a fortnight? Yes.
5721. Did much coal come out in those three days? Before I go further I might state that on the slack days we have some headings working, and of course the coal comes out on the slack days. I think there are seven headings so far as I can recollect, and these men fill coal on the slack days, and their coal came out on the four slack days, and for this fortnight there are 3,520 skips of coal, giving as the weight paid to miners, 1,920 tons 13 cwt. 3 qrs. 14 lbs. During that time there were 1,887 slack skips, and they are averaged at 10 cwt. per skip.
5722. Do you say that for these latter days there has not been any weighed at all? No skips weighed for the past fortnight. That is the only fortnight there has been none weighed since I have been on the check-weighing.
5723. Have you made an average for the quarter, or anything like that? I have an average for the last 12 months, from June 30th, 1894, to June 30th, 1895, and the average upon skips comes out 13 per thousand, and for the total output—slack skips and coal skips—9.75.
5724. Do you say upon the round coal there is about 13 for each thousand? Yes.
5725. Do you think about 1 in 80 is anything like a fair average to weigh? No, I think we ought to weigh more.
5726. Have the men ever expressed themselves as dissatisfied with the limited number of skips that are weighed? Yes, the men have done so to me.
5727. Have you complained to the weighman or the manager? I have complained to the weighman, but I could not draw your attention to any complaint to the manager, although, when I first went on the weigh there was no notice put upon the pay-sheet of what the average of the skips weighed were, and I found the number not weighed to be so great one fortnight that I put it on, and since that time there has been a little more weighing done. The manager had noticed the small number of the skips weighed, and on the average there have been a few more weighed since then.
5728. When did you do that? I could not tell you exactly the date I did it.
5729. Some months ago? Some months ago, and I have always kept that up every fortnight. I put it this way, "One skip weighed out of 101" or "One skip weighed out out of 75," as the case might be, sometimes less and sometimes more. I put that on the pay-sheet.

5730.

5730. Showing the men's weight? Yes, showing the men's weight.

5731. Do you think the men wish every skip to be weighed, or would they be satisfied with an average, if there was a reasonable amount weighed? As far as I have heard the men express their ideas, they wish every skip to be weighed.

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5732. Do you think that would involve much expense? My opinion is that every skip ought to be weighed. As regards the additional expense on the present system, which is to pay for round coal, there would be an expense at Corrimal, but slack coal being a marketable commodity, I think the miners could be paid on the gross, and there would not then be a great deal more expense than the attaching of a machine to weigh the whole.

5733. They would have to erect a new machine I suppose? Under the present system they would have to erect new screens.

5734. *President.*] Do you not think that if they weighed a larger average of skips the whole difficulty could be met? I think an agreement might perhaps be drawn up to weigh a certain average, but for my part I want every skip weighed.

5735. *Mr. Curley.*] Do you think that when you are paid on the amount that you produce, you have a right to have the exact quantity that you produce weighed? Yes, I think I have a right on the lines of justice for the whole to be weighed.

5736. Do you know anything about the hours worked at Corrimal? Sometimes we work overtime.

5737. Do you do much of that? Yes; I think we do a good deal.

5738. What do you mean by "overtime"? The regular shift that we work is from 7 till 5 o'clock. Sometimes we work after 5 o'clock, and that is overtime—anything later than 5. Sometimes in the morning we may start an hour earlier and knock off at 5 o'clock at night, and the hour earlier before 7 in the morning is overtime.

5739. You say this is done occasionally? Occasionally it is done by starting in the morning earlier, but generally they are a few minutes over 5 o'clock almost every night.

5740. Did you take any note of when this occurred? Yes; I have got my time as I took it. I am paid myself regarding the overtime.

5741. Can you tell us when this occurred? This is a three weeks' pay. On June 17th, we started at 6 a.m. in the morning, and knocked off at 6:50 at night. On June 18th we started at 6 o'clock in the morning and knocked off at 6:45. I might make the statement here that this is my time. The pit, perhaps, might knock off at 6 o'clock. The fifty minutes and the forty-five minutes might belong to me, inasmuch as the incline is run after the pit is knocked off. The inside will have run from 6 o'clock to 6 o'clock, but the screens will have been running from 6 a.m. to 6:50 p.m., and from 6 a.m. to 6:45 p.m.

5742. Do you stop there to see if there is any coal-weighing done? Yes.

5743. Can you give us the pit time as near as you can—that is, when the men would go in and come out? When we have worked this overtime there has generally been chalked up the night before on one of the water tanks by the master, "The pit will hang on at 6 o'clock, and the front shift men will be expected to go in at 6 o'clock, and knock off at 2 o'clock. The back shift men shall go in at 10 and knock off at 6 o'clock." That is only eight hours for the miners, but the wheelers are going all that time from 6 till 6.

5744. Are these wheelers men or boys? You may call them young men of from 17 to 18 years of age; some, perhaps, are older.

5745. On these days they have been employed about twelve hours? Yes, about twelve hours.

5746. Has there been anything of that kind done quite recently? On June 30th we worked upon coal from 6 o'clock to 6:50. That is my own time. The pit works then from 6 o'clock to 6. Those are the orders.

5747. Is that making you stop there almost thirteen hours a day? Yes; I am stopping there that time. If the men go in at 6 o'clock in the morning I go at 6.

5748. *Mr. Gregson.*] Are you paid by the hour? I am paid by the day; of course, I keep every minute, and everything over my hours. I put in eight hours after that. I am paid from 7 o'clock to 5 o'clock as a shift.

5749. You are paid for everything over eight hours? No, sir; from 7 o'clock in the morning till 5 o'clock in the evening is ten hours. One hour is included in that for meals. That is a shift. I am paid for that as one shift; everything over those hours I am paid for at the rate of eight hours per shift.

5750. *Mr. Curley.*] You put in overtime? Yes.

5751. *Mr. Gregson.*] Are you rather glad of the overtime? Personally, I am not.

5752. *Mr. Curley.*] Would you prefer the regular thing? I would prefer the regular thing, which is a day's work, and go home.

5753. You do not believe in working a day and a half? No; I do not believe in working a day and a half in the twenty-four hours.

5754. Do you think the men are satisfied with the eight hours? As far as I can get an expression from the men, I think the men would be satisfied with the eight hours.

5755. Do they believe in a matter of this kind being left to the management—in a mutual agreement—or do they want it legislated for? All the information I can gain is that it will have to be done by legislation—that there is no hope of getting it in any other way.

5756. Do you think these young men that you spoke about would prefer to work only the eight hours instead of twelve? Yes; I think they would. I have heard expressions of opinion, but not from the young men themselves, that they have been very much dissatisfied with having to stop this overtime.

5757. Whom have you heard these expressions from? From some of the miners.

5758. Have the miners ever been requested to go back to the mine at night-time, after they have worked their shift during the day? Yes, miners have been requested; but I could not point to a particular person.

5759. Would that be only an occasional circumstance? Only an occasional circumstance, I think.

5760. What weight does a man start with when he starts at the colliery? The average weight of the skips that are weighed during the fortnight if he is not weighed; it used to be different when I first started; it used to be 10.2 and 11. We have two weights at our colliery. There are four different sizes of skips, but they are classified into two weights.

5761. There would be large skips and small ones? Yes; they go under the name of Tommy skips and Kembla skips. Tommy is the larger skip, and Kembla the smaller.

5762. Do you arrive at anything like a fair average with these skips running in that fashion? We average

Mr. W. T. Philpot. average all the skips up every fortnight on the weight-book, and if a man is weighed three times in the fortnight he is paid on the average of those three weights that are taken. We take all that has been weighed during the fortnight and strike the average from that, and that is the average for the colliery for that fortnight, and if a young man should start, and he has not been weighed, then he is paid at that average.

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5763. Where you have such a disparity between skips as you have mentioned, is it not almost a necessity for every skip to be weighed in order that a man should get a fair average weight? I think it is.

5764. *Mr. Gregson.*] Did you tell us the number of days you worked when you turned out that 3,520 skips? We worked seven and a quarter days, and three-quarters of a day overtime. That is my own time.

5765. Can you give an idea of the average number of days you worked for any period? No; I never took the average of days worked.

5766. Would it be half-time? Yes; more than half-time. During the fortnight there have been some few hours through the night when coal came out that I have not been there.

[Witness withdrew.]

David Ritchie sworn and examined:—

Mr. D. Ritchie. 5767. *President.*] What are you? I am at present check-weighman for the employees of the Mount Kembla Colliery.

5768. That is Mr. Ronaldson's colliery? Yes.

5769. *Mr. Ourley.*] Had you worked at the Mount Kembla Colliery previous to becoming check-weighman? Yes; I worked in the colliery for about fifteen months previous to becoming check-weighman.

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5770. Have you worked in the Wollongong District for any period of time at other mines? Yes; I have been connected with the mines in the Illawarra District for the last eleven or twelve years.

5771. What other mines did you work at in that district? Mount Pleasant and Mount Keira.

5772. How long have you held the position of check-weighman? A little over twelve months now.

5773. What is the system of weighing there;—are the men paid on the average, or do you weigh every skip? The system of weighing there is that, supposing two men start fresh at the colliery to-day, they are placed on what is called the standing average for the pit, which gives them 10 cwt, 3 qrs. for each skip. There are two kinds of skips in that particular pit. One skip is an iron one, and the other is a wooden one. One will carry about 2 cwt. more than the other. They stand on that weight until they happen to be weighed, and no man can tell when that will be, because the system of weighing that is carried on at present is entirely in the hands of the Company itself. It is a matter of their pleasure as to how many shall be weighed, if any. I have just gone over my book, and I find that the average for the last fortnight runs twenty-four to the thousand. Of every thousand that are drawn from the pit there are twenty-four weighed. That is for the fortnight ending 28th September.

5774. *Mr. Gregson.*] For one fortnight only? For one fortnight only. I have gone through my books for the last quarter. There are men working in the pit who, I can prove, have been standing on this 10 cwt. 3 qrs.—the pit average—for two months without being weighed. My books also show that men in the adjoining places, working similar coal, are standing on 14 and 15 cwt. That is their weight.

5775. *Mr. Ourley.*] Have you the numbers that these men run? Yes. I have also taken the trouble to go through the last fortnight's work, and I find that the average of every skip that comes out of that pit runs 11 cwt. 2 qrs. 21 lb. That is taking the small with the large skips. The pit is worked in four flats. They are known as No. 1, No. 4, No. 5, and the shaft. The section that these men I have just spoken about were working in is No. 1. They were working in the best part of the pit for weight. I have taken the trouble to average the skips from that particular section for the last fortnight, and I find that the average weight of the skips runs 11 cwt. 3 qrs. 14 lb. for that section, where those men were receiving 10 cwt. 3 qrs.

5776. With regard to this 10 cwt. 3 qrs. that you speak about as a standard for a man to begin with, have you ever approached the manager to try and get that altered in any way? Personally I have not. I have not been able to approach the manager upon anything.

5777. *President.*] Why? For the simple reason that he would not acknowledge me in anything. He would not speak to me upon any consideration. What his reasons are for not doing so I do not know; they are best known to himself.

5778. Are you check-weighman there now? I am check-weighman there at the present time. There is no end of grumbling every day with regard to the twenty-four per thousand. The men are continually grumbling about not being weighed, and the power is not mine to weigh, though I receive all the grumbling, being their representative there. As it is at the present time the Company's weighman has a great many other duties to attend to, and sometimes I have seen him away out of the weigh-cabin for an hour at a stretch. Of course during the time he is away all weighing is suspended. That accounts for the very small number of skips that are being weighed. To show that the men have just grounds for grumbling at that particular colliery I may say that there are four sections in that pit, as I mentioned before. Every skip that has come out of the section known as No. 1 in the last fortnight runs an average of 11 cwt. 3 qrs. 14 lb. Every skip that has come out of section No. 4 runs an average of 8 cwt. 2 qrs. There is a very marked difference. At the end of the quarter, or any other time during the quarter, men who leave this No. 4 section to go to No. 1 section carry their 8 cwt. 2 qrs. of an average with them to the No. 1 section, and they may stand there for two months on that low weight, when men adjoining them may be filling 15 cwt.

5779. *Mr. Gregson.*] In the opposite case, when a man leaves the No. 1 section, where the weight is 11 cwt. 3 qrs. 14 lb., and goes down to the No. 4 section, where the weight is 8 cwt. 2 qrs., does he carry the 11 cwt. 3 qrs. 14 lb. weight? He does; the system is not fair at all. There are not many skips come out of the No. 4 section where the low weight is. There are only six or seven men working there at the present time. They get one set a day, and that one set would take about fifty skips. One pair of men will have, perhaps, thirteen or fifteen skips on that set, and the weighman, if he thinks fit, can weigh the whole of the men working in that section where they are running the low weights any day he likes. On the other hand, there are about ninety men working in the other section, known as No. 1, where the high weights are obtained; one pair of men will not have more than two skips on one set, and some sets they will miss altogether, so you see the chances of getting weighed out of the No. 1 section are not nearly so

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many as they are in the No. 4 section. A man going in from the heavy weight into the low weight simply can be weighed the following morning, but the man going from where the low weight is prevailing to where the high weight is prevailing may stand there for the time I have mentioned, two months on a stretch without being weighed at all.

5780. To cure that you want more skips weighed? Yes, we want more skips weighed.

5781. Would keeping one screen going all day answer the purpose? It would be a great improvement; but I do not think anything would give satisfaction other than weighing every skip.

5782. Supposing one screen were kept going the whole day, there would be very much less loss either one side or the other? The loss would be still great to the men.

5783. How would it be? The screens for weighing are so unworkable and unwieldy that if they were weighing the whole day they would not weigh a fair percentage.

5784. How many skips have you weighed in a whole day? Myself and the Company's weighman have weighed on an exceptional day fifty.

5785. What is the number of skips you bring out in a day? They average about 1,000.

5786. Fifty out of a thousand? Yes; that is an exceptional day, mind. The screen is so flat that it wants one shoving it down and the other pulling it down. Although I act as check-weighman, I assist in pulling it down.

5787. Do you consider one skip in twenty is a fair average? No.

5788. If you get one in twenty weighed, is it not likely that if there is any error it is just as liable to be on one side as the other? No.

5789. Why? A skip is always liable to lose coal coming out, but never likely to gain. If it should happen that one that has lost a certain portion of coal coming out of the mine should be weighed, the whole of the skips for that particular day, and for as many days as you might stand on the weight of that skip, go at the same weight.

5790. Suppose that all the skips were weighed, would not the miner suffer the loss on the skips that lost weight travelling from the bord to the weighbridge? On the one skip alone.

5791. But every skip you want weighed? Yes.

5792. If they are all tumbling coal off, would they lose that? I do not mean to imply that all skips lose coal. I mean that one skip out of the day's work might get broken on the way, and that one in particular might be the one that would be weighed. If a man fills twelve skips in the day, and one out of the twelve gets broken, that one might be weighed, and the other eleven are averaged at that weight.

5793. *President.*] Supposing there is a skip that no coal tumbles out of? He gets the benefit.

5794. Supposing coal tumbles out of the whole lot that he brings, would he not get the benefit afterwards? He would get the benefit, but it would not be likely to occur.

5795. *Mr. Gregson.*] Do you object to a skip being weighed when it is a broken skip? I do; but there is a standing rule there, which is enforced by Mr. Ronaldson, or others when he is not about there, that unless a skip is marked by the wheeler, or other official inside, it must be weighed.

5796. *President.*] What does marking mean? That it has been broken previously to leaving their hands. I pointed out to the Company's weighman that after leaving the wheelers and those in charge of the flats a skip has a long way to travel at Mount Kembla, and that it is an easy matter for it to get broken after leaving their hands and to come out without being marked at all. It can be proved that without it breaking at all a good quantity of coal falls off on the road.

5797. *Mr. Gregson.*] If they were better packed, would it happen? That is not the only cause. Coal is not all of one nature. You will find brittle coal that will not carry far, and you will find some coal which will carry any distance provided it is packed properly. A man may have brittle coal and it will not carry far, because a bit of a jolt going round a turn will send it away, consequently the number of skips that have been weighed there is altogether inadequate in my opinion, and I can testify to the grumbling of the men there daily. I can also testify to the just ground they have for grumbling, which my books will prove.

5798. You were speaking about twenty-four to the thousand; if you could manage fifty to the thousand, would it be a great improvement? Of course it would be a great improvement.

5799. But you think nothing will be perfect short of weighing the whole of the skips? Nothing short of it. I admit, however, that to weigh fifty in a thousand would be a very vast improvement. Of course I have already said it would not give the satisfaction that people would desire to see prevailing. My own opinion is that the matter of cost in making the necessary alterations to begin with should not stand in the way of meting out justice to all hands who are employed. I do not think there should be any limit to meting out justice; that is my candid opinion. Justice should be served to all at any cost.

5800. *Mr. Curley.*] Do you not think that that is a plea that can be constantly put forward on the part of the proprietors that you are always going to run them into additional cost? Certainly that plea has always been put forward, and always will be while it is listened to.

5801. Do you know anything about the working-hours at Mount Kembla? Yes; the system at present in vogue there is what is known as an eight-hours shift—that is to say, the pit draws coal for a period of ten hours. The front shift goes in at 6 o'clock in the morning, and comes out again at half-past 2. What is known as the back shift goes in at 8-30 and comes out at 5 o'clock. That is the system that is generally worked there. On the 15th June, 1895, the following notice was posted up:—

Fourteen days from this date miners and other workmen employed at this colliery will be required to work on Pay Saturdays for such number of hours as the exigencies of trade demand, and to start work at any time up to 9 a.m. as on other days when required; and employment will be subject to acquiescence in this rule.

J. H. RONALDSON, Manager,
Mount Kembla Colliery.

On the 17th July last the overman stopped the front shift as they came out of the pit, and told them that both shifts had to be in at 6 o'clock in the morning and come out at 5 o'clock; that is to say, that they should extend their working-hours from eight to ten hours. He asked them if they were willing to propose that it should be done, and only one man in that crowd put the question to the meeting, and because the men did not vote for it the overman said to them, "What is the matter with your hands that you can't hold them up and vote." The same course was pursued in regard to the back shift; the overman intercepted them and told them that the front shift had agreed to go in at 6 in the morning and come out at 5 o'clock. The back shift, on hearing the statement, said nothing, but dispersed. As secretary of the lodge I called a meeting that evening to see what action they intended to take in the matter. A resolution

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resolution was put to the meeting, and unanimously carried, that the men adhere to the eight-hour system and decline to comply with the request which has been placed before them. The boat came in late on Thursday, and on Friday morning the men went to their work on the usual shifts. The overman was there and wanted to know why they were not in at the stipulated time, 6 o'clock, both shifts together. They said they were on the regular shifts, and that they had not agreed to go in both shifts together. He then said, "The screw is going on you now all right."

5802. *Mr. Curley.*] All you have said simply amounts to this, that at Mount Kembla an attempt was made to extend the hours from eight to ten? Yes.

5803. And the men declined to work these ten hours at the request of the manager? Yes, they did.

5804. Was there any further attempt made to ask them to consent to it later on? No further attempt only what I have stated. The manager told them that they would have to do it, and that this must not occur again when they were told to go in at that hour. They were notified to go in on the Saturday undoubtedly.

5805. The men would not agree to this? No.

5806. Notwithstanding the appeals of the manager? They would not agree to it.

5807. Did he then give a notice about the working on the Pay-Saturday subsequent to this? He gave a notice previous to this. That was his final notice which I have just placed before you. He gave a notice previous to that which the men would not entertain, consequently for the Pay-Saturday following, this notice was given. This notice was a fortnight later than the other one, to make that as a final fourteen days' notice that they would have to accept the alteration.

5808. And the men to come to some kind of agreement agreed to what is now going on? Yes.

5809. Are they now working what is part of the Pay-Saturday? Yes; they agreed to go in at 6 and come out at 12 o'clock.

5810. Has there ever been any request made in that district for the miners to work on a Sunday? Not to my knowledge. I have heard of it having been done, but I cannot say that I know of it.

5811. It has not occurred so far as you know? Not any further than I have heard it rumoured that it was so.

5812. You do not know where any requests have been made for the men to work on a Sunday? No.

5813. *President.*] Do they work regularly on the Pay-Saturdays, or only when there is some emergency? The understanding was that it should occur only in cases of emergency.

5814. You do not generally work full time? This last fortnight or two they have started eleven separate days in the twelve.

5815. You cannot take that as a general rule? No; it is not a general rule.

5816. The colliery is not kept in full work? No; it is not.

5817. If the colliery was kept at full work the miners would be very glad indeed to have their holiday on the Pay-Saturday, but when it is not at full work do they look upon it as a great hardship to have to work on Pay-Saturday, and get paid for it? They do, for the simple reason that, although the pit does not work every day, they are compelled to be there to go to work when called upon, so that practically the men are bound every day. They have to hold themselves in readiness every day in the twelve, and they always look upon the Pay-Saturday as a day to attend to their private affairs.

5818. Until what time are they obliged to hold themselves in readiness every day. Suppose that I am a miner and that there is no work doing on Monday, after what time on Monday am I free? At Mount Kembla you would be free at about 8 o'clock in the morning.

5819. Free for the day? They do not start after 9 o'clock. At the adjoining collieries, Mount Pleasant, and Mount Kiera, you are not at liberty before 12 o'clock in the day. You must hold yourself in readiness up to that time.

5820. In one case from 8, and in the other case from 12 o'clock, the men have a holiday when the mine is not in full work? Yes.

5821. Do you consider it a very great hardship under these circumstances to have to work on Pay-Saturdays when an emergency arises, supposing that for ten days or a week at a stretch the colliery is not at work at all; have you not got practically those days to yourself at Mount Kembla after 9 o'clock, and at the adjoining collieries after 12 o'clock? Yes.

5822. Yet you look upon it as a very great grievance that when an emergency exists you should work on the Pay-Saturday? Yes, we do. Working men are not men who have always got money to put their hands on during the working days of the fortnight. The Pay-Saturday is the only day they practically have it.

5823. Supposing they have not been at work all the week, what money would they have on the Pay-Saturday that they want the holiday on? The pays are usually made up fortnightly, and it is rarely, if ever, that there is a whole fortnight without work. Whatever work is done during that fortnight is not paid for until the Pay-Saturday, or Pay-Friday night.

5824. Supposing on the last Pay-Saturday they get their money, and that in the following week there is no work doing at the mine, would they not have all the week in that case to do what they like? They have to square up their last fortnight, but at the expiration of the next fortnight they are expected to be as punctual.

5825. Is the object of having the Pay-Saturday to spend their money as soon as they get it? Not entirely so. They look upon it as one day in the twelve which they should have to themselves—for instance, they have got their associations; these associations sometimes set a certain day apart to transact their business, and they cannot set a day apart depending on an idle day in the fortnight. If they have one stipulated day which they know will be theirs they can arrange their business for that day. We look upon it as a hardship to be compelled to give every day up. At present in the Illawarra district, if the men's association should want to have some meeting on the Pay-Saturday, the owners make the men work on that day. We have direct proof of that. That is the reason why we look upon it that Pay-Saturday is the one day we should have absolute control over.

5826. *Mr. Curley.*] How do you view the question of legislation in regard to hours? I view it, on behalf of men who are employed in coal mines, that the stipulated number of hours should not be more than eight hours from bank to bank. Eight hours I contend is quite enough to be engaged under ground.

5827. Do you think there should be legislation at all on the matter? Certainly. I am certainly of opinion that the men themselves are not strong enough to enforce what they desire to have. I can bring resolution

resolution after resolution that has been moved by the men, and carried unanimously, calling for an eight-hour day, and they are not strong enough to enforce it themselves. They are craving to have it through legislation. More than that, they are desirous that it should be made compulsory, and that they should be punished if they did more than eight hours' work. I come in contact with hundreds of them, and that is their unanimous opinion.

5828. Is this your own individual opinion that eight hours should be made compulsory? Yes, that is my individual opinion, and I am very firm upon it.

5829. By legislation? Yes, by legislation, and I am firmly of opinion also that there should be a penal clause to enforce it.

5830. *Mr. Curley.*] Can you give us the number of days your colliery worked last year? I cannot at present, but I can give you the exact time the pit worked from the 24th June to the 28th September, both days inclusive. The number of days were sixty-one and three quarters.

5831. Were they full days? They were not all full days; I make them into full days.

5832. Is what you have given us the total? Yes; that makes full days. There have been more starts than that, but that is the total put into days.

[Witness withdrew.]

David Mason sworn and examined:—

5833. *Mr. Curley.*] What is your occupation? Miner.

5834. *President.*] Where? Lambton.

5835. *Mr. Curley.*] Have you worked at Lambton for some time? Twenty years.

5836. Have you followed mining all your life? Yes; since I was ten years of age.

5837. What is the system of working at Lambton? Bord and pillar working.

5838. What is the width of the bords? The width of the bords is 8 yards.

5839. And the pillars? Four yards, I believe.

5840. Has that been the system of mining, as far as you know? So far as Lambton is concerned.

5841. Have you worked in pillars at the Lambton Colliery? Yes; I am working in pillars at the present time.

5842. Do you know of any falls that have taken place, of any extent, in connection with the pillar working? Yes; a great many falls have taken place since I have been there working pillars.

5843. Do you know of any falls that have taken place, where men have had to fly for their lives, and had a narrow escape in getting out? There was one particular instance, in the New Chum district, where they had a very narrow escape of their lives at one time; but I was not working in that portion of the mine at that particular time.

5844. Was this a matter of general conversation amongst the men? At that particular time, and for some time after the fall it was.

5845. Did you converse with some of these men yourself? Yes; most of the men lost their tools.

5846. That is their working gear? Yes.

5847. Were many of them affected in that way? I could not say exactly what quantity of men were working in that district; but I know the tools were all replaced by the management.

5848. Later on? Later on.

5849. Did you hear the men say whether the roof had come over the pillars? I heard the men say that the roof had come over the pillars unexpectedly.

5850. Have you worked in some very small pillars yourself—very thin pillars? I have at times. Generally speaking though the pillars at Lambton are about 4 yards wide; but there are instances sometimes where one encroaches on the other in the bords, and it makes the pillar smaller—5 and 6 feet sometimes. I have worked in pillars that small.

5851. Have you sometimes worked in a pillar that runs pretty well into the goaf away from the main road? Yes; in one particular instance I have.

5852. Did you consider that that was a safe method of working pillars—did you like it? When we thought that there was any danger we reported the matter to the overman, and he ordered us out of it.

5853. Did you draw his attention at any time while you were working there to the fact, that you thought it was dangerous to work there? Yes.

5854. With an experience of that kind, do you consider that larger pillars should be left in the mines? A great deal depends upon the height of the seam. The seam at that time, at Lambton Colliery, was 8 feet 6 inches; now it is only from 5 to 6 feet.

5855. Do you think a good deal depends upon the strata above the seam? Yes, I do.

5856. Have you any idea as to the depth of the mine? It is a tunnel. Of course in some portions we are working now there would be 300 or 400 feet of surface on it, I daresay; that would require larger pillars to support it.

5857. Do you think that there should be larger pillars left than the 4 yards, where the surface is anything like what you state above the coal-seam? I think where there is a great depth of covering over a seam, the pillars should be 6 yards wide.

5858. And in some cases, I suppose, they should be much larger? It depends a good deal on the nature of the coal. Some coal frets a good deal—it is tender; other coal is very strong. The majority of the Lambton coal at present is strong coal.

5859. Is this pillar working a business that has been left entirely in the hands of the management? I believe so.

5860. How many miners are there working in the Lambton Colliery now? Somewhere between 160 and 170.

5861. Having worked in the Lambton mine for the number of years you mentioned, I daresay you know a good deal about the ventilation in the different parts of the mine? Yes, I do.

5862. Have you found any defects in the ventilation occasionally in some of the districts? At times we have. Generally speaking, it is pretty well ventilated; but there are times when we have to complain.

5863. On these occasions, when you have to complain, have you noticed that the air is very injurious to the men who have to work in these places? Yes.

5864. What defects have you had most to complain of—can you recollect? Not particularly. Generally speaking,

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- Mr. D. Mason, speaking, as I have said before, it has pretty good ventilation; but there are times when we have to complain to the manager about the scarcity of air, and he has generally had that remedied. In the Straight Down district there have been complaints lately.
5865. Is that what you call Fairish's Flat? No; Fairish's Flat is to the crop.
5866. Are there many men in the Straight Down? I could not exactly say, because I have not been down there. I believe there are ten or twelve bords down there.
5867. Have there been complaints there quite recently? Yes.
5868. Have you heard the men complaining yourself about it? Being Chairman of the Lambton miners, of course the complaint was made to me.
5869. *Mr. Gregson.*] Are you Chairman of the Lodge? Yes.
5870. *Mr. Curley.*] When these complaints are made do you generally make representations to the manager? Yes. We did not on this occasion, but we sent the check inspectors round in order that they should test the air, and see if there was any reason for complaining. That is our mode of doing business generally.
5871. Did the check inspectors report substantiate the representations of the men? The check inspectors have not given their report yet.
5872. Do you consider that the ventilation should be continued into the working face? Yes; I think that is highly necessary.
5873. Do you think it sufficient to have it simply passing along the heading without going into the working place? No, I do not.
5874. Do you consider that one of the defects of the present Act? I think that is one of the greatest and most important defects in connection with mining.
5875. Have you thought over the matter of conducting the air into a bord by bratticing, or would you shorten the distance of the cut-through? I have had some experience in connection with that at the Lambton Mine. A short time ago Mr. Croudace started to brattice the bords, and there was a considerable improvement. I told Mr. Croudace himself it was one of the most beneficial acts he ever conferred upon the men by doing so.
5876. Did he do this of his own accord? As far as I can understand.
5877. Do you know what districts that was in? The Far Flat district I was working in at that particular time.
5878. Was the brattice put into your place? Yes.
5879. Did you find it a considerable improvement? I found a considerable improvement, because the end of the old bords were stopped up, and the air was conveyed into the face.
5880. Do you think that every miner would experience a similiar benefit if that was carried out in connection with mining? There seemed to be a general expression of that opinion on that occasion amongst the Lambton men.
5881. Was the brattice carried very far up the place at the time? Within about 10 yards in some instances.
5882. From the bord end? From the bord end.
5883. Was it canvas brattice? Tarred with Stockholm tar, I believe.
5884. Have you looked over the proposed Bill with regard to the increased minimum quantity of ventilation. Have you seen the proposed Bill? I saw the last proposed Bill some time ago, but not recently.
5885. Look at section 47, p. 23, Rule 1. [*See Appendix A.*] Those marks that run through the clause there represent the amendments suggested by the Legislative Council, that is, they strike those out, and those larger additional black letters which you see placed in they have substituted. If you read the clause right through without those marks, and omit what has been placed there by the Legislative Council, you will have the clause as it originally stood. You will see that it provides for 150 feet as a minimum quantity, and also for cut-throughs at 25 yards. Do you consider that would be an improvement? I would consider that a great improvement. That is, 50 feet more of air would pass per man.
5886. Along the heading? Along the heading.
5887. And with the shorter cut-through? With the shorter cut-through.
5888. You think it would be a great improvement? I think it would be a great improvement. I would not think it necessary to shorten the cut-through if it were bratticed in the way I have mentioned.
5889. Without the brattice? Without the brattice I should consider it a great improvement. I think it is plenty far enough—in fact too far for bords going to the rise.
5890. The 25 yards? The 25 yards. A bord going to the rise or any places going to the rise are very difficult to air.
5891. Do you think a provision of that kind should be in the Bill? Yes, I think so.
5892. Do you think that the minimum should be increased beyond what it is at the present time? Yes; I think 150 feet would be a very good provision. You must understand that at the present time the present Act says 35 yards. Then there are 2 yards of a cut-through, and the width of the pillar is counted in addition to that before you get the air, so that in many cases I have found it has been 41 yards instead of 35 yards where it has been a thick pillar.
5893. Do you think a minimum quantity is necessary in a mine? I think the minimum quantity is absolutely necessary.
5894. Do you think the word "adequate" would meet the conditions? It would leave it an open question as to what the manager thought was really adequate.
5895. Do you not think a good deal of difference of opinion would arise on that question? I am satisfied about that.
5896. And that while the manager said it was adequate the men in all probability would consider in some cases it was not adequate? Yes. Some districts are far different to others. With regard to other mines working close to the crop the same as Fairish's, where there is a lot of heavy carbon, it is highly desirable that there should be a large amount of pure air, because the air is so detrimental to a man's constitution. The places in a mine vary so much with regard to noxious gases. In Fairish's Flat particularly there is a lot of carbon.
5897. What kind of gas? Carbon—heavy, dense air, that seems to come out.
5898. Carbonic acid gas? Yes. Although it is good work, there are plenty of men who would exchange to a rather hard laborious place sooner than work in it; the air is so detrimental to their constitutions.

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5899. Would they prefer to change into worse work for purer air? Yes.
5900. Have you known that done? Yes, I have known that done; yet it appears to be well ventilated.
5901. Do you mean to say that there is an element in the air that causes it to be impure? Yes, I do.
5902. Although there appears to be a good quantity of air there? Yes, I do.
5903. Is that where there is some return air? No, it is in nearly all the places in the crop work at Fairish's Flat. If you put your light down on the bottom it will almost go black.
5904. Is that in consequence of this black damp, or carbonic acid gas escaping out of the old workings? The workings are of a very damp nature, and it appears to come from both the roof and the bottom, so far as I can understand.
5905. Do you consider that to be most injurious to the health of the men? I do, and it has been found out to be so by the men themselves.
5906. Have you made representations to the manager about this particular air? Yes, there have been representations made to the manager, and he has had shafts put up to cause a greater circulation of the air, and that remedied the defect to a very large extent.
5907. Do you know Mr. Evans, who used to be there as check-weighman? Yes.
5908. Do you know that the colliery suspended work some time ago? For five weeks I believe; we all had notice.
5909. Did you all have notice that your services would not be required? Yes.
5910. At the termination of that notice did the mine come to a standstill? The mine came to a stand for five weeks.
5911. Was Evans your check-weighman at that time? He was the check-weighman when we ceased work.
5912. Did the colliery resume work again after that five weeks? Yes.
5913. Were the men still willing to engage Evans in his old position? Yes; as far as I could understand. In fact, it was understood that he was still the check-weighman.
5914. You understood that? Yes.
5915. Do you know if he went to see the manager to see if he would engage him as one of the employees, in order that he could take up his old position? He did, at my request. I requested him to do so, knowing that the Act said he must be an employee of the colliery before he could resume his work.
5916. You advised him to do that? Yes, I advised him to do it.
5917. Do you know that the manager refused to do that? Yes; the manager refused to give him employment.
5918. In that way was he prevented from taking up his position? Yes; I believe Mr. Evans waited upon the management himself with regard to it.
5919. Do you know that he did? I know he did, and they refused to employ him.
5920. Had the men to make another appointment from one of their number? Yes.
5921. Do you consider that the workmen at a colliery should have the right to select their check-weighman from wherever they choose—either from amongst themselves, or from outside the colliery if they think fit? I think they should be left to their own choice, seeing that they have to pay the check-weighman for looking after their interests.
5922. Do you consider that the standard weight should be abolished? Personally, I do.
5923. Do you know if this is the feeling of the men at the colliery? I could not say that at the present time. There was an agitation with regard to that some years ago.
5924. Was it the wish of the men that the standard weight should be discontinued? At that particular time it was.
5925. Have you any idea of the number of skips that are weighed at Lambton in a day? I could not say exactly, but I asked the check-weighman some time back, and I think he told me then from 90 to 100 a day.
5926. Do you think it is that many? I could not say. That is what he told me on that particular occasion—from 90 to 100. I could not say exactly. It is a matter I never interfere with.
5927. Have you heard the men express a wish that every skip should be weighed? Some men have expressed the wish. It is done I believe in the county of Durham, and those men that have been used to that principle of weighing wish the same principle adopted out here.
5928. Do you think it is the most accurate way of ascertaining a man's weight? Yes; I think it is.
5929. Do you think a miner should be paid for all he produces? Yes; I think he should be paid for all he fills.
5930. What hours do you work at the Lambton Colliery? Eight hours.
5931. That is, the men work eight hours? The miners.
5932. The colliery, I presume, works ten hours inclusive of the time for meals? It starts at 7 o'clock and knocks off at 4 o'clock, with one hour for meals. There are two breaks.
5933. The drawing hours are really eight, exclusive of the time for meals? Yes; that is all.
5934. That is for drawing coal? Yes; there is half an hour at breakfast and half an hour at dinner.
5935. Have you known of any attempt to extend the hours? No; I have not.
5936. Are they uniformly kept up to that standard? Yes.
5937. Do you think that the eight hours should be embodied in legislation? I think it should be.
5938. Have the men any guarantee that the eight hours will be continued at any time? No; they have no more guarantee against the eight hours being increased than they have against a reduction in the wages.
5939. Would that be one of the reasons why you wish the eight hours to be legislated for? Yes.
5940. Do you think it is long enough for a man to be working in a mine? I think it is too long if anything.
5941. Do you think it is the general wish of the men that the eight hours should be legislated for? In the Northern District it is.
5942. Have you a full opportunity of hearing the men express their opinions pretty freely? Yes; I have been Chairman of the Lambton Lodge for four years, and I have been invited to other collieries at meetings where there has been an expression given of that opinion. I am satisfied from what I have heard that it is the general opinion of the miners that there should be an enactment.
5943. In matters of danger in connection with the mine, do you believe that the Inspector for Collieries should have the power to withdraw the men? Yes; I do.

- Mr. D. Mason. 5944. You would not leave that power in the hands of the manager? No; simply for the reason that the manager is always very anxious to get as much coal out as he possibly can.
- 2 Oct., 1895. 5945. Do you think that his anxiety to get the coal out might make him hazard whether the men should be brought out or not? I think that, although I could not say so as far as Lambton is concerned. Whenever there has been any danger apprehended there the men have been called out at once, although the places have not come down for weeks after. Still I think it should be left in the hands of the Inspector to call out any men when he thinks the mine is not fit to work in.
5946. Although you hold the opinion that you think the manager would withdraw the men? Yes, I do. Some managers would, I could not say for all.
5947. You think some managers would? Some managers would; I could not say for all. I would not leave it an open question.
5948. Whether they would or would not would you leave that power in the hands of the Inspector? Yes; I would.
5949. In the event of apparent danger, and the manager objecting to the men coming out or being withdrawn, would you wish that a manager, at the request of the men, should send for the Inspector at once in order that there might be a consultation on the matter? Yes; where there was an opinion of that description expressed, I would.
5950. You know the men cannot very well, of their own accord, leave the mine? No; they are not allowed to do that without instructions from the management.

[Witness withdrew.]

James Rowan, Esq., Inspector of Collieries, sworn and examined:—

- J. Rowan, Esq. 5951. *President.*] You are an inspector under the Coal-fields Act? Under the present Coal Mines Regulation Act.
- 2 Oct., 1895. 5952. For what district? The Southern and the Western Districts.
5953. *Mr. Curley.*] How long have you held the position of Inspector of Collieries? Twelve years.
5954. *President.*] Before you held the position of inspector did you understand the management of coal mines? Yes. I have been in the mines since I was 9 years of age. I have passed through all the different branches of coal-mining, stone-mining, and sinking, and was manager of a colliery in Scotland for ten years. I passed a government examination at home, and received my certificate of competency under the English Coal Mines Regulation Act of 1872.
5955. *Mr. Curley.*] What positions have you held out in this colony? I sunk a shaft for Mr. Fletcher, in Wallsend, at Plattsburg—the Co-operative Company, and then I was deputy under young Mr. Fletcher in the Co-operative Colliery.
5956. I suppose you are pretty well acquainted with the various systems of mining, such as longwall, pillar, and stall? Yes, pretty fairly; I passed through them all.
5957. In carrying out your duties as inspector, if you see anything irregular in connection with any of those mines you inspect, do you draw the manager's attention to it at once? In connection with inspections I make under the present Act, if there is any breach in connection with the Coal Mines Act, or the special rules of the colliery, of course the manager is dealt with, but in practice if there is any danger which is not expressed in the Coal Mines Regulation Act or the special rules, we deal with it under the 25th section.
5958. That is with regard to the withdrawal of the men? That is in connection with any practice that is dangerous in the opinion of the Inspector he draws the manager's attention to it, shows him where the danger exists, and requests him to remedy the matter forthwith. The manager then has the power to appeal against the Inspector's judgment to the Minister for Mines, and then the case has to go to arbitration.
5959. Have you met with any defects in connection with those mines in your district at different times? Yes, they are cropping up occasionally.
5960. What is the nature of these defects that you have come across occasionally? Defects that are not expressed in the Act. I might cite one of which I think has been referred to. Sometime ago I received a letter from the Minister for Mines, Mr. Abigail, that they had received notice that a serious land-slip had taken place at Coal Cliff Colliery, and instructed me to leave at once, inspect, and report upon it. There was a great commotion amongst the people about the place, and the severance had been made for three quarters of a mile in a semi-circle. It had upset one of the railway bridges, and twisted the side of the Police-station. After I went below I made a careful examination. I was satisfied that it was no subsidence underground, that had caused, or was making the land slip. So far as I could judge I calculate there were 200 feet of cover seemingly on one great move. I went to the manager and said: "Mr. Williams, this is serious, this is a dangerous affair. I think it would be better if you were to stop the men from working till the cause and effect of this landslip be further ascertained." He did so; the men were idle for three days. It had been an alluvial bed about 200 ft. deep, and it seemed to be on a hydraulic move, and I was afraid the whole thing would slip over and engulf the men who were under it, because they were on the edge of the water. This severance on the surface seemed to subside in some way or other. The miners themselves had been doing some testing by boring, and they were satisfied there was no danger. Eighty signed to the effect that they were willing to work. That is one of the positions that inspectors are placed in. It all ended well; but suppose it had been the other way, which it might have been, it would have been said "The inspector was called, went down the pit and examined it; the matter was allowed to go on, and eighty men were engulfed." In that case the men and the press would have been for lynching me, and I would have stood a public disgrace to the department to which I have the honor to belong.
5961. *President.*] Did the manager do what you asked him at once? He did.
5962. And everything was obviated? There was evidence given that I had stopped the colliery, and the company was going to sue the Government for £20,000 damages.
5963. *Mr. Curley.*] What evidence do you refer to? The evidence given at the time that an inspector had stopped the Coal Cliff Colliery.
5964. When was this evidence given? I think the evidence was taken before this new Coal Mines Bill.
5965. Do you refer to some Select Committee? Yes.

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5966. Do you know who tendered that evidence? I could not say on the spot from memory.

5967. *President.*] Do you know who asked you the questions? It was not me. It only came out in the evidence.

5968. It came out by somebody else? Yes; I mentioned this because Mr. Curley asked me if I found any difficulty in connection with matters in mine inspection.

5969. *Mr. Gregson.*] Assuming that, where is the difficulty? There is a difficulty, if an inspector sees anything dangerous, in calling out the men on his own authority. I think, so far as he is concerned, that the present 25th section stands pretty well—that if he sees danger he is to write to the manager of the colliery, and state wherein the danger exists, and request him to remedy the matter forthwith, and the manager has the power to appeal against the inspector's judgment.

5970. *President.*] Do you say you want more power given? No; no more power, but it places an inspector in an awkward position to have power to do certain things on his own opinion, because he might be wrong, and yet things might be very dangerous.

5971. You mean to say you would rather he should not have any more power than he has? No more power than he has.

5972. Then you do not agree with any clause which says that the inspector shall have power in cases of danger to withdraw the men? No; I think it is too much power to place in the hands of any inspector.

5973. You know the clause I refer to? I do; and I only cited a case where it was very difficult to know how to act. Although I might not wish or believe that the inspector should have absolute power, nevertheless in the case I cited at Coal Cliff I was brought to a standstill, and had to act almost on my own responsibility.

5974. Do you think that if there is a case of imminent danger, the inspector should have power himself to withdraw the men? The danger must be immediate. I do not see any difficulty, because I never saw a case where the manager would object.

5975. In any case where you think an inspector would call the men out, you believe a remonstrance with the manager would be quite sufficient? I think so.

5976. Or rather that a representation to the manager would be quite sufficient? Yes; and serving him with a notice besides, stating wherein the danger exists. I think Mr. Croudace had something to do with that matter I referred to.

5977. *Mr. Gregson.*] You are quite content with the powers given under the 25th section of the present Act? Yes.

5978. And do not want them enlarged? No.

5979. *Mr. Curley.*] Is the very case that you have cited not an argument why you should have that power; you virtually took that power on on that occasion, or at least you moved the manager? I moved the manager in connection with it.

5980. Is not that very case you have cited an argument that the inspector should have this power? Yes; but the argument brought against the inspector is that that very thing is standing even now, and I was ridiculed on account of its not taking place. It was said that the colliery had been stopped for three days owing to want of knowledge on the part of the inspector.

5981. *President.*] Nobody blames you, surely? They were going to blame the Government to the extent of £20,000, and if it was not for John Robertson they would have done it too.

5982. The late Sir John Robertson? Yes; he was a sort of partner in the Coal Cliff Colliery.

5983. *Mr. Curley.*] Have you noticed the legal opinion which was taken by the Department some time ago, that an inspector was not to apprehend danger, or anything of that kind (*see Appendix Z*)? No; I could not say that I saw anything directly like that. I do not think there would be a great deal of difficulty with an intelligent management in drawing their attention to danger. They know as well as you if there is any difficulty or immediate danger.

5984. *President.*] Supposing there was a difference of opinion, and the inspector thought the men ought to be withdrawn, and the manager differed from him, either from self-interest—that is to say the employers' interest—or any other motive, do you think in that case that the inspector or the manager should have power to withdraw the men? If it came to a question of that kind I think the inspector should have a good say in it; but under the 25th section of the present Act, the Inspector serves the manager with a notice, and he can then appeal against the inspector's judgment. It is then out of the hands of the manager and the inspector, and in the hands of an arbitrator.

5985. Suppose I am the manager, and you say to me "I think that looks very bad. You had better withdraw the men," and you serve me with a notice, and the matter goes to arbitration—that takes some ten days? Yes, several days.

5986. Supposing the mine comes down in the meantime: what becomes of the men? That places it in a different light, but the manager is supposed to be a trained manager who has passed through examinations and knows the whole strata, and the working of the mine. With his intelligence he should know all about it as well as you know. It is just like two lawyers in one case.

5987. *Mr. Gregson.*] There would scarcely be a difference of opinion? There would not be much.

5988. *President.*] Do you mean to say that the cases in which a manager would refuse to comply with the request of the inspector, where there was imminent danger, would be very rare—that they would both probably agree at once? Yes, I am almost certain of that.

5989. So that you think practically there would be no use in any provision saying that the inspector should have power in cases of imminent danger to withdraw the men? I do not think so, or else it would be a very outrageous case.

5990. *Mr. Curley.*] Do you know of any such case as that in existence at the present time in connection with collieries? I know by repute of Stockton; that is all I know of.

5991. Do you know that the inspectors have not certified that that colliery is safe yet? I know it just by hearsay a little. I cannot say I know it. I do not go up to that district. It is out of my district altogether.

5992. *President.*] Who are the gentlemen in charge of that district? John Dixon, Mr. Humble, and Mr. Bates.

5993. *Mr. Curley.*] Do you know Inspector Dixon and Inspector Humble? Yes; they are both very good men.

5994. If you had known that they had both declined to certify that a mine was safe, when men had been

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withdrawn from it, and that they had requested the men not to re-enter until such time as they certified that it was safe, do you think their word should be respected? I do not know the full facts of the case. Did they request the manager to withdraw the men?

5995. No. The manager withdrew the men. They inspected the colliery, and they certified that the men should not enter the mine again until they certified it was safe? I think that the inspectors' opinions should have gone very far, although a certain time has elapsed and nothing has taken place, nevertheless it is fortunate it has not.

5996. Could not either one party or the other have gone to arbitration under the Act in such a case? I would have thought so. I would have thought that if the Government had served them with notice under the 25th section that the matter would then have been settled by a court of arbitration.

5997. Seeing that you have a circumstance of the character I have alluded to in existence, would that not impress you with the idea that the inspector should have some definite power and authority? As the President said, if it was a case of real imminent danger—almost a tumbling-down case—and you requested him to do so, and he did not do it, then I believe the inspector should have power to act, but that scarcely ever happens.

5998. That is in any case of apparent danger? Yes. Suppose you went into a pit and they had been taking out pillars, and you knew there was a great deal of ground exhausted, and the main drawing-way was very slightly supported with exhausted pillars, and you heard a creep—the floor packing, that is heaving, and the roof crushing, and the pillars crumbling, why you would say, "I am far enough; how many men are working in here?" "Twenty." "Why, are you not afraid that the whole thing will collapse? You know there is very little support on the side." "Oh, it's all right; she will fall through and settle down right enough." But I say, "It might be that the whole thing will close, and close us all in." In this case I say he should take out the men. If he would not take out the men, then I say the inspector should have power to say in the case of danger which is ahead, "I will do it on my own responsibility;" but prospective danger is a question of opinion.

5999. *President.*] You do not agree with the section as it stands here? No, not exactly. I believe in an immediate danger. If you see any danger coming meet it and meet it straight away; but I do not believe in anything prospective or unlikely.

6000. That is to say, a danger plainly some distance off? Some distance off that you thought of.

6001. Then you think there is quite enough provision by telling the manager what you want him to do and letting him go to arbitration? Yes. He must appeal against your judgment within seven days. Then it is out of the hands of both the manager and the inspector; but, in a case of immediate danger that requires to be dealt with, I think the inspector should have power to withdraw the men if the manager would not do it.

6002. *Mr. Gregson.*] In that illustration you gave us just now do you not think the manager would be just as ready as you would be to have the men out? That is what I said. I only said in an extreme case, A trained manager who had passed through the ordeal and knew the strata of the pit he had been working in should be in a better position to judge than the inspector, except it was a case of immediate danger.

6003. *Mr. Ourley.*] Do you know that inspectors of collieries, even before the 1872 Act was passed in England, stopped portions of mines or a portion of a mine where they thought it was somewhat dangerous for men to work—that they took that responsibility;—have you seen a circumstance of that kind in Hopton's book? No, I cannot say that I have.

6004. Look at the case he cites here on page 335 of his book "Conversation on Mines"—"The ventilation of the colliery was very bad. Only 19,000 feet of air per minute passed through the workings, and the mine gave off much explosive gas. The lamps in several parts were unsafe to work with, and the inspector found it necessary to stop some part of the mine. Gas came out of the workings now and then, and filled the safety lamps hundreds of yards along the main pony roads." Do you see there that Hopton speaks about the inspector stopping the mine or any portion of it? Yes.

6005. Do you not think that the inspector has taken some power in his hands when he talks about him stopping the mine where he thought it was dangerous for men to work? He seems to have done it on that occasion. The great difficulty I see is that the manager would be in a position to have a thorough knowledge of the danger as well as the inspector would have, and then I do not think he would run the risk of life and property if he really thought there was danger. I do not see where there would be any interest or advantage to him to allow life or property to be endangered.

6006. A manager might not have the idea of sacrificing anything in his mind at all, but still he might err in his judgment? Quite likely.

6007. And if there was a conflict of opinion, and the men had appealed to him about this matter being dangerous, and he had declined to withdraw the men, do you think it would be better if they had the power to request him to send for the inspector at once? Yes—present danger, as I have already said. I do not think I can say anything more to make it any plainer. If you are in the midst of a danger, and the manager will not do it, I think the inspector ought to have power according to law to do it on his own responsibility.

6008. *Mr. Gregson.*] You think the men would not require him to do it in that case—it would not want much calling attention to? No; that is only taking an extreme case.

6009. *Mr. Ourley.*] This sub-section 5 (clause 21) (*see Appendix A*) refers definitely to inflammable gas. You will admit, I dare say, that that is not a matter to be trifled with, or looked upon in an inconsiderate way? No, it is not. I had only one case in connection with inflammable gas, but of course the manager reported to me straight away, and I came down and found that the men had destroyed a certain amount of brattice, and 13,500 cubic feet of gas had accumulated in eight hours. Of course, the manager suspended the men straight away.

6010. Where was that? In the Metropolitan Colliery.

6011. *President.*] You think a good manager would know as much about the danger as an inspector? That is what I say. A man who has graduated and passed through the whole thing, and knows the strata of the whole colliery, because he is there daily, would know as much about it as the inspector.

6012. Would he withdraw the men in the case I put? Yes.

6013. You think the section as amended in the way I have suggested is unnecessary? You put it in connection with being in the midst of the danger, the inspector thoroughly believing that the danger was there,

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there, and that it was not something prospective, or something likely to come about; but I would say, suppose he was standing in the danger, and that he requested the manager to do it, and he would not, then the inspector ought to have power to deal with it.

6014. Could such a case exist? It is supposing a very extreme thing, because the managers are there and have the interests of the men and the property in their charge. I do not see why the manager should sacrifice or destroy the property for any cause.

6015. *Mr. Gregson.*] To say nothing of loss of life? No.

6016. *Mr. Curley.*] Do you think the men's lives should be the first consideration? Yes; life before property.

6017. Then you can imagine that a condition of things may exist where it would be necessary for the inspector to have the power to withdraw the men? Yes; it may so happen, but it is very unlikely. I think if he serves the manager with notice in the presence of the danger, and the manager will not act, then the inspector ought to have the power to do so.

6018. Do you, in going your rounds in connection with these mines, draw the manager's attention to matters that strike you at any time as requiring attention;—do you draw their attention verbally to these matters, or give them a distinct communication in writing upon the subject? In connection with any danger?

6019. In circumstances of any importance? If it is of any importance I might go round the mine and say, "There is no breach in connection with the Act, or the special rules; everything seems to be going right enough, but there is a certain thing you have to watch a little bit. I may be wrong, but nevertheless you just think it over." I might go that length without dealing with him in writing. In nearly every case I have had he has said, "I have not thought it over, but I will think it over, and do it. Prevention before cure." In common cases he has done the thing without any notice at all; things that are not of great danger—some little thing which requires a little thought.

6020. *President.*] Have you generally found the managers compliant with your desire? Yes.

6021. Have you found any exceptions? There was one case. I was only a witness in that case. That was in Newcastle-Wallsend, where Inspector Dixon requested a manager to do a certain thing which he did not comply with.

6022. *Mr. Curley.*] Did you inspect the colliery? Yes; I went round. Mr. Dixon could give you all the particulars. The facts were that there were seven blowers giving off fire-damp, which the inspector considered dangerous, and he served the manager with notice under the 25th section to remedy the matter. Of course the manager did not comply with the inspector's notice, for which he was brought to court, and fined £1.

6023. It was a breach of the Act? Yes.

6024. I think you have had some experience in the southern district in a mine that was giving off gas at Bulli? Yes.

6025. Did you see that gas given off yourself? Yes. I could not say that I could see it. There was one occasion I think when a man was working in a narrow cutting, that I thought I could detect a blue cap on the light by holding it away in a crevice. The first indication is a tapering blue light, in a safety lamp, caused by the gas.

6026. Did you consider the question of bratticing at that time in connection with any of these places? No; I did not think that there was really any need of bratticing. There was a good current of ventilation, and I did not see any need for it in going through casually. Of course we all see things differently now.

6027. Do you know that the Act provides that where a place is giving off gas it is to be bratticed up to within three yards of the face? Yes.

6028. Do you not think that it is one of the inspector's duties to notice this? Yes.

6029. That is that an inspector ought to fully realise that gas is a very serious business? Yes.

6030. You say you did not give much attention to the brattice at that time? No; I did not say that I did not give any attention to it.

6031. You said that you did not see that it was necessary? Yes.

6032. Do you know that is one of the points raised by the Commission that inquired into the business—that they referred to the question of bratticing? No. I know it says "Where gas is given off." But it is a question where gas is given off. I say I never saw anything to lead me to believe gas was given off, except in the case I told you, in the crevice—in a recess.

6033. Here is one of your reports dated the 2nd September, 1886, in which you make the following statement—referring to the Hill End district:—"The miners in this division are working with safety-lamps as the coal gives off a small portion of fire-damp. Strict discipline is exercised by the management to ensure safety, &c." That was in the Hill End district after they passed through the cinder-coal.

6034. Then you make another statement in connection with another report made later on in the same year. It is dated December 22nd. Referring to the Hill End district again you say:—"This is the division of workings that used to generate fire-damp, and where the men when working had locked safety-lamps." In these reports I notice that you make reference to the bad state of the return air-way as well? Yes.

6035. Did you refer the matter verbally to the manager in connection with that;—were your instructions of a verbal character? A verbal character.

6036. You never gave him any written communication? No.

6037. Do you not think a definite written communication on these matters would be better? Yes; it might be better.

6038. And that there would be more attention paid to it? Yes.

6039. Have you adopted a course of that character since the Bulli disaster? Yes; if occasion required it, I would. I do not know actually that I have had occasion to do so since then.

6040. You even come on into the 2nd March in the year 1887—only a brief time before this calamity—and you make this statement in your report, referring to the Hill End district: "Fifty men employed; four of them working in narrow headings with safety-lamps, owing to the coal giving off a small percentage of fire-damp."—That was on the 2nd March. When did this disaster take place? I cannot recollect.

6041. Was it the 17th or the 18th? It might be; I could not say.

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6042. It was in the same month—you see, therefore, what a serious matter can come out of a small incident within a few days. Has that impressed you with the idea of paying more attention to this limited quantity of gas that may be given off at any mine? There are connections and conditions in that which require a great deal of explanation. I positively believe that the Bulli explosion was caused by a very little gas.

6043. Whether it was caused by little gas or much gas, I daresay you will admit that it was a fearful calamity? Oh, yes.

6044. And that the results were most calamitous? Yes.

6045. And if there was a small amount of gas—as you now express the opinion that there was—is that not all the more reason for serious attention being given to the question of gas, even in small quantities? Yes; undivided attention should be given to it, I believe.

6046. Would that impress you with the idea of paying attention to the question of brattice where gas is given off? Yes; where gas is given off.

6047. Would it also impress you with the idea of having the returns in an efficient condition, so that there could be a clear scope for the ventilation? Yes. There should be a defined recognised return-way for the ventilation. Notwithstanding there might be sufficient space for the return to pass, there should be a proper way.

6048. You think that the return should always be efficient? Yes.

6049. Free from obstructions? Yes.

6050. You appear to have drawn particular attention to the state of that return on more than one occasion? Yes; I know that I drew attention to it. The men were out at the time, and they could not get men to come to do it. They tried to get volunteers to come down, but there had been some trade dispute on, and the men would not come. The manager said that as soon as ever the colliery started it would be his first duty to get the thing attended to. Some had fallen in at the time the dispute was on, and he said, "I tried to get men, and cannot, but as soon as I can get them to come I will make it the first point."

6051. Do you not think in matters of that description that a definite communication, or some instructions from you should come under the manager's notice? I admit that.

6052. Do you at the present time intimate verbally to the managers, or do you write to them when you see anything amiss? If there is anything amiss I write to them, except as I said before, when it is any light thing that might come about, where no danger was likely to occur of any consequence. In that case I might draw their attention to it only, and advise them, but if anything has to be dealt with I serve notice under the 25th section.

6053. Have you had occasion to intimate to any of the managers recently the withdrawal of any men? No. We have had them in court for breaches of special rules, and for dealing lightly with matches in their possession.

6054. Where has this been? At the Metropolitan Colliery. We had six cases all at once there.

6055. Is that long ago? Some eight or nine months ago. We had two cases about three weeks ago. One was a miner from Newcastle. The manager and deputies take periodical days to inspect, and on going round to examine their clothes a match was found inside the lining of one man's vest pocket. He said he did not know he had got it there at all. He was very poor. He travelled from Sydney up there and carried his swag. Another man had an old match in the lining of his pocket. Both of these men were brought to court. It might have been in his pocket for months. The manager did not believe it was with any wilful intent. Nevertheless for the sake of strict discipline it had to be dealt with.

6056. *President.*] What became of them? They got a good character from the manager, and being very poor, and all the circumstances of the case being taken into consideration, they were fined 10s. with all expenses, and were told that if ever they came before the Court again they would be dealt with to the utmost rigour of the law. They got a great caution as to what might have happened.

6057. *Mr. Curley.*] Have you been in the Western District lately? I was up there lately, and was called away to come here.

6058. Did you visit the Vale of Clydd Mine while you were up there? A portion of it. I have to go back and finish up the Western District, and have to go on to Capertee after that.

6059. Did you notice anything amiss when you went round there? No. There is a division I was not up to yet. I have to go back. The portion I was in seemed all right enough.

6060. Did you visit the Oakey Park Mine? I visited portion of that too.

6061. Do you know that the ventilation there is simply a natural ventilation? Yes; there is a waterfall going down one side. It seems to be always pretty well up to the mark so far as I could see.

6062. Do you think natural ventilation is to be depended on? Not altogether, but fire damp has never been seen or known to exist in the Lithgow District. It is a moist and very clear atmosphere all through; there is no dust at all in it; everything is moist and wet; you can see a light 100 yards away quite clearly.

6063. Do you account for that by the altitude of the land there? I do not know about the altitude. The nature of the coal has something to do with it. You see the water dropping away from the coal in the solid.

6064. Have you ever suggested to the manager the idea of the erection of a furnace? No; I found the conditions of the Act were complied with. It was a water power to create a current. As everything was going right, I did not see that it was necessary that I should do so.

6065. How far are the workings in underground at the furthest point? I could not say; $\frac{1}{2}$ mile perhaps.

6066. Do you think they are a mile? They might be; I could not say.

6067. Are there any of these workings going to the rise? They are dipping partly. There is a sort of swallows all through it.

6068. Are there no rise workings in the mine at Oakey Park? Yes; there are a few places to the rise.

6069. Do they rise much? Not very much.

6070. What would it be? They may be one in twelve or something like that. I could not say the grade exactly.

6071. Do you know the number of men in the mine? About twenty altogether.

6072. At present? Yes; only about ten I think work during the day. The next day perhaps the ten who have been working to-day are out of the mine, and the other ten work.

6073. Have you ever received any communication complaining of the defective ventilation in that colliery? I got a notice only to-day to make an inspection there.

6074. From whom? From the Department.

6075. *Mr. Gregson.*] Do you ever get complaints made to you, or requests to examine mines without their coming through the Department? Yes; at times I do.

6076. Do you act on them? Yes.

6077. *President.*] If you got an anonymous communication asking you to go to a certain mine, would you go? Yes; I would go.

6078. *Mr. Curley.*] You would pay attention to an anonymous communication? Yes, because men say they do not like to put their names to complaints.

6079. You said that the requirements of the Act were complied with—how do you define the requirements of the Act being complied with with regard to ventilation? I read it that every mine to which this Act applies shall provide 100 cubic feet of air for the men.

6080. *President.*] Suppose a man is supplied with a 100 cubic feet of air, is he supplied with enough? That is according to the Act.

6081. You are leaving out altogether the words "Not less as a minimum"? It is a minimum I am referring to.

6082. Supposing that in any mine—not a gaseous or fiery mine—there is great want of air, and the men are complaining in regard to it, do you say that if you find there is 100 feet of air passing along the air-way you pay no heed to that complaint? That is the Act being complied with.

6083. You have got to see that it is adequate—"An adequate amount of ventilation shall mean not less (as a minimum) than 100 cubic feet of pure air per minute"—but there has always to be an adequate amount of air? I would not say it was enough. In the western mines, where it is moist and wet, 100 cubic feet is enough. I would think if that was got it would comply with the Act.

6084. Because you would think it enough? Yes, in connection with the condition of the workings; but if I found there were only 100 cubic feet in the Metropolitan Colliery, that would not be an adequate amount to meet the requirements of that mine.

6085. Do not take such a prominent instance as the Metropolitan Mine, because the Metropolitan Mine beyond all doubt is a very gaseous mine, in which I suppose you have to supply 700 or 800 cubic feet, but take the case of a mine that is not a gaseous mine, but a mine in which the workings are starved for want of air; do you say you consider your functions or duties would be satisfactorily fulfilled if you were to go out into the air-way and find 100 cubic feet passing along? I thought that would meet the requirements of the Act.

6086. "An adequate amount of ventilation shall mean 100 feet of pure air." That is the way you read it? Yes.

6087. You leave out altogether the words "not less than as a minimum." You have got to be satisfied, if it is necessary that 500 cubic feet of air should pass along the air-ways, that it is there. What do working places mean? Where the men are actually working in.

6088. Are "working place" and "working face" synonymous terms? Yes. Commonly in longwall they call them working places, and in pillar and stall they call them working faces.

6089. *Mr. Gregson.*] Is not the face the wall of coal in front of you? Yes.

6090. What you are picking at? Yes. It is generally understood the working face is close up to where the men are working the solid coal.

6091. *President.*] Supposing this room were a bord, the wall would be the face? The working face is the face of the coal where the men are working, that is an 8-yard face or a 4 or 5 yard face of coal which the men may be working at.

6092. If they are not synonymous of course my argument is not so strong; but even granting that, do you not see that the second subsection of clause 12 of the Coal Mines Regulation Act, 1876, says (*see Appendix B*). That means working places of the shafts, levels, &c.? Yes.

6093. *Mr. Gregson.*] You have stated that when there are 100 feet of air the Act has been complied with? Yes. You mean to say that the interpretation of this is, that though there may be 100 cubic feet of air, the inspector might think that he could go over that, and that that would not be an adequate amount?

6094. That he is to have as much more as he thinks is adequate. Your construction leaves out altogether the words "Not less as a minimum than." Supposing you struck out of this section altogether the words "Not less as a minimum than" your construction would be right, because it would mean an adequate amount of ventilation would be 100 feet; but if you leave in "Not less as a minimum than" you might want 1,000 feet? Yes.

6095. *Mr. Curley.*] Have any of the collieries in the Western district attempted to work on Sunday? Yes. I heard through a newspaper report that they did.

6096. Do you know personally? I believe it has been done; but I could not understand for the life of me what they were doing it for. They were brought to court in connection with it.

6097. Who brought them to Court? I do not know who brought them to Court. They were brought before the magistrate any way.

6098. Do you know anything about this personally? No, nothing at all. I was in the Southern district when I heard the case was brought before the Lithgow Court, and that they were fined for working.

[Witness withdrew.]

J. Rowan,
Esq.
2 Oct., 1895.

TUESDAY, 8 OCTOBER, 1895.

[The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.]

Present:—

FRANCIS EDWARD ROGERS, Esq., Q.C. (PRESIDENT).

JAMES CURLEY, Esq.

JESSE GREGSON, Esq.

Thomas Owen sworn and examined:—

Mr. T. Owen. 6099. What are you, Mr. Owen? I am a check weighman.

8 Oct., 1895. 6100. At what colliery do you act as check-weighman? At the South Waratah Colliery.

6101. Is not that colliery generally known as the Waratah Colliery? Yes; but it is being worked now by the Caledonian Company.

6102. How long have you been working at this colliery? Eight years.

6103. Have you worked in the mine? I worked for two weeks in the mine.

6104. Have you been check-weighman during the rest of your time? Yes.

6105. What is the system of weighing there? They pay by the average weight.

6106. Have you what is known as the standard weight? No.

6107. What is about the average weight of your skips? They vary considerably from 9 cwt. to 17 cwt. That is the weight the men fill.

6108. Does the weight vary owing to the way the miners fill, or is it owing to the nature of the coal? It is owing to the way they fill, and also to the nature of the coal; some of the men are indifferent as to how they fill, and others take a delight in filling a large skip.

6109. How many skips do you weigh in a day? Some days they weigh seven, some days twenty, and other days none at all.

6110. Do you ever weigh more than twenty skips in a day? Twenty-five skips is the highest number weighed during the last twelve months.

6111. Is that in one day? Yes, in one day.

6112. How many miners are employed at the colliery? 148 miners.

6113. Are there a large number of skips coming out of the mine in a day? The average number of skips for the last four weeks has been 462 daily. That is the average output of skips for large coal each day.

6114. *President.*] Did that average number of skips come out of the mine when they were weighing only seven skips daily? Yes, that is the average number of skips for the last twelve weeks.6115. *Mr. Curley.*] Do you consider that that is anything like a fair number of skips to weigh each day out of the number of skips that come out of the mine? No, I do not.

6116. Have the men ever complained about getting more skips weighed? Yes, repeatedly.

6117. What replies have they received to their representations? The manager has always promised to weigh more, but that promise has never been fulfilled.

6118. Is there anything to prevent more skips being weighed? No.

6119. Were there any more skips weighed at any other time? Yes; when the old company had the colliery they weighed thirty or forty skips every day.

6120. Did the old company weigh every day? Yes, every day.

6121. Did this colliery change hands some time ago? Yes; twelve months ago last August, as near as I can say. It might be a little later.

6122. Do you know if the men wish every skip to be weighed? Yes.

6123. Is it the opinion of the men that every skip should be weighed? Yes.

6124. Would they be satisfied with an average if a fair number of skips were weighed? Provided they could not get the whole of the skips weighed, they would like to have more skips weighed.

6125. *President.*] Would they be satisfied if a fair percentage of the skips were weighed? Yes.

6126. What would you call a fair percentage of the number of skips to be weighed? One in five.

6127. *Mr. Curley.*] How many screens have you? Only one screen, exclusive of the weighbridge screen.

6128. Is it a travelling screen? Yes.

6129. Is the most of the coal tipped over that travelling screen? Yes.

6130. Is there any impediment to weighing more coal at the weighbridge? No impediment whatever.

6131. How do you arrange for the weighing of the skips. Do you call a skip in turn, or what method is adopted? We agree in the morning to take the first skip in the cage, and continue all day while weighing taking the first skip in the cage.

6132. Do two skips come up in the cage? Yes.

6133. Do you take the second skip in the cage on some days? Yes.

6134. Have you any control in sending the skips to the weighbridge? None whatever.

6135. Who controls that? We agree in the morning which skip we will take, and as soon as the company's weighman is ready, he calls the skip.

6136. Has the company's weighman any other duties? Yes, several. He is the clerk of the colliery as well.

6137. Does he leave the weighbridge to do clerical duties? Yes.

6138. *President.*] Have the men no control over the number of skips to be weighed? No control whatever. The company's weighman starts to weigh when he thinks proper at any time of the day.6139. *Mr. Curley.*] Who is the manager of that colliery? Mr. Duncan M'Geachie.

6140. Have you ever had any conversation with Mr. M'Geachie about the weighing of the skips? Yes; I have spoken to him several times about it.

6141. Does he not appear to see the reasonableness of what you put before him? Yes; he always admits it.

6142. Is it a matter of general complaint among the men that there are not more skips weighed? Yes; there are complaints made every day.

6143. Do you know anything about the men being in the mine for a considerable time on one occasion? Yes, on the 20th April, 1893, when the shaft fell in.

6144. Was that the main downcast shaft? Yes.

6145. The hauling shaft? Yes.

6146.

6146. Do you know anything about the circumstances in connection with this matter? I was there when the fall occurred.
6147. Where did the fall occur? Near the surface.
6148. *President.*] How did it fall in? The sides gave in.
6149. *Mr. Curley.*] Did it make a crash? Yes.
6150. Was that what attracted your attention? Yes.
6151. Do you know anything about a steampipe going down the shaft? Yes; the manager's theory was that the steampipe had burst and affected the shaft.
6152. Did this pipe give any report when it broke? It gave a little report, but not much.
6153. Do you know if the shaft was completely blocked up on that occasion? No, it was not completely blocked up.
6154. Was it completely blocked up at the bottom of the shaft? Yes; but not on that particular day. It was blocked up a few days afterwards.
6155. Was it in such a ragged condition that the men could not get out? They could not get near the shaft, so they could not come up.
6156. Was the mine brought to a standstill when that accident occurred? Yes, for fifteen weeks.
6157. Had the men to come out through the other shaft? Yes.
6158. What shaft was that? The upcast, known as the Flaggy Creek shaft.
6159. Is that shaft a considerable distance away from the other shaft? About a mile and a quarter away.
6160. Have you heard anything said by the men, or do you know anything about the pillars giving way, or about a creep? Yes; there was a creep near the upcast shaft.
6161. When did this creep occur? About three months previous to the main shaft falling in.
6162. How do you know this? I heard the men complain that they lost all their working places.
6163. What time did the men start to come to the upcast shaft that day? About 10 o'clock in the morning.
6164. Was that when the fall took place? Yes. The first cage of men came up the upcast shaft about a quarter to 3 o'clock in the afternoon.
6165. Had the furnace to be cooled down before the shaft could be used? Yes; steam had to be got up on the top, because there was no one stationed at the engine on the top.
6166. If any foul air had accumulated, would it not have been a serious matter for these men? Yes, a serious matter.
6167. Has that upcast shaft been recently on fire? It was not the shaft; it was near the downcast shaft.
6168. What was the cause of that fire? There was a small Cameron pump near the main shaft, but the cause was never found out.
6169. Do you know anything about it? No; I know nothing about it.
6170. Have you worked in mines? Yes.
6171. What collieries have you worked in? At New Lambton, East Waratah, and at the Waratah colliery.
6172. Do you think that the shafts at a colliery should be a reasonable distance apart from each other? Yes.
6173. *President.*] What do you call a reasonable distance? I should think 50 yards, at the least.
6174. Can you understand why, in England, the Act only says 15 yards? I think that the shafts should not be closer than 50 yards.
6175. *Mr. Curley.*] Have you heard tell of the Ferndale disaster? Yes.
6176. Did you see the quantity of sand that was washed away from the surface there? Yes.
6177. Were you there? Yes.
6178. Was that before it got filled up with tidal waters? I saw it before it was filled up.
6179. Did you see several acres of sand that were washed into the mine? Yes.
6180. Knowing that we have collieries with a good deal of silt and delta in connection with them on the surface, don't you think that if anything was to happen to one of the shafts that it is possible it might affect the others? Yes.
6181. And that there might be no outlet for the men? Yes.
6182. Was this shaft bricked? No, it was not bricked.
6183. Did you look down the shaft? Yes.
6184. How was it supported? By slabs—timbers.
6185. Is there any other shaft about that colliery? Yes, there is another shaft within about 40 yards of the main shaft.
6186. Was that a shaft that was once identified with this colliery? Yes, a furnace-shaft.
6187. Was it an abandoned shaft? Yes.
6188. Has that shaft been abandoned since the time you were working as check-weighman? Yes.
6189. Do you know any reasons why it was abandoned? At the time Mr. Neilson was manager there he changed the air-course, and made the Flaggy Creek the furnace shaft. It had been a very small shaft.
6190. Which was the small shaft? The Flaggy Creek shaft.
6191. Do you know the size of that shaft? No.
6192. Do you know the diameter of the downcast shaft? I cannot give the diameter accurately.
6193. Was it abandoned because anything was the matter with it? It is in a very bad state at present.
6194. Is it in use at the present time? No, but the present manager is going to repair it.
6195. Is he going to utilize it again? Yes, as an outlet.
6196. Have you seen this shaft yourself? No, I have not.

[Witness withdrew]

Henry Hanlon sworn and examined:—

6197. *Mr. Curley.*] What is your occupation Mr. Hanlon? I am a miner.
6198. Where are you employed? At the Waratah Colliery; I think they call it the Caledonian Mine now.
6199. Have you worked at any other collieries? Yes.
6200. Where have you worked? At the Lambton Colliery.

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6201.

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6201. Have you worked at any other collieries? No.
6202. How long did you work at the Lambton Colliery? For twenty-seven years.
6203. Have you followed mining for a long period of time? Yes; I was in a pit before I was twelve years old.
6204. How long have you been at the Waratah Colliery? Three years.
6205. Do you know anything about the system of weighing at that colliery;—are you paid there by the average? The skips are averaged. If you get three or four skips weighed, you get the average of those skips.
6206. *Mr. Gregson.*] Are you paid on the average? Yes, we are paid on the average.
6207. *Mr. Curley.*] Do you get many skips weighed? Very few. Sometimes for nearly a week there is never a skip weighed.
6208. Is that in connection with some numbers only? No, with all numbers. I have seen them go for two or three or four days without weighing any skips at all.
6209. Does this occur occasionally? Yes, occasionally.
6210. Is this a matter of common complaint amongst the men? Yes; it is a matter of great complaint amongst the men.
6211. Could more skips be weighed? Yes.
6212. If the Company felt inclined to do so? Yes.
6213. Have you any control over the weighing? No control whatever. We have visited the manager many times, and have complained to him of not being weighed oftener.
6214. What does the manager say? He says that he will do all that he possibly can, but the same thing still goes on. Only this last week there has been very little coal weighed. I should say an average of about five skips a day.
6215. *Mr. Gregson.*] How do you know how many skips are weighed? The numbers are put up on the pit-top every night. If there are no numbers put up we know that there are no skips weighed. There is a slate put up at the top, and if it is not up we know there has been no weighing.
6216. Who puts that slate up? The check-weighman.
6217. Is it put up for your information? Yes, for our information.
6218. *Mr. Curley.*] Was there a time when there were more skips weighed? Yes; there was a time when there were more than twice as many skips weighed.
6219. Was that during the time you have been at this colliery? Yes.
6220. Who was the manager of the colliery at that time? Part of the time, Mr. Ramsay, and after him, Mr. Neilson.
6221. *Mr. Gregson.*] Had you a travelling belt then? Yes, in Mr. Neilson's time, but not in Mr. Ramsay's time.
6222. *Mr. Curley.*] Were you in the mine some time ago, when a fall occurred in connection with the shaft? Yes; it was on the 20th of April, on a Thursday, that the shaft came in.
6223. In what year was that? In 1893.
6224. How were you apprised of this occurrence having taken place in the shaft? The first information we received was about 20 minutes to 11 o'clock, when we were told to knock off work.
6225. Did you cease work? Yes.
6226. Were you advised to come to the furnace shaft? We were going out at the main shaft, and we were told to wait near the furnace shaft—to sit there until we got further orders.
6227. Were you told that there was a fall in the main shaft? Yes, we were told that there was a fall in the main shaft.
6228. Who told you that? The deputies and the onsetter. The onsetter came from the downcast shaft to the furnace shaft.
6229. Did he say that there was much of a fall? He said it was coming down all the time after he left. He did not say whether there was a great deal or not.
6230. Do you say that you were told to go out by the furnace shaft, and that you had to wait for some time near that shaft? Yes.
6231. While you were waiting there, did you look around at all? Yes, we were looking around; some men stopped there all the time, and others were walking about. We were ordered to stop between two doors, about 50 yards apart, and we were not supposed to go any nearer the furnace without orders from the overman or deputy, who was sitting the other side of the door.
6232. Did you go to the furnace shaft later on? About 3 o'clock, twelve men at a time were allowed to ascend through the furnace shaft.
6233. Was there a large opening to this return shaft—a big return air-way? No, it was not a very big air-way, on account of the timbers and chocks. About three or four months before that there was a large creep right around there.
6234. Did these chocks and this timber you saw give you the impression that there had been a creep? We knew there had been a creep, because we helped to pull the rails out. There was a creep three months before around the furnace shaft, and I was one that helped to pull the rails out while the creep was on?
6235. Did you know the creep was on? Yes.
6236. Would you regard this as a crush? It was the roof coming down on account of the thin pillars. That was the reason of the creep, I think.
6237. Were the pillars too thin? We know they were too thin.
6238. Did you see any of these pillars? Yes; several of them. In Mr. Ramsay's time I have seen men holing through into one another through the pillars being that thin.
6239. Was that the upcast shaft at the time that creep came on? Yes; the furnace shaft or the upcast shaft.
6240. Was this a very narrow passage that you had to go through to this furnace shaft? About 20 yards towards the furnace the passage we had to travel would be about 6 or 7 feet wide. When we went to the furnace shaft we had to take a roundabout turn about the furnace to get into the cage. It was about 6 or 7 feet where we got into the cage.
6241. Do you think it is a mistaken idea to leave small pillars round about shafts? Yes; I think it is not a very good idea to leave small pillars in any part of a mine.
6242. Do you think that substantial pillars should be left about a mine? Yes. 6243.

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6243. Is the larger pillar safer to work for the workmen? Yes; the system the present Company is working now is a great deal different to the way the old Company worked.

6244. Was the old system the 8-yard bord? Yes, and 4-yard pillars. Many times miners have holed into each other in several places.

6245. *President.*] How do they tell what to work by? Under the new management you are supposed to keep as near 8 yards as you possibly can, and if you are over 8 yards it is the duty of the overman to chalk you off.

6246. *Mr. Gregson.*] Do you say that 8-yard bords and 4-yard pillars was the custom of the old Company? Yes.

6247. Was it not the district custom? Well, I can not say. I only worked at Lambton.

6248. Was it the custom at Lambton? Yes.

6249. *Mr. Curley.*] Have you worked in pillars yourself at Waratah? No.

6250. Have you worked in pillars at Lambton? Yes.

6251. Did the caving in of that shaft lead to the suspension of work? Yes, for a good many months. I think about four months, but I know it was a few months.

6252. Do you think that the shafts in a colliery should be a reasonable distance apart from each other? Yes.

6253. *President.*] What do you call a reasonable distance? Fifty yards.

6254. Do you think they should not be less than 50 yards apart? I think so, but that is only my opinion.

6255. *Mr. Curley.*] Do you think if the shafts are fixed too near each other that one may break into the other? Yes; if it is loose ground one will affect the other.

6256. Have you ever noticed anything in this shaft at Waratah when you were going down it;—did you have lights when going down? Some men carry lights, but I never noticed anything. Instead of being bricked, the shaft was faced with brattice for a good many feet down the shaft.

6257. Have you worked in pillars at the Lambton Colliery? Yes.

6258. Have you noticed the pillars there to be very thin in some cases? Yes; we have started on a 4-yard pillar, and before we got very far we have not been a yard and a half, the pillar has thinned so much. When we turned the bord away the pillar would be 4 yards, and before we got 10 yards she would not be $1\frac{1}{2}$ yards thick. I have seen pillars in Lambton that were not 1 yard thick.

6259. Do you mean that the pillars ran in till they got a yard thick? Yes; they have tapered out till they got that thin.

6260. Were the bords driven by any line? No, none of the bords were driven by line.

6261. Would not that account for the want of uniformity in the pillar? Yes.

6262. Did you ever work very thin pillars far away from the main road—say, two or three pillars ahead, into the goaf? No; I cannot say I have. The goaf was behind us.

6263. Did you bring the pillars back? Yes.

6264. Were you in the Lambton Colliery when any big crush came away? Yes; I was there when there were two or three crushes in the straight-down flats.

6265. Did these crushes come over the pillars? Yes; in many instances. The first creep in Lambton was over twenty years ago, and it came over all the pillars.

6266. How many pillars did it come over? It did not come to the main bank. The pillar is 70 yards thick in that bank—the main engine road—but it came from that straight out.

6267. Did it come over several pillars? Yes, dozens of pillars, and buried a fearful lot of skips.

6268. *Mr. Gregson.*] Were there a lot of skips and rails lost? Yes.

6269. *Mr. Curley.*] Have you seen other crushes since that crush? Yes, where half a flat has been lost; two flats in the straight down.

6270. Which flats were these? The first and the second flats.

6271. How long ago was this? About ten years ago, or less, since I saw the last crush.

6272. Having seen all these crushes, do you think that more substantial pillars should be left in the mines than what there are? Yes, I do, and always did. It needs more substantial pillars for the safety of the men and property.

6273. *Mr. Gregson.*] Did you not say that the Company who has the Waratah Colliery now is leaving larger pillars? I think they are leaving 8-yard bords and 8-yard pillars, and 12-yard bords and 12-yard pillars.

6274. *Mr. Curley.*] During the time you have worked at Waratah and at Lambton have you noticed any defects in connection with the ventilation? Yes. At the Waratah Colliery, as far as the main roads are concerned, the ventilation is good, but where the men are, after a man gets a little up the bord, say 10 or 15 yards, he is nearly roasted.

6275. Have you experienced that yourself in Waratah? Yes, I have experienced that myself.

6276. Have you experienced that in more than one place or district? Yes, in two or three districts; more in some districts than in others.

6277. Are any of those districts that you have been working in going to the rise? Yes; one is going to the rise now, and one place going to the dip is affected in the way I have stated.

6278. Have you worked in the rise? Yes, but not in the dip.

6279. Have you found the ventilation very defective there? Yes, very defective in the rise places. I am speaking of places I am now working in.

6280. Is the air still defective? Yes; after you are up a certain distance it is fearfully hot.

6281. Is not the difficulty that while the ventilation is passing along the heading it does not go into the working place? Yes, that is the difficulty.

6282. *President.*] Do the men come out of the working places to get air? In many instances the men have had to come out into the heading for a few minutes to get air. I have heard men complaining. Younger men can stand it better than the older men, but the older men have to come out where the air does not go to the face.

6283. *Mr. Curley.*] Do you know the quantity of air provided in the Act that you are working under now—the Act of 1876? Yes; it provides for 100 cubic feet of air.

6284. Do you know that the new Bill proposes to increase that quantity to 150 cubic feet? Yes.

6285. The Legislative Council wish that provision to be erased, and the word "adequate" to be inserted instead, and consider that will be quite sufficient to meet the case;—do you think so? No, I do not; because

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- because if it is an adequate amount of air we cannot say what that quantity will be. The manager or the overman would be the judges, and might say if there was not 100 feet of air it was adequate.
6286. Do you believe in a minimum quantity being stated? Yes.
6287. *President.*] Have you ever worked in England? I have trapped in England.
6288. Is there any trouble about ventilation there? No, because in England an adequate amount of air must be got to sweep the gas, but where there is no gas, I do not think an adequate amount would do at all.
6289. *Mr. Gregson.*] What about the mines in England that have no gas? I suppose they will be affected in the same way as I am speaking of.
6290. Have you heard of any complaints being made there? No.
6291. Have you heard men talk about this matter? No, not about mines where gas does not exist.
6292. *Mr. Curley.*] Do you know the provision in the Bill with regard to the shortening of cut-throughs? [*See Appendix A.*] Yes.
6293. Do you know it proposes to reduce the distance to 25 yards? Yes.
6294. Do you believe that the cut-throughs should be lessened to 25 yards? I think it would be a great benefit if they were lessened.
6295. Do you think that the working place should be bratticed, and the air taken to within 15 yards of the face? If she was bratticed within a certain distance of the face, the men would get the air.
6296. Do you think that if brattice was used under the present system, that would meet the circumstances of the case? I think so.
6297. Do you think it would be better to leave it to the manager? If the management had it all in their hands it is questionable what they might do. They might say, if the miner wanted air, that there was quite sufficient without brattice.
6298. They could not do that if there was a minimum? We have had disputes about the minimum under the present Act. We have appointed check-inspectors, and they have taken the air, and afterwards the management have taken the air and differed from them.
6299. How do they measure the air? With the anemometer.
6300. How did they come to differ? The check-inspectors put their measurements down in a book kept in the colliery office, and, as soon as the manager saw this, he went into the mine and found more air than the check-inspectors.
6301. *Mr. Gregson.*] Did the manager find a door open? Perhaps so. In a week or so there was a joint inspection. The Government inspector was called over, and that was all the satisfaction we got, although men were complaining and laid up on account of bad health.
6302. *Mr. Curley.*] Where was this? At Lambton and at Waratah. At Lambton it was before Mr. Croudace got the new furnace.
6303. Has the new furnace improved things? It was worse with the new furnace than with the old furnace in my time.
6304. Was that your experience? Yes.
6305. Do you think that the air should sweep around the working face, or be carried within a reasonable distance of the face? If we could get it carried within a reasonable distance of the face, it would be a great improvement.
6306. Would you be more likely to get the air than you are at the present time? Yes; there is no doubt of that.
6307. In the absence of bratticing to carry the air up into the cut-through at the present distance, 35 yards, would you be in favour of the cut-throughs being shortened, so that the air might sweep within a nearer distance of the face? Yes; it would be better ventilation if the cut-throughs were shorter.
6308. Do you think that an inspector should have power to withdraw the men in case of danger? Yes; it is not until lately that I knew they had not this power.
6309. Will you look at the provision in the Bill, section 21, sub-section 5, on page 8, giving them this power (*see Appendix A*);—do you think that an inspector should have this power? I do.
6310. Would you leave this power in the hands of the manager alone, or do you think it better to be in the hands of the inspector? I think it is better in the hands of the inspector.
6311. *President.*] In cases of imminent danger? In cases of danger to life.
6312. Would you divide the responsibility between the inspector and the manager? No; I would leave the full responsibility with the inspector, because he acts independently between the manager and the men.
6313. Suppose there was danger when the inspector was not about? Then the manager is the responsible party.
6314. Don't you think it is better for the manager to have absolute responsibility? No; I have seen it stated by the manager that there was no danger when there was danger. The miner knows as well as the overman or manager where danger exists.
6315. *Mr. Gregson.*] Why does he want calling out if he knows this? If the man says there is danger and the manager says there is no danger, the manager may turn round and say, "If you think there is danger you can go; I can get somebody else." That has been done, and may happen again if the control was left in the manager's hands.
6316. You have not got the inspector there always? If there is danger he can be written for.
6317. Is there any objection to writing for the inspector? No; but when he comes he has no power.
6318. Has he not sufficient power to deal with a difference of opinion between him and the manager;—do you know what is provided in the present Act? Yes.
6319. How is the question to be settled under the Act? I do not know.
6320. I may tell you that arbitration is provided for;—the inspector insists upon going to arbitration? We have had none of those cases.
6321. Have you known of a case in which the manager and the inspector have differed? No, not any cases.
6322. Does it often happen that the inspector sees danger and the manager does not agree with him? There are very often cases where a miner sees danger, where with a very small expense it could be rectified, but the manager will not do it.
6323. Could you not write for the inspector? Yes, but there is a lot of red-tapeism about that.

6324. Suppose a miner sees little things that would improve the safety of the mine, and he writes for the inspector to come, and the inspector agrees with him, would he not prevail upon the manager to do it? Yes.

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6325. Do you know of any cases where the manager would not do what the inspector ordered him? No.

6326. Did you ever hear of such a case? No.

6327. On the whole, do you not think that the present provision in the Act meets the circumstances fairly well? It might in many instances. I can point out a case in which the manager and I differed on the air question. We were about 46 yards before the air, which, according to the old Act, should not be more than 35 yards; and I complained to the overman, and said I would report it to the inspector. He bratticed this bord up, and told me at the same time it would have no effect. If I had had to brattice it I would have bratticed it differently, but he said, "That carries out the Act."

6328. Did it have the effect you wanted? No; it made the air worse.

6329. What did you do? Nothing; because I might have got the sack.

6330. Why did you not write to the inspector? Well, I do not know.

6331. Did you ever know of a case in which the inspector was written to anonymously, and took no notice? No.

6332. Might you not have written to the inspector and pointed out this to him? Then the manager would have put it down to Henry Hanlon.

6333. If you do not do this, how is the inspector to know? Where a joint inspection is called, if the miners write to the Government for the joint inspection, I think the inspector notifies both the manager and the men at the same time.

6334. Would it not be better to write to the inspector anonymously, rather than have this joint inspection. Do not the check-inspectors charge you for every inspection they make? Yes, but there are many men who have not the ability to write.

6335. Do you not know perfectly well that if a man cannot write himself, he will find many men who can? I know plenty of men who say that before they will differ they will work it out for this quarter.

6336. Have you heard that the Secretary of State in England has approved of anonymous letters being sent to inspectors? No.

6337. Have you never heard of an anonymous letter being sent to an inspector? No.

6338. *Mr. Curley.*] From your experience, Mr. Hanlon, do you think that a manager likes any complaints about the mine lodged with the inspector? No, he does not.

6339. Does he not seem opposed to anything of the kind being done? Yes.

6340. Did you think the system of ventilation wants more attention altogether? Yes.

6341. Are you speaking from your personal experience? Yes.

6342. *Mr. Gregson.*] Have you ever known a manager to be haughty because of a complaint being made to the inspector? Yes, I have. I mean that he was not satisfied.

6343. Because of the complaint being made to the inspector? Yes.

6344. *Mr. Curley.*] Have you given any attention to the question of working-hours? Yes.

6345. What hours do you work at present? Eight hours in the face, or nine hours from bank to bank.

6346. Have you thought about the proposed legislation for eight hours. Will you look at section 36 on page 17 of the Bill (*see Appendix A*); do you see the provision there? Yes.

6347. Do you approve of that provision? Yes.

6348. Do you think that this is a matter that should be settled mutually between the manager and the men? No; I think it should be settled by legislation.

6349. *President.*] Are you going to make the party who works more than eight hours punishable for doing so? Yes; I believe in a penalty in that case.

6350. *Mr. Curley.*] Do you think it is the general opinion of the men that the question of the hours of employment is a matter for legislation? Yes.

6351. Is that the opinion of the men generally? Yes.

6352. Have you talked this matter over with the men pretty frequently? Yes, and we have held meetings upon the subject.

6353. *Mr. Gregson.*] Have you ever paid any attention to what has passed on the subject in Great Britain? Not lately, but I have seen that there are some men in Great Britain who are against it. I have read of men of good standing being in favour of the eight hours, and I know that some are against it.

6354. Can you understand that there should be anyone against such a matter? I think that those who are against it say that it takes away the liberty of the subject.

6355. Have you not seen that some are frightened about it affecting their trade? No.

6356. Do you not see that if one country puts limitations upon its trade, and another country does not, that the trade will go from one country to the other? The only conclusion I have come to is that anyone who has worked eight hours has worked long enough.

6357. *President.*] Can you legislate for such a matter as this;—are you going to make it punishable if a man works more than eight hours? I am of opinion that the man who works more than eight hours ought to be punished.

6358. No matter, if from some cause or the other, he does not work three days out of the week, are you going to make it punishable if he wishes to make up for that idle time on the 4th or 5th day? The opinion is, that if we had this eight hours, we would work more constantly, and that the man who works ten hours, takes the work that another man ought to be doing. Some men, I know work for twelve or fourteen hours a day, knowing that when they get this work they may not get more for some time, but I am of opinion that they should not work more than eight hours.

6359. Are you regardless of whether the trade goes away or not;—suppose that legislation was given, and you lost your trade, what would you say then? I do not think we would lose trade up in the north. We are waiting on the trade up there under the present system.

6360. You must remember that you are asking for legislation for the south as well as the north, and we are told of cases in which a steamer comes, and if she does not get what she requires, she goes elsewhere. Do you think it well therefore, under such circumstances to put a limit? In such cases, I think they should put on two shifts of men.

6361. Would not that add to the cost of the coal? I cannot see that it would.

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6362. *Mr. Curley.*] Don't you think that in these districts it is simply a matter for them to regulate the trade—the loading of the coal? I think so.
6363. *Mr. Gregson.*] Do you know that you must not judge the south from Newcastle. In the southern districts, the people have no harbours whatever; they have had to make their own railways and wharfs, and their trade is fitful; a steamer may come suddenly, and want a good deal of coal. In Newcastle you may have your coal ready for shipment, but in the south they have none of these facilities. What do you think of the eight hours in such a case as I have put? I cannot study the southern district any more than the northern district. If they have plenty of waggons, they can fill them up, and have plenty of coal.
6364. I suppose you know that waggons cost money? Yes.
6365. And that money costs interest? Yes.
6366. And that means an additional cost to the coal? Yes; but, I think, the southern collieries should be just as well prepared as the northern district collieries.
6367. Do the miners in Newcastle work eight hours? Yes; but we are nine hours down in the pit.
6368. Would you say that that was the general rule? Where there is a tunnel, they may not, or where there are two shifts of men, but where I am they do.
6369. Do you work eight hours at Lambton? It all depends upon where you were working. I have worked ten hours.
6370. *Mr. Curley.*] Do you think the managers are favourable to the eight hours. Have you ever heard them say anything against it? No, I have not.
6371. *President.*] Are you going to penalise a man who wishes to work more than eight hours? We look at it, that if an Act was passed to legalise the eight hours, what is the good of that Act if it is broken? Some penalty must be put into it.
6372. *Mr. Curley.*] Do you know that some of the managers in the south are trying to get the men to work more than eight hours? Yes, I have heard that as information.
6373. Do you know that a manager in the western district, has called his men out to work on a Sunday? I was not aware of that.
6374. Would you be surprised to hear that that is a fact? It would not happen up in the north.
6375. Do you think a man has much choice in these days? He has no choice at the present time, that is, if he chooses to be the bread-winner of his family.
6376. *Mr. Gregson.*] Suppose trade improved, and we got eight or ten days work, what would you say then? I think that the man who wished to work more than eight hours then ought to be fined. Instead of being more than eight hours, it ought to be less. In the north of England the miners only work six hours.
6377. Is it one of your objects to divide the work better by saying that a man shall not do more than a certain amount of work? That may be one object, and the other is that a man may have a standard wage. We want to prevent another man competing against him by working twelve hours.
6378. *Mr. Curley.*] Don't you think that one of the objects is that after a man has done a day's work he should have a reasonable time for recreation? Yes; the cry has been—eight hours rest, eight hours work, and eight hours recreation.
6379. *Mr. Gregson.*] Do you think it wise to penalise the man who works more than eight hours? Yes, I do; I think that if a law is passed there ought to be a penalty for breaking it.
6380. You want to prohibit a man working longer than eight hours? Yes.
6381. And you want the work more distributed? That is one reason.
- 6382-3. And what is the other reason? That I think eight hours is long enough for a man to work.

[Witness withdrew.]

William Quinn sworn and examined:—

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6384. *Mr. Curley.*] What is your occupation, Mr. Quinn? I am a miner.
6385. Where are you working at the present time? At South Waratah.
6386. How long have you worked at South Waratah? This time, nearly five years; I cannot exactly say to a month, but it is close to that time.
6387. Have you worked at any other collieries in the Northern District? Yes.
6388. Where have you worked? At the Glebe and New Lambton Collieries.
6389. Does the Glebe Colliery belong to the Newcastle Company? Yes; both the sea pit and the old pit.
6390. Have you worked in any other pit? I was in Minmi for a short time.
6391. Have you followed the occupation of a miner for a great number of years? I never did anything else in my life.
6392. Do you know the system of weighing at Waratah? Yes.
6393. Are the men paid there by the average weight? Yes, by the average weight.
6394. Do you get many skips weighed? Very few, lately; sometimes five or six skips in a day; it might be seven, eight, or nine skips.
6395. Do you think that will give anything like a fair average to the men working there? Well, I do not feel satisfied with the quantity weighed, nor do the men, as a rule.
6396. Is this a matter of complaint amongst the men generally? Yes, there have been deputations appointed to interview Mr. McGeachie, the manager; in fact, I have been sent to him by the men.
6397. What does he say to your representations? He says that he will weigh as many skips as possible. That is all the reply we received.
6398. Have things improved in the weighing business? They go on as usual, I think.
6399. Do the men wish every skip to be weighed, or are you satisfied with the average, provided a fair number of skips is weighed? I think the body of the men would rather have every skip weighed.
6400. *President.*] Suppose that is impracticable, would not the men be satisfied if a fair average number of skips were weighed? I think they would.
6401. What do you think is a fair average number of skips to weigh? One in five.
6402. Would not one in twenty do you? I consider that one in twenty is a very small average.
6403. *Mr. Gregson.*] Would it be better than what you have now? Yes, it would.
- 6404-5. *Mr. Curley.*] Do you think you lose much by this system of averaging? Well, I cannot say so. I think the men have lost of late through there not being so many skips weighed. 6406.

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6406. Do you think the manager always knows how the weights stand with regard to these averages? Well, I cannot say.
6407. Does he weigh his own coal on the line? I cannot say whether he weighs the coal or whether the Government weighs the coal.
6408. Is the probability that he does know the weight he gets? Yes.
6409. Does he know the weight he is paying for? I suppose so.
6410. Do you think that if a reasonable number of skips were weighed there would be any complaints at all? I do not think there would be as many complaints as there are if a reasonable number of skips were weighed.
6411. How long do you say you have worked in the Waratah Colliery? Close on five years this time.
6412. Do you recollect anything that occurred at the Waratah Colliery in connection with one of the shafts about two years ago? I remember one of the shafts being blocked in when the lining boards or the cribbing gave way, but I did not see it myself.
6413. Did you hear of it? Yes; I think it was about half-past 10 when we got to hear of the accident in the mine.
6414. How long was this ago? It happened on the 20th of April, 1893.
6415. Who informed you that anything was wrong? The wheelers brought word into the heading where we were working.
6416. Were you advised to cease work and go to some other place in the mine? No; there was no advice given. The men simply got to know that the shaft had fallen in, and they put on their clothes and went into the main heading, and Drury, who was deputy then, told the men they would have to go up Flaggy Creek.
6417. Was that towards the furnace shaft? That is the furnace shaft.
6418. Did you go up that way? Yes, to a certain part. There was a door there, and they would not allow anyone to go through that door for two or three hours.
6419. Were you stationed at a certain point? Yes, in the heading going up to the furnace.
6420. Were you told not to go past this point? Yes.
6421. Did you get instructions to leave the mine later on? Yes; when they started to send up the men, only three men were allowed to go up in the cage at the one time.
6422. Did you pass out that way along with the other men? Yes; the biggest portion of the men went out that way. A few of the men went out by the No. 3 workings, through a heading that was naturally finished. It was an old district.
6423. Would those men have to come to the furnace shaft? Yes.
6424. Did you notice much timber set on the road as you were going out? Yes.
6425. Did you notice any chocks? Yes; chocks, slabs, and timber nearly all the way.
6426. Do you know if the creep bordered on that shaft? I was working in the pillars when the creep came on.
6427. *Mr. Gregson.*] Was this at the time of the creep? Previous to the shaft falling in.
6428. *Mr. Curley.*] How long before the shaft fell in? Three months before the shaft fell in. The creep had not got thoroughly settled when the shaft fell in.
6429. Was that caused through the roof coming down? Yes.
6430. Was the roof weighting on the pillars? Yes.
6431. Did it give any indication in coming over the pillars? Yes, it went over five pillars. We were working in the sixth pillar, and it crossed the narrow bord, and went over another six pillars. That was in the No. 9 workings.
6432. Did it approach very near to this upcast shaft? Yes, it went pretty close to it.
6433. Do you think that there should be larger pillars left in the vicinity of the shafts? Yes, I do.
6434. Did you find some of the pillars that you were working in very narrow? I have seen them all thicknesses, from 8 yards down to 2 yards, or even smaller than 2 yards.
6435. Were any of the pillars 8 yards at that time? Yes, odd ones.
6436. Do you know anything about the depth of that shaft at Flaggy Creek? Well, I cannot say exactly.
6437. Do you think that more substantial pillars should be left in mines? Well, I have seen them very weak, and I think it would be a benefit if they were stronger.
6438. Do you think if the pillars were larger it would be safer for the men to work them? I do.
6439. Do you think that the management would get more coal out with larger pillars? Yes; if a place is crushed you cannot get the same quantity of coal out.
6440. Have you ever noticed any defect in connection with the ventilation at Waratah? There has been pretty fair ventilation where I have been working lately, but I cannot speak for higher up.
6441. Where are you working? At No. 1 Little Flat section.
6442. Have you worked in any other places besides where you are working now? Yes.
6443. How have you found the ventilation in these places? I have seen it where it ought to have been a lot better.
6444. What districts do you refer to? At the time they were working at Berrima it was pretty bad at one time, and at the top end of No. 1 I have seen it bad.
6445. Was the defect in these places that the air was not going to the face? The air was not going near the face.
6446. Was there a fair quantity of air on the headings or main roads at these times? Not too good.
6447. Would the air in that case generally be defective? At the time I was speaking of the top end of No. 1 flat was naturally the last of the split, and that would have a tendency to make the air a little worse.
6448. Do you think the ventilation should be conducted up to the working-face, or within a reasonable distance of the working-face? I would like to see the air up to the face.
6449. *President.*] Would it be practicable to do this in all cases? I have seen it where it has been practicable.
6450. Where? In England, in South Yorkshire.
6451. What were the names of the mines? Ardejeley Oaks and Swaithemain Mines. There was an explosion in the Ardejeley Oaks in 1866; the mine fired on the 12th of December, 1866.
6452. *Mr. Curley.*] What did they do there? They bratticed it, and took the air to within 9 feet of the face.

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6453. Was that in a thick seam or in a thin seam? In a thick seam.
6454. How thick was the seam? It was from 7 feet to 7 feet 6 inches, up to 8 feet thick. They worked the seam in two sections.
6455. Did they use canvas brattice? I have seen canvas brattice and lining-boards used.
6456. Were they $\frac{1}{2}$ -inch lining-boards? Yes; I have seen both sorts of bratticing.
6457. Was there a lot of gas in these mines? Yes, plenty of fire-damp.
6458. Had they to be bratticed up to sweep out the fire-damp? Yes.
6459. From your experience of the collieries you have worked in here, do you consider that more attention should be paid to the subject of ventilation? Well, I believe it would be better for all parties if more attention was paid to the matter of ventilation.
6460. Do you speak from your own experience? Yes; I believe that.
6461. Have you to get the coal by blasting at the Waratah Colliery? Yes.
6462. Is it a strong seam to work? Yes.
6463. Have you several bands in the seam? Yes, three bands.
6464. Does it require good ventilation to sweep out the powder smoke? Yes.
6465. Do you know that the proposed Bill stipulates for a higher minimum quantity of air than the present Act? I believe it does.
6466. Have you read the proposed Bill? No.
6467. The present Act stipulates for 100 cubic feet of air, and the proposed Bill stipulates for 150 cubic feet;—do you believe in a minimum? I think that, if there was a minimum of 150 cubic feet, it would be better than it is at present.
6468. Have you had occasion to make complaints to the manager at different times about the ventilation? No; I am not aware that I have had to complain more than once, and that was at the time Mr. Neilson was manager there.
6469. What district were you working in then? The Ganning bord in No. 1, Little Flat.
6470. Did you consider that you were too far in advance of the air? It was a little gas that showed.
6471. Did you draw the manager's attention to this? Yes; as soon as I found that gas was there I sent for the manager at once.
6472. Did the gas show on the light? It lit up.
6473. *Mr. Gregson.*] Did the manager put it right? Yes; he bratticed it right away.
6474. *President.*] Was it a sudden manifestation of gas? It came suddenly, and as soon as I laid a complaint brattice was put in at once.
6475. *Mr. Curley.*] Before you got the brattice, did you consider the air was a little slack? The air was not too good before the brattice was put up.
6476. At these other collieries you have spoken about, did you consider the ventilation in some of these places, defective or not? It is so long since I was at these collieries that I cannot say exactly whether they were affected much at the time. At the time I was at the Glebe Colliery there were several complaints about the ventilation in different districts there, but I was never lucky enough to work in them.
6477. From that incident that took place in connection with the Waratah shaft, do you consider that shafts should be a reasonable distance apart from each other? I believe they should.
6478. What do you consider a reasonable distance? I think about 50 or 60 yards between the two shafts.
6479. Have you known any instances where the shafts have collapsed into each other? I know of no instance myself. I have heard tell of instances, but I have never seen them.
6480. Where have you heard of such a thing happening? I have heard of one case at the Oaks Colliery.
6481. How did that collapse? One of the shafts gave way, on account of sand, and it ran the other in. It also took the head-gear away.
6482. Were these shafts very far apart? I think they were about 21 feet apart. They have opened up one shaft since the explosion.
6483. Do you elect your own check-weighman at Waratah? Yes.
6484. Do you think the men should have the right to elect their check-weighman from whom they please? I do.
6485. Do you ballot for your check-weighman every three or six months? That is the rule if it is required, but our check-weighman has had no opposition lately.

[Witness withdrew.]

John Archibald Neilson, Esq., sworn and examined:—

J. A. Neilson,
Esq.
8 Oct., 1895.

6486. *President.*] What is your occupation, Mr. Neilson? I am a mining agent; at present I am agent for the Merewether Estate. I have been a mining manager up to July last year.
6487. What collieries have you managed? I have been manager of the West Wallsend and Waratah Collieries.
6488. *Mr. Curley.*] Have you had a good deal of experience in connection with mining? I have had fifteen years experience—five years as manager, and I have been for five years agent for the estate of the late E. C. Merewether, I was for three years manager at West Wallsend, and two years manager at Waratah.
6489. Did you serve your time at the Wallsend Colliery? Yes.
6490. Did you serve your time under your father, the late J. Y. Neilson? Yes, under my father.
6491. You say you have managed the West Wallsend Colliery for some time? Yes, for three years.
6492. And you have managed the Waratah Colliery? Yes; I was for about nineteen months at South Waratah, the Charlestown Pit.
6493. Do you know anything of an occurrence that took place in connection with one of the shafts at that pit? Yes, I do.
6494. When did that accident happen? I think it occurred about two years ago last April, three months after I went there.
6495. Did that accident occur in the downcast shaft? Yes, in the main downcast shaft.
6496. Was it the main hauling shaft? Yes, the downcast shaft.
6497. What time of the day did this occur? Between half-past 10 and 11 in the morning.

6498.

6498. Was it a cave in from the surface down the shaft, or how did it arise? It arose from the collapse of a crib, 40 feet from the surface. J. A. Neilson, Esq.
6499. Had this worn away, or had it burst out; had the timber decayed? Yes, the timber had decayed.
6500. Did much of the shaft give way at the time? No; I do not suppose there would be 1 cwt. that fell from the side of the shaft at the time. It displaced the slides, and that was the trouble. 8 Oct., 1895.
6501. *Mr. Gregson.*] Did that prevent the winding of the cage? Yes.
6502. *Mr. Curley.*] Did you have to stop winding in consequence of that? Yes.
6503. Did you consider it unsafe for men to go up the shaft? Yes, it was unsafe for men to go up the shaft.
6504. Did the whole of the shaft subsequently collapse later on? Yes, the following day while effecting repairs it collapsed higher up the shaft.
6505. Did that run to the surface? Yes, the broken ground ran to the surface.
6506. How much would go away? It would be impossible for me to estimate the quantity, because in re-building the shaft a lot of other stuff was taken down.
6507. Could you not estimate the quantity from the top of the pit, to where it ran? I believe there was about 35 or 40 feet from where she broke away from the surface.
6508. *Mr. Gregson.*] Was that from the upper part of the shaft? Yes, to the surface from where the break had taken place.
6509. *Mr. Curley.*] How far did it extend from the point of the shaft, along the surface ground, taking a direct line? What fell away would be about 23 or 24 feet, but we afterwards took a lot more away in effecting our repairs.
6510. Can you give us a rough sketch on paper? Yes. [See sketch Appendix 1.]
6511. Does that sketch represent the shaft and the area that went away? Yes, it would be in diameter about 20 or 25 feet.
6512. Would the part that gave way below undermine the upper part? Yes, it did undermine the upper part, and this caused the collapse at the top.
6513. When this occurrence took place how did you communicate with the men down below? With a line.
6514. Did you advise the deputy or the overman to call upon the men to cease work? I advised the deputy and overman to get the men up the shaft—that we had to lift the men in the event of an accident taking place.
6515. Was that out of the upcast shaft? Yes; out of the upcast shaft.
6516. How long were you getting the men out? About six and a half hours, I think. The occurrence took place between half-past 10 and 11, and we had the first men up about half-past 5.
6517. Had you any steam at the time? Yes; we had steam at the main shaft, the winding shaft, but not at the upcast shaft.
6518. How did you draw the men out there? I had an engine-driver, a spare man, partly employed for that purpose. The boilers, engines, ropes, and cage were kept in thorough working order, and as soon as ever the accident occurred this man was sent over to get up steam.
6519. Had not the furnaces to be cooled down before the men could be got out? The furnace had to be put out for the men to travel in the shaft. We did put the furnace out.
6520. Do you know anything about a creep that bordered upon the furnace shaft? Yes.
6521. How long was that previous to this other occurrence? The creep was on when I took charge. I took charge in November, and the accident happened in April, so that would be 4 or 5 months previously. It was practically over when I took charge.
6522. Did you anticipate any danger in connection with that shaft during the time that creep was there? Yes; and prepared to meet it, and did meet it successfully.
6523. Was that your principal upcast? We had three shafts at the colliery; one was the main downcast, and that one was the main upcast. The other one was sometimes the upcast, or the downcast. It would be the main upcast shaft.
6524. Did the other shaft become either the upcast or the downcast? Yes; according as we arranged it to suit our purposes.
6525. Could you go up and down that shaft? I never went up and down it.
6526. Was it ever used? No; never used.
6527. Had you a direct road to this unused shaft? Well, there were two headings going into it. One would be a direct line 10 or 12 chains, and the other a direct line of 2 chains, as far as I can remember.
6528. Had you direct connection with it? Yes.
6529. Do you think that these pillars had been left rather thin near the proximity of that shaft—the shaft pillars? No, not under the circumstances, because the shaft was solid on one side. It was right on to the boundary, and there was solid coal there.
6530. What was the size of the shaft pillar on the front? About 16 yards, so far as my memory serves me, but I cannot say with any exactness.
6531. Was that pillar broken in any way—was there a small road through it? Not to my knowledge. There was a small road between the arch of the furnace and the coal. I would have to turn edgeways to go through. It would be about 2 feet wide between the arch of the brickwork and the pillar side.
6532. What distance was that in? On that side it was in 5 or 6 yards, and then it went into a small pick-rack. It was originally a side of the rib, and they had a small pick-rack there for the men to get their tools when they went down. (See sketch Appendix).
6533. Had you generally to put in timber to save the road leading into that on either of the sides? On the low side I never put in a stick. With regard to the crush on the northern side, I timbered and put in chocks along the edge of the main shaft pillar.
6534. Had that working been carried out long before you went there? Yes, prior to my taking charge; in fact, the crush was virtually over when I took charge, and it was the after effects that I was protecting myself against with the timber.
6535. Would that crush be quite settled for some time? No, for some months after it would not be thoroughly quiet, but the actual danger would be over.
6536. Did you take this course to guard against the possibility of this load coming down? Yes.
6537. Do you know the system carried out with regard to working the colliery? Yes, pillar and stall.

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6538. Was it the usual district system of 8-yard bords and 4-yard pillars? I never saw any of the workings in the crush, but the plan showed 8-yard bords and 6-yard pillars. In the actual working that was the system before I took charge.
6539. Do you know the depth of the shaft? It was between 450 and 500 feet.
6540. *Mr. Gregson.*] Was that the depth of the upcast shaft? Yes.
6541. *Mr. Curley.*] What pillars did you carry at West Wallsend? Eight-yard bords and 8-yard pillars.
6542. Do you think the increased size of the pillar is an advantage? It depends on circumstances entirely.
6543. Well, say, for a mine of that depth? Then, it depends on circumstances.
6544. What particular circumstances does it depend upon? The pillars in West Wallsend were increased to that thickness, because we were just breaking away from around the shaft. We were opening out the workings from the shaft at that time.
6545. Would you not leave a larger pillar as a shaft pillar? We left 120 yards around the shaft. The size of the pillars would depend upon the nature of the roof to a great extent.
6546. In a mine of that depth, would you not consider the 8-yard pillar an advantage? It depends upon the circumstances of the roof, and the system of the working in which they are taking the pillars out.
6547. Have you seen a statement by Wardle with regard to the working of pillars? No.
6548. Will you look at his "Reference Book on Practical Mining" (3rd edition, page 262), and tell us what he says there? Yes; "Many good collieries have been ruined, and thousands of acres of valuable coal lost through having the pillars of too small dimensions."
6549. Do you think that small pillars are a danger and a menace to a colliery? If the pillars are too small, certainly.
6550. Do you think, from what you know of the Northern District, that many of these pillars have been left too small? I have seen coal lost with pillars being too small.
6551. Would that lead you to the belief that an increased size of pillars would be a superior system of management? No; not in all cases. I have been taught by my father's records that in some collieries in the district the system is the best to get the greatest amount of coal per acre.
6552. Have you not to look to something else besides winning coal? Yes; there are all sorts of considerations.
6553. Are there no considerations for the safety of the workmen? Yes.
6554. Is not that the prime consideration? I have always considered the safety of the workmen first, and the commercial part of the business afterwards.
6555. Do you know that the opinion is gaining ground that the larger the pillar the greater the quantity of coal to be got? We have found that with the smaller pillar in some cases we get more coal per acre.
6556. Have you read any authors in connection with colliery management in England? Yes.
6557. Do they not approve of the larger pillars? Yes.
6558. Do they not state that a larger quantity of coal can be got out by leaving larger pillars? Yes; most of the authors say that.
6559. If that obtains in England, don't you think it will have the same application here? It may not obtain in every place; it all depends on the system adopted.
6560. In a general way, do you not think it would have the same application here? I should think it would.
6561. Are not the main roads leading to the shafts the only outlets for the men? Yes.
6562. Do you think that these roads should be above suspicion at all times with regard to the size of the pillars that are left there? Yes.
6563. Regarding the spare shaft you have spoken of at Waratah, what condition is that shaft in? I have no idea; I have never been down it.
6564. Was that shaft in disuse when you went there? Yes.
6565. Do you know from any records why that shaft was abandoned? The secretary told me that it was unnecessary with the other shaft they had there.
6566. From the collapse of that shaft, did that impress you with the idea that it would be better to wall or brick these shafts? I always prefer bricking.
6567. Do you think that shafts should be at a reasonable distance apart? Yes.
6568. How far apart do you think they should be? If the two shafts are to be close together, I would not have them any nearer than 20 yards.
6569. Do you know that in the Northern districts that some of the collieries are put down on a good deal of delta? Yes.
6570. If those shafts were nearly approximating one another, and an accident took place, is it not possible that silt might keep running? Yes; where shafts are close together there is a liability to that happening.
6571. Do you think that 20 yards is a sufficient distance for shafts to be apart in such cases? I have not had any experience of that sort.
6572. Did you see the sand that washed into the Ferndale Colliery? No.
6573. Were you down at the scene of that disturbance? No.
6574. Do not you think that shafts 20 yards apart would be rather near in such a case as that? On considering it, I think it would be rather near on a delta colliery, or quicksand. It depends on the depth of the quicksand of course.
6575. Were you working 6-yard pillars or 4-yard pillars at the Waratah Colliery? I was working on two different systems at that colliery. I finished up all the old workings on the old system.
6576. What was the old system? Eight-yard bords and 6-yard pillars. Under the new system I was going to start 8-yard bords and 8-yard pillars on the new main roads that were being driven.
6577. Do you consider that if a pillar is intended to be left a certain size it should be left that size? I believe that if a pillar is intended to be left 8 yards it should be left 8 yards.
6578. Do you think that there should be some endeavour to keep the pillars to a uniform size? Yes.
6579. Was that done under the 4-yard pillar system in any of the collieries you know of;—were the pillars kept to a uniform size? Every care was taken at Wallsend. In the new tunnel, we had a 4-yard system, and regular measurements were taken by the overman.
6580. Did you ever know of one pillar encroaching on another pillar? That was according to arrangements.
6581. What do you mean by according to arrangements? By my father's orders—the manager's instructions in crop coal.

6582. Have you ever noticed that narrow pillars are very difficult for men to work in, in cases where the roof is down on each side of the pillar, through a lot of refuse tumbling on each side of the pillar? It depends on how they work. At Wallsend they would leave two ribs on, and there was no difficulty, and at collieries I have visited lately they do the same thing. J. A. Neilson,
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6583. Will that rib answer the purpose? It stops on long enough to keep the fall from the next bord.
6584. Is it not only a shell? Yes, it is met by timber, on the side of the rib. Of course, cases do occur where it comes through.
6585. When you were managing collieries, how did you read the present Coal Mines Regulation Act with regard to ventilation? I read it that it was necessary to give 100 cubic feet of pure air for every man, boy, and horse.
6586. Does not the Act say that that has to be the minimum quantity of air? Yes.
6587. Did you make the minimum the maximum? No, it is seldom that it is so.
6588. In every case where that was carried out, have you only had 100 cubic feet of air, wherever you had a split. Did you work under the split system at the collieries you were managing? Yes.
6589. Supposing you had 100 cubic feet of air, for each man, boy, and horse, in these splits, would you consider the Act had been complied with? Certainly not, if there were other reasons that made it necessary to have more air.
6590. What do you mean by other reasons to have more air? The presence of a great quantity of gas might make it necessary to have more air, or the 100 cubic feet of air might be adequate where there was gas.
6591. Putting the question of gas on one side, if you had no gas there, and every man, boy, and horse was getting this 100 cubic feet of air, would you consider that fully met the requirements of the Act? I would.
6592. Would you think the Act complied with, when the minimum quantity was supplied? Yes, if I had that quantity of air, I would consider it sufficient.
6593. Would you think you had complied with the Act? Yes.
6594. Will you look at the sections in the present Act dealing with ventilation (*see Appendix B*). Do you see anything about an adequate quantity of air, in sub-section 2? Yes.
6595. Do you think that the two clauses should be read together, the adequate quantity and the minimum quantity? It depends on circumstances entirely.
6596. Do you mean where there is no gas? I might have more than an adequate quantity for clearing the ordinary gases, apart from fire-damp.
6597. In any case, if you had 100 cubic feet of air, would you consider the Act was complied with where there was no gas? Yes; under ordinary circumstances, under general conditions, I would consider that I had fulfilled the requirements of the Act if I had 100 cubic feet of air per minute.
6598. Did you find any section of the Waratah Colliery difficult to ventilate? Yes; we had a difficulty in two bords next to the crush, but that was stopped immediately. I changed the system when I went there, and we found no difficulty whatever.
6599. When you were there as manager did the company's weighman have any other duties to perform besides his weighing? The weighman had no duties apart from the weighing.
6600. Was he kept at the weighbridge the whole of the time? Yes; cleaning and weighing the coal on the weighbridge.
6601. Do you know the average number of skips that were weighed in a day? I have no recollection.
6602. Did you leave the business of weighing pretty well between the company's weighman and the miners' check-weighman? The screen overseer was there to superintend any matters, and the weighing was almost absolutely left between the miners' check-weighman and the company's weighman.
6603. Did the men ever make any complaints to you about the weighing? I do not recollect any complaints.

[Witness withdrew.]

Duncan M'Geachie sworn and examined:—

6604. *Mr. Curley.*] What is your occupation, Mr. M'Geachie? I am a colliery manager.
6605. What colliery are you managing at present? The Waratah Colliery.
6606. Have you had charge of any other collieries? Yes.
6607. Where? Some at home, and some here.
6608. What collieries have you been connected with in Great Britain? I worked for the Carron Company in all the different branches of colliery work, and at the latter end as general assistant.
6609. Have you had charge of any other collieries in Scotland? No; I was with the Carron Company until I came out here.
6610. What collieries have you been identified with out here? The Greta and the New Wallsend collieries, and the one I am in now in the northern district, and the Coalcliff colliery in the southern district.
6611. What were you at the Greta Colliery? Surveyor and general assistant.
6612. What position did you occupy at the Coalcliff Colliery? I was the manager of the Coalcliff Colliery.
6613. Were you the manager at New Wallsend? Yes.
6614. Does your experience of collieries extend over a number of years? Yes.
6615. How long have you been at the Waratah Colliery? About eighteen months, I think.
6616. Do you know anything about the system of weighing at Waratah? Yes.
6617. How are the men paid there? By average weight.
6618. Is there a weighman on behalf of the company there? Yes.
6619. Is he stationed there? Yes.
6620. Is he there every day? He is supposed to be there every day.
6621. Has he any other duties to perform besides weighing? He supervises the other men on the pit-top.
6622. Is he a kind of foreman over the top men? Yes; he can see everything from the machine when he is weighing.
6623. Is he supposed to perform any clerical duties at the colliery? Yes; he has to do all the clerical work in connection with the weighing, but I think he generally does that at night.

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6624. Are there any days that you do not weigh at all? Not that I am aware of, but if we are running unscreened coal it is rather awkward to weigh. Last week, I think, we loaded some unscreened coal, and there might possibly have been no weighing done on that particular day.
6625. Will you explain what you mean? Our weigh-screen is on the large coal road, and any coal weighed when we are sending away unscreened coal, would be sent away as such. On that account there might be no weighing on that particular day, but I could not say whether there was or was not.
6626. Do you take unscreened coal over your shaker? Yes; everything goes over the shaker.
6627. What difficulty stands in the road of weighing? None; but, as I have already said, every skip of coal weighed when loading unscreened coal would go away as unscreened. It is not a difficulty.
6628. Is that the reason you give for no coal being weighed on certain days? Yes; for no coal being weighed on these days.
6629. Have you any idea of the average number of skips that are weighed every day? I think about twenty-five or thirty skips per day.
6630. Do you think it is as many as that? Some days last fortnight we were over thirty skips, and I should say we would average from twenty-five to thirty skips per day for the last fortnight.
6631. Do you know that the average number of skips weighed for the last three months has been seventeen per day? I cannot say for so long a time as that. I am referring to the last fortnight; but I think the average must be more than you mention.
6632. Do you think the check-weighman ought to know? He should know if he is there at all times when skips are being weighed, but there are many times skips may be weighed when he is not there; such as days when the special places only are working.
6633. How many men have you in these special places? From fourteen to sixteen; but for the last fortnight we have had very few special places going.
6634. Have you had any complaints upon the subject of weighing from the men? Some time ago I had, but since then I have weighed more skips than they anticipated could be weighed.
6635. How many skips was that? We have weighed over thirty in one day, and they were under the impression that fifteen was the greatest number that could be weighed. We put up a new weigh-screen and bridge, and can weigh more skips than with the old one.
6636. Are you sure that you have weighed thirty skips in one day? Yes, because I have seen it in the book.
6637. If you have done that once, can you not do it again? Yes.
6638. Was that number of skips weighed when the colliery was going a full day? Yes.
6639. How many skips do you draw on an average in the day? Four or five hundred skips.
6640. What do these skips carry? They average from 12 to 13 cwt.; some of the skips go 9 cwt., and some 16 cwt., and the general average is about 12½ cwt.
6641. Do you consider that is a very high number of skips to weigh out of the number of skips that come out of the pit daily? I do not see that it makes any difference what number of skips are weighed, so long as the men fill honestly. If a man fills every skip alike, it can make very little difference to him.
6642. Do you know, from your experience, that it is utterly impossible to fill all skips to weigh alike? We have weighed as high as four skips in a day from one bord, and found not more than half a cwt. of difference.
6643. Does not a miner get into tender coal sometimes? Very seldom at Waratah.
6644. Have you no tender coal at Waratah? No; it is all good coal there.
6645. Have you any faults in the mine? There are, but not in the present workings.
6646. Do you not get tender coal adjacent to these faults? We have crossed none in my time.
6647. Do you think you would get a more exact average if you weighed a greater number of skips than you do weigh? I find very little difference, taking the fortnight all through. We like to weigh as many skips as we can to comply with the wish of the men as much as possible.
6648. How do you weigh your waggons for the colliery? We weigh ourselves, and take the Government weight also.
6649. Do you ever compare that weight with what you pay the men for? It comes out very near. Sometimes we pay the men for more coal than we get, and sometimes we may be a few tons to the good.
6650. Have you struck an average covering three or twelve months as to the loss or gain on each side? I strike it each fortnight. Some fortnights it is a little to the good, and some fortnights a little to the bad, but for the whole year I do not think there would be a difference of 20 tons either way. I could not say positively whether it would be a gain or a loss for the year.
6651. Have you been at the Waratah Colliery for twelve months? Yes.
6652. Do you say that you have made no comparison of these weights for the twelve months that you have been there? No; I have not.
6653. Do you inspect the shafts pretty regularly at Waratah? The shafts are inspected every week, sometimes oftener. They are always inspected on the Saturday.
6654. How are the shafts standing at the present time? Pretty fair.
6655. Do you know that there was a collapse at the main shaft some time ago? Yes; I have heard that.
6656. Have you any cribs in the main shaft? There are no cribs in the main shaft.
6657. Is the main shaft walled? It is bricked down to the solid rock.
6658. Have you looked pretty well about the furnace shaft? Yes.
6659. And about the roadways at the bottom leading to it? There is only one main road leading to the furnace shaft. We have made a new road there recently.
6660. Have you abandoned the old road? Yes.
6661. Why did you do that? Because she was crushing too much.
6662. Was that on the old road? Yes.
6663. Were you afraid that the road would collapse? Yes, I could see that it would collapse.
6664. Do you consider that this new road that you have made will be much safer? Yes, it is perfectly safe. It is on good ground as far as can be seen at present.
6665. From what you saw of that crushing, what opinion did you form of the pillars in that locality? There would be very little pillars there I should think from what I have seen.
6666. What system of work are you carrying out at present? Bord and pillar.
6667. What is the width of your bord? The bords are 8 yards and 12 yards, and we have also narrow bords 4 yards.

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6668. Is this 12-yard bord a new idea? No.
6669. Is it a new idea up in that district? It may be new in that district.
6670. Is it a new idea in Waratah? Yes; it is the first at Waratah that I am aware of.
6671. Had you any difficulty in coming to any arrangement with the men in connection with that system of working? No, not after they got started with it.
6672. Had you any difficulty with the officers of the Miners' Association in any way? No, I cannot say I had. Of course, they did not care about making a start; but after they did, they were quite satisfied with the work. It is very hard to tell what may be called a difficulty with the officers of the Miners' Association.
6673. Had you any difficulty about terms to commence upon? No, none whatever, any more than a consultation once or twice.
6674. Would you call that hostile opposition? Not by any means; it was easily got over.
6675. What pillars are you leaving at Waratah? From 8 yards to 16 yards.
6676. Do you believe in larger pillars being left? Yes; I believe in good large pillars, although those who leave large pillars are often crippled by others who do not leave them, simply because they have less yardage. It does not take so much yardage to work the small pillars. People who work with small pillars can often work at a less cost than people who leave large pillars.
6677. Do you not come in with the large pillar later on? We have not come to that.
6678. Is not that a compensating element? Yes, to a certain extent, of course; but you have to live until you get that.
6679. Do you know that pillar work is worked at a less rate than solid work? I am aware of that.
6680. Do you know that pillar work is worked at a less price than the other work, and will not this compensate you for the yard work? Yes; but you have to look a long while before you.
6681. Does not the Company take the colliery in the aggregate, looking at the question of costs;—do they not look upon the mine as a whole? They have to look to the present as well as the future. We may not get pillars for four or five years, owing to the work that has been done there previously.
6682. What do you mean by that? We do not know how she has been crushing; and if we began to remove the pillars now we might do something detrimental to our own interest. I want to leave something solid between the old work and the new work.
6683. Do you think that is owing to the thin pillars left there previously? Yes; to the insufficiency of pillars.
6684. Does that new road to the upcast shaft give a better outlet? It is more direct for the men who are at work. It is much shorter and more direct.
6685. Has your ventilation been improved by it? It has a little; but we improved the ventilation very materially before making that road.
6686. How is the colliery ventilated as a whole? Fair.
6687. *Mr. Gregson.*] Is the colliery ventilated by furnace? Yes.
6688. Are you still using the furnace? Yes.
6689. Are you putting up a fan? Yes; we are just starting at the foundations now.
6690. *Mr. Curley.*] Is your furnace-man there all day? Yes.
6691. When does he begin work? At 4:30 in the morning, with the fireman.
6692. Do you find any of the rise places difficult to ventilate? We did not work them for some time after starting. At first there was no ventilation there at all, no doubt caused through the crushing in of some of the old workings.
6693. Had you any complaints about the ventilation from the men? No.
6694. Not then? No, there were no men in that section.
6695. Have some of the men complained to you since? I removed ten men from a split last week, through the making of the new road interfering with the ventilation.
6696. What did you do with those men? I put them in at night instead of in the day.
6697. How do you read the present Act, with regard to ventilation [*see Appendix B.*]? I take it that every man must get 100 cubic feet of air per minute.
6698. *President.*] If he has 100 cubic feet of air, has he enough? In some cases he would have enough, and in other cases he would not; it depends altogether on the conditions. In some mines 300 cubic feet of air would not be enough for a man.
6699. Supposing it is not a gassy mine, and 100 feet is going along the airway, and there are complaints about the air, would that quantity be sufficient according to the Act? It all depends upon the conditions. Every mine is under different conditions, and what will suit one mine will not suit another.
6700. *Mr. Curley.*] Take your own mine,—have you any fire-damp there? Yes.
6701. In what district do you find this fire-damp? In the new headings. I work part of the mine with safety-lamps.
6702. Is there much fire-damp given off? Sufficient to warn me to work with safety-lamps.
6703. Does that cover much of your mine? I have only the two prospecting headings going in that way, but we will have a large field of coal there directly.
6704. Have you any fire-damp in the other districts? I have only seen fire-damp in one part of the mine.
6705. If you gave 100 cubic feet of air there, would you consider that the Act had been complied with? Yes; in any district I would be complying with the Act.
6706. *President.*] Why would you be complying with the Act? Because the Act stipulates 100 cubic feet of air.
6707. Will you look at the Act; it says:—
- (2) An adequate amount of ventilation shall be constantly produced in every mine to dilute and render harmless noxious gases, to such an extent that the working places of the shafts, levels, stables, and workings of such mine and the travelling roads to and from such working places shall be in a fit state for working and passing therein.
- (3) An adequate amount of ventilation shall mean not less (as a minimum) than 100 cubic feet of pure air per minute for each man, boy, and horse, which shall sweep undiminished along the airway past each working place.
- What do you say to that? I think an adequate amount of ventilation is sufficient to cover the whole thing, and that it should be left to the management to say what is an adequate amount of ventilation.
6708. Do you mean to say that there is no need for a minimum quantity to be stipulated? Yes; that might cover the faults of careless management. Careful managers will see that they have an adequate amount.
6709. Suppose you have 100 cubic feet of air going through your mine, do you consider that the Act is complied with? Yes, if we have 100 cubic feet of air for every man, boy, and horse. 6710.

- D. M'Geachie, Esq. 6710. Do you think the Act is complied with whether that is enough or not? If you have 100 cubic feet of air you are complying with the Act.
- 8 Oct., 1895. 6711. Does not the Act say, "Not less, as a minimum"? Yes.
6712. You must have 100 cubic feet of air under all circumstances; and if more air is necessary, surely more air must be given? Yes, I admit that; but I would consider I would be complying with the Act if I had 100 cubic feet of air for every man.
6713. What effect do you give to the adequate amount? That it shall mean not less than 100 cubic feet of air.
6714. What sense do you give the word "adequate"? What you think is a fair quantity to keep the place clear.
6715. If 100 feet is not enough, must you not have 1,000 feet if necessary? Certainly.
6716. I do not understand what you mean by complying with the Act. The Act, as I read it, means that you must have 100 feet of air, and just as much more as the men want? I was always under the impression that if you had 100 cubic feet of air for every man you covered the Act.
6717. *Mr. Gregson.*] What do you think now? It is explained now in a very different way.
6718. How do you take the explanation—do you think it covers the Act now as it stands? I do not follow it.
6719. Can you tell us why? Simply because of the words, "not less, as a minimum, than 100 cubic feet of air per minute." If I had that I always thought I was clear of the Act, but in the meantime we have three times that quantity of air.
6720. *President.*] Take a case in which 100 cubic feet of air is absolutely insufficient, do you say you can not be found fault with under this Act? Yes; if you can get 100 cubic feet of air for every man, it must be fit to live in.
6721. Supposing by reason of some external cause, say a blazing hot wind or bush fires, you send 100 feet of air, but still the men are absolutely hardly able to breathe, do you mean to say that you have complied with the Act? So far as any prosecution is concerned I would consider I was clear of the Act, but in a case of that kind I would say that the men would require more air.
6722. Will you look at sub-section 3 and strike out the words "not less, as a minimum, than," and read the clause as it stands without these words;—you clearly then comply with the Act if you give 100 cubic feet of pure air;—these words, therefore, "not less, as a minimum, than," might as well be left out of the Act altogether;—why are these words put there at all? I suppose you can increase it beyond 100 feet if you like.
6723. *Mr. Curley.*] Is not that making the minimum the maximum, as the section stands? No doubt it is.
6724. *President.*] If you say that you have complied with the Act when you give 100 cubic feet of air, is not that making the minimum the maximum quantity, as *Mr. Curley* says? I think the English Act is very clear on that point.
6725. *Mr. Curley.*] Have you had any particular instance, when the inspector has made an examination, where you have just been within the meaning of the Act? It has never been reported to me if that was the case.
6726. *Mr. Gregson.*] Has the inspector ever found fault with any part of the arrangement in your colliery? No; he has been highly pleased with all the alterations that we have made in the ventilation.
6727. *Mr. Curley.*] Have you looked over the proposed new Bill? I have only seen it once, or so.
6728. Have you given any attention to it? Yes.
6729. Were you acquainted with the English Act before this? Yes.
6730. *Mr. Gregson.*] Are you speaking of the Act of 1872? Yes.
6731. *President.*] When did you come out to this Colony? About eight years ago.
6732. Would the Act of 1872 have been in operation when you left England? Yes, about then.
6733. *Mr. Curley.*] Have you read the English Act of 1887? No, I have not.
6734. Do you know the provision in the proposed Bill with regard to the powers of inspectors. Will you look at section 21, sub-section 5, on page 8 [*see Appendix A.*]? Yes.
6735. Do you think that the power to withdraw men in case of danger should be invested in the inspector? I do not think that it should be invested altogether in the inspector.
6736. Why? I think the manager should say whether the men should be withdrawn, as he has the whole responsibility of the mine. He is there continually, and the inspector only glances through the mine, the manager should therefore know more of the details than the inspector.
6737. Should not an inspector know that an inflammable gas is a dangerous thing? Yes.
6738. If there was a difference of opinion between an inspector and the manager about an impending danger, do you think the manager should override the opinion of the inspector? I cannot see why the inspector should have the whole power to stop the working of a colliery.
6739. Do you think an inspector would do such a thing for any trivial little matter? I do not say he would, and I do not think that any manager would keep men in a mine if he thought there was danger.
6740. Do you not think that managers are liable to be mistaken in their judgments as well as inspectors? No doubt they are, but the manager should know more than the inspector, who comes only for an hour, and goes through the place every month or six weeks.
6741. If an inspector has been in the district for a number of years, and is going round these mines from time to time, may he not know as much as the manager? Yes, in a general way, but not as to details.
6742. Are not most of the inspectors men of observation? Yes; and a great many managers are the same.
6743. An inspector comes to a mine for a particular purpose, to examine the mine and use his observation, and to note every passing event he sees? No doubt.
6744. Might he not in particular cases of apparent danger see something prior even to the manager, and know what should be done under such circumstances? I cannot see that he could.
6745. In certain cases, if a manager has a pushing trade to do, might not one of the motives, as far as he is concerned, be to meet his output? No; I do not think that is a manager's views altogether. I think the managers of all collieries have as great respect for the lives of those under them as any inspectors.
6746. Might not that be one of the motives that would weigh with a manager? Yes; he has to get out as much coal as possible.

6747. *President.*] Would the exigency to get a good output, to meet pressing trade demands, make a manager underrate danger? No; not in the least degree;—at all events, it would not do so with me.
6748. While it might not do so with you, are there not other managers besides yourself whose judgments might be affected from this cause? I take it that other managers are as careful as I am, and I would not put men's lives in danger for the sake of a few tons of coal.
6749. If an inspector came to a colliery, and in his opinion he thought it was not safe, and the manager thought it was safe, do you think that the manager's opinion should override the inspector's opinion? The manager, in my opinion, is the responsible man, and surely he would not keep men there under such circumstances.
6750. Suppose an inspector came and saw what he thought was imminent danger, and that serious loss of life might ensue if the men were not withdrawn, but the manager thought otherwise and would not withdraw the men, how would you end a controversy of that kind? If an inspector could point out to me where the danger was to arise from, I might accept his views.
6751. Would not that make the inspector's voice of no effect;—would his opinion not be set on one side in holding to the Act? Suppose the safety of the men is concerned, I do not think the manager would look to the Act; I think he would see first to the safety of the men.
6752. *Mr. Gregson.*] If the inspector could give you reason to think that he has reasonable grounds for apprehending danger, would you not give way? Yes, of course; but I would say that the manager should be the responsible party. The inspector might come and see a little danger, but a great deal of the details he might know nothing about. To know as much as the manager, he would have to know everything from the main downcast shaft to the upcast shaft.
6753. *President.*] You think that the inspector might withdraw the men from a supposed danger? Yes; he might take for a real danger what was only a supposed danger. No man knows these things except the manager, who has charge of the pit. An inspector cannot go into the details of the colliery in the same way as a manager. The manager has everything at his finger-ends, and the inspector has not.
6754. *Mr. Curley.*] Would not an inspector, before he took a step of that kind, converse with the manager and ask his opinion? I do not know that he would; he could snap his fingers in the manager's face with this power.
6755. *President.*] Would you give an inspector power to withdraw the men in case of imminent and immediate danger, with the provision that the manager, if he objected, could appeal to the Minister at once, and have the matter settled by arbitration? I think that power would be a great drawback to the colliery.
6756. In what way? Because the colliery would have to stand while the arbitration was going on.
6757. Do you think an inspector would dare to withdraw the men unless it was in a case of imminent or immediate danger? In the meantime the manager sees the imminent danger, and has the men withdrawn.
6758. *Mr. Gregson.*] Can you imagine a case in which it would be possible for an inspector making periodical visits to the pit to see an impending danger that would not be known to the manager or the overman at the time? I do not think I could imagine such a case; such a thing could hardly occur.
6759. Would not a manager or an overman know what his duty was if he saw impending danger in a mine? Yes; the first thing a manager would think about would be the safety of the men.
6760. *President.*] Would that be the case with all managers; would all managers do that? Any managers I have met would not hesitate to do a thing of that kind.
6761. Have you met many managers? I have met a great many managers in the north and in the south, and I think the first thing they would fly to would be the safety of the men.
6762. *Mr. Curley.*] Can you not understand a difference of opinion arising between an inspector and the manager? I can, in isolated cases.
6763. I will put a case: a mine is giving off a fair quantity of gas, and the inspector goes in and finds the ventilation is not sufficient to cope with the gas, that an explosion may occur at any moment, and he says to the manager, "I am afraid there is some danger in there; I have noticed a certain quantity of gas, and you have no safety-lamps; the men are all working with naked lights, and I think these men ought to be withdrawn until such a time as they are supplied with safety-lamps, or until you get a better current of ventilation"; but the manager says, "No, I think the matter is all right, there is no fear, and I decline to withdraw the men"; would you give the inspector power to withdraw the men under such circumstances as these? I think very few men would do such a thing as that. A manager would never allow men to work with naked lights in the face of gas, and, if the men were working with naked lights, the inspector would not be likely to go in with a safety-lamp to find it.
6764. Do you know that in this Colony an individual instance has taken place at one of the collieries from this cause, where men have worked through a portion of the day, and have come back from their work to take their breakfast, and when they have gone into the mine again a gas explosion has occurred? Where did the gas come from?
6765. It was in the working-place? Where you are working coal there is always a certain amount of risk to be run, and that is a thing that could not be known to the inspector or the manager.
6766. If a series of accidents had taken place from this cause, it must not only have been seen, but it must also have been known. If an inspector said that the men should be withdrawn until better ventilation or safety-lamps were provided, do you think a manager's opinion should override an inspector's opinion in a case like that? I cannot see that any manager would stoop to do a thing of that kind—that he would keep men working, where gas would explode, with a naked light.
6767. If a series of accidents had taken place in a section of a mine, would you not have a knowledge of that, and know that fire-damp was given off; if you did not provide the men with safety-lamps, or withdraw them, and the inspector came round and said that you must withdraw them, would not that be a case for them to be withdrawn? With me there would be a provision to guard against that. If there was gas there, and men were working with naked lights, it would explode before any person could tell. In a section of a mine where such was the case, I would not allow men to work with naked lights.
6768. Would you give an inspector power to withdraw the men in a case of that kind? I should say that the manager of that mine should not be a manager.
6769. Would that help matters if an inspector said the men ought to be withdrawn; should his opinion prevail? I think that is an isolated case.

- D. McGeachie, Esq.
8 Oct., 1896.
6770. Would you, in such a case as that, give the inspector power to withdraw the men? I think that power should be invested in the management.
6771. If the management will not do it, do you think the inspector should have the power? I think there is a great danger in giving that power to the inspectors.
6772. Might not an inspector, on the other hand, be as good a man as the manager, or even better? Yes, even a better man. I confess they may be better men than I am, but they cannot know as much about the mine as the manager.
6773. Could not an inspector know something about a circumstance like that I have brought under your notice? I cannot think any manager would do such a thing as that.
6774. Would you give an inspector power under such circumstances as these to withdraw the men if the manager declined to do it? No; I would not give the inspector power to withdraw the men.
6775. Would you run the risk? No; I would not run the risk. If I thought there was any risk, the men would not be there for one minute.
6776. Suppose that the roof was crushing down upon a number of small pillars, and you had a number of men working in that district, and you could notice the roof working, and the inspector came along and said, "I am afraid you are going to have a crush here; you had better get the men out," but the manager said, "I do not think there is any great danger; I do not think the place will come in just yet";—would you then give the inspector power to withdraw the men? I do not think it is possible for the inspector to know when a mine would collapse. The nature of the coal and the nature of the roof would have to be taken into consideration. It might crush for weeks and months, and the manager might know, but the inspector could not tell when the crush would come. I think the manager would be the most capable man to give an opinion on a matter of that kind.
6777. Could not the inspector examine the roof, and the pillars, and the floor, as well as the manager? Yes; but you cannot tell by looking at the roof when the roof will fall.
6778. In a case of that description, if the inspector held the opinion that it was unsafe for the men to work, would you not give him the power to withdraw the men? I think the management should have that power; I cannot alter what I have already stated; I think the manager should know a little more than the inspectors, because he hears the pit start crushing, and is there till she falls.
6779. *Mr. Gregson.*] Might not a manager be experienced, an overman be experienced, and a fireman may go his rounds, and still there may be danger half-an-hour afterwards, which neither the manager, the overman, nor the fireman could see? Yes; and nothing in creation could prevent such.
6780. *Mr. Curley.*] Do you think that mining legislation has tended to improve matters of that kind? Yes; but it is impossible to foresee everything.
6781. In the event of your working the mine, and you considered that it was not necessary to withdraw the men, although the inspector had been there and offered his opinion that he considered it was unsafe, could the men come out of their own accord if they thought they should not work;—would you not expect them to stay there and do their work if you thought there was no impending danger? No, certainly not; because the Rule says that if there is any danger they must withdraw at once from where the danger is.
6782. Is not that always subject to your jurisdiction as the manager;—whatever they may think or say, or whatever the Rules say, is not everything subject to your jurisdiction? You cannot ask a man to go into a place where he thinks it is dangerous. I do not think a manager would ask men to stay in a mine if they thought it was dangerous.
6783. Do you think a deputy would? No, I do not think so.
6784. *Mr. Gregson.*] I suppose you can imagine a case where a man did leave his place, and the manager disagreed with him;—would a manager be wicked enough, if a man left his place because it was dangerous, to say that if he did not go back to his work he would have to leave his employment? I do not know any manager that would do such a thing.
6785. *President.*] You seem to think the suggestions made in connection with this clause are worthless, because they point to matters that are unlikely to arise? Yes.
6786. That they are not practicable, or within the range of probability? No.
6787. *Mr. Curley.*] Do you know that there is something in the present Act dealing with the powers of inspectors. Will you look at the 25th section of the present Act, on page 9:—

25. If in any respect (which is not provided against by any express provision of this Act or by any special rule) any inspector find any mine or any part thereof or any matter thing or practice in or connected with any such mine to be dangerous or defective so as in his opinion to threaten or tend to the bodily injury of any person such inspector may give notice in writing thereof to the owner or agent of the mine and shall state in such notice the particulars in which he considers such mine or any part thereof or any matter thing or practice to be dangerous or defective and require the same to be remedied and unless the same be forthwith remedied the inspector shall also report the same to the Minister. If the owner or agent of the mine objects to remedy the matter complained of in the notice he may within seven days after the receipt of such notice send his objection in writing stating the grounds thereof to the Minister and thereupon the matter shall be determined by arbitration in manner provided by this Act in relation to the special rules and the date of the receipt of such objection shall be deemed to be the date of the reference. If the owner or agent fail to comply either with the requisition of the notice given by the inspector when no objection is sent within the time aforesaid or with award made on arbitration within twenty days after the receipt of such notice or the making of the award (as the case may be) he shall be guilty of an offence against this Act and the notice and award shall respectively be deemed to be written notice of such offence. Provided that the Court if satisfied that the owner or agent has taken active measures for complying with the notice or award but has not with reasonable diligence been able to complete the works may adjourn any proceedings taken before them for punishing such offence and if the works are completed within a reasonable time no penalty shall be inflicted. No person shall be precluded by any agreement from doing such acts as may be necessary to comply with the provisions of this section or be liable under any contract to any penalty or forfeiture for doing such acts.

Do you see the power given to an inspector there? Yes.

6788. Do you object to that power? No, I approve of that clause, because it gives time to consider the matter, but to give an inspector power to stop a mine at a moments notice is out of the question altogether.
6789. I think you have assumed that there might be cases of imminent danger where a manager might have to withdraw the men himself? You never know; it might happen in my mine to-morrow. It would not be the first time I have had to withdraw men.
6790. You think that circumstances might arise over and over again where you may have to withdraw the men? Yes; circumstances may occur any day in any mine.
6791. If a manager has to take up this position, what is your objection to an inspector having the same power? Because an inspector may stop a mine for a supposed danger, but a manager knows whether there

there is danger or not, and he will withdraw the men if he sees danger. The inspector may think he sees D.M'Geachie, danger when there is really no danger. Esq.

6792. Suppose a manager had great anxiety for the pit to go on working? I do not think that any manager would stoop to keep men's lives in danger for all the output of the whole of the Newcastle mines. 8 Oct., 1895.

6793. Do you know that there is a colliery in the northern district where the inspectors have never been satisfied as to its safety? No doubt the manager is satisfied that the mine is safe, otherwise he would not be going on working.

6794. Would you care to take up a position of that kind yourself? I would rather not answer that question unless pressed to do so.

[Witness withdraw.]

WEDNESDAY, 9 OCTOBER, 1895.

[The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.]

Present:—

FRANCIS EDWARD ROGERS, ESQ., Q.C., PRESIDENT.

JAMES CURLEY, Esq. | JESSE GREGSON, Esq.

George Wright Batey sworn and examined:—

6795. *President.*] What are you, Mr. Batey? I am Council Clerk at Greta.

6796. Have you followed any other occupation? Yes; I have been a coal-miner.

6797. What collieries have you worked in? I have worked at Greta, the Glebe, and East Waratah Collieries, and I have been coal-mining in England. 9 Oct., 1895.

6798. Where have you been working in England? In the Newcastle coal-fields, in the county of Northumberland.

6799. *Mr. Curley.*] What collieries have you worked at in England? In the West Wylam Collieries, under the Mickley Coal Company.

6800. Did you work long at West Wylam? I went into the West Wylam Colliery when I was about 14½ years of age.

6801. What was the system of working there? Bord and pillar.

6802. What was the width of the bords? 4 yard bords—12 feet.

6803. What was the size of the pillars? 16 yards by 22 yards.

6804. Was the bord 22 yards in length? Yes; 22 yards in length, and 4 yards wide. The cut-throughs were 22 yards apart; what we called walls.

6805. Do you know the depth of that mine? I am not certain. There were tunnels, and I think the depth would be about 200 feet; possibly less.

6806. What was the thickness of the seam? There were several seams.

6807. What was the thickness of the seam you worked in? I worked in them all; they ranged from 2 feet 3 inches to about 4 feet. There was one seam they called the yard seam, which was practically speaking 3 feet thick.

6808. How was the ventilation conducted; was any brattice used? Brattice was used where necessary of course. The ventilation was pretty good owing to the bords being shorter, and the thickness of the seam.

6809. Was that mine ventilated by furnace or by fan? By fan.

6810. How long have you worked at the Greta Colliery? For about three years, as near as I can recollect; up to about four years ago.

6811. Did you work in different parts of the colliery? Yes.

6812. Are you acquainted with almost the whole of the workings of the colliery? Practically speaking, yes.

6813. Did you ever do any check inspecting at that colliery? Yes; I was check inspector for about 8 months.

6814. Is the Greta seam on an angle to the rise? Yes; it dips about 1 in 5 or 1 in 6; or from 10 to 12 degrees.

6815. Does it rise in the same proportion in the opposite direction? Yes.

6816. Did you ever notice any defects in connection with the ventilation when you were there? Yes.

6817. What was the nature of these defects? The principal thing would be the want of ventilation at the working face. Want of canvas, or some artificial means of carrying the air to the face, was the principal defect.

6818. Did you always find sufficient air in the headings, or in the air course? As a rule, we found a sufficient quantity of air in the main levels to meet the requirements, taking it on the average.

6819. *President.*] What do you call a sufficient quantity of air? Allowing 100 feet of air per man, according to the wording of the Act.

6820. *Mr. Curley.*] Did you find the minimum quantity of air there? Yes.

6821. *President.*] Was that enough? Of course, going by the Act it was.

6822. Was it enough for the men? My opinion would be that it was not enough.

6823. Do you think that there ought to have been more air in the airways? I think so.

6824. *Mr. Curley.*] On the main level, near the working place, did you find the air as brisk as you found it on the main roads? No; I have with me a diagram, that will illustrate what I wish to point out, if it is admissible [*Diagram produced, see Appendix 2.*]

6825. What does this diagram represent? A pair of levels; it is a sectional plan. Eight men are working at the faces. A being the last cut-through the full quantity of air for these eight men, exclusive of wheelers and horses—that is, say, one horse and one wheeler—should go through B; and the minimum quantity would be 1,000 feet of air, but back in the main level from about (say) half-a-dozen to ten cut-throughs the quantity, although being found there, was not found in the last cut-through. We could not get a revolution of the instrument at A, because the air was sealing through the previous cut-throughs, and the men were complaining about the air being bad. 6826.

- Mr. G. W. Batey. 6826. How far was the ventilating current from the other places? It would be within the 35 yards if properly conducted, but the air was seeping through the old cut-throughs.
- 9 Oct., 1895 6827. The air did not come up to the working-place? No.
6828. What district did that represent? It was either the No. 1 or the No. 2 South level, on the north side of the pit. I would not be sure whether it was the No. 1 or the No. 2 level. I have another diagram referring to another district, called the Long Gig District. [See diagram, Appendix G 2.]
6829. Was there a defect there? Yes; I had to call the Government inspector's attention to this matter.
6830. What does that diagram illustrate? The same defect, but there is a technical point raised on this plan. With reference to the measurement the Act prescribes 35 yards, and the underground officials were taking their measurements from the level. The men complained of the deficiency of air when firing shots, and they had to come out for half-an-hour, until the smoke partially cleared away. As check inspectors we based our measurements from the air current on the main level, and the underground official took his measurements from the bottom of the heading, consequently the distance of the bord was less than 35 yards according to his measurements, and, according to our calculations, 38 yards. The Government inspector made a special inspection of this particular locality through our having to report the matter.
6831. Were you present at this inspection? Yes. Mr. Bates and Mr. Humble, Government inspectors, the manager of the colliery, two underground officials, and myself and colleague were present.
6832. What locality was that in? It was on the top of the Long gig, on the south side of the shaft.
6833. Whose view of the matter did the Government inspectors bear out? They substantiated my view of the matter.
6834. Did they uphold the views of the check inspectors? Yes.
6835. That the working-place was in advance of the air-current? Yes; it was 3 yards over the distance.
6836. Was there any brattice used there at all, to conduct the air into that particular place? None whatever.
6837. Would the air be deficient there, apart from the shot-firing? Yes.
6838. Was that to the rise of the mine? Yes. Being to the rise, irrespective of the firing, the impure air would stop in the place.
6839. There was nothing to drive it out? Nothing, except the passage of the skip.
6840. What means do you think should have been adopted;—what was done? Nothing was done.
6841. Was nothing done after the inspectors were there? Nothing was done till the No. 2 cut-through was put through. When the No. 2 cut-through was put through, bratticing was put across No. 1 cut-through, and consequently the air was forced up to No. 2 cut-through, past the bottom of the heading; that, of course, brought it within the distance.
6842. Did the manager endeavour to get that cut-through over as quickly as he could? Yes; they had just commenced it at that particular time.
6843. What was the thickness of the cut-throughs at that time? 8 yards, I believe.
6844. Had you many complaints about the ventilation when you were going your rounds as check-inspector? Yes; I had once a case of my own, that I had to draw the attention of the officials to, of the same nature.
6845. Was it a case similar to the one you have referred to? It was not the same distance; it was within the distance, but the air was quite as deficient.
6846. Do you mean to say it was not over the 35 yards? Yes; it was under the 35 yards.
6847. And was the air still defective? Yes; I had to leave the face on account of the bad air affecting my head.
6848. You suffered personally from the effects of bad ventilation? Yes.
6849. Had you to leave the colliery? No; I had to leave the working-place and go down to the level to get fresh air.
6850. Did you complain to the manager about this? No, to the underground official.
6851. What did he say when you made these representations to him? He remarked that it was not as bad as the C Pit. The C Pit had a particularly bad name at that time.
6852. Did you get any redress in connection with this matter? None whatever. I remarked, what had the C Pit to do with it?
6853. Do you think that some steps should be taken to get the ventilation into the working-place? Yes; particularly with a seam of the nature of the Greta seam, owing to the amount of pitch.
6854. Do you know anything about the proposed Coal-mines Regulation Bill? I have not had an opportunity of going through it carefully. I have glanced at the ventilation clauses.
6855. Will you look at section [50] 47, rule 1, on page 23 of the Bill; the words crossed out and the words in large letters denote the amendments, made by the Legislative Council, and without the erasures the clause reads as it was originally drafted (see Appendix A);—will you read the clause as it was originally drafted? Yes.
6856. Do you notice that it is proposed by the Legislative Assembly to make the minimum quantity of air 150 cubic feet, and the cut-throughs 25 yards? Yes.
6857. The Legislative Council erase these provisions, and think the word "adequate" will meet all that is required, and they substitute 35 yards, for 25 yards with regard to the cut-throughs. Do you consider, that the proposed minimum quantity of 150 cubic feet, should be adhered to in the Bill? Yes, I think it should be adhered to.
6858. Are you of opinion that the word "adequate" would meet the case? I do not think so; one man's opinion might differ from another man's opinion on that word.
6859. What have you to say about the 25 yards? I think it is quite enough; I think 35 yards is considerably more than it should be.
6860. Do you find the air stagnant going to the rise at Greta? Even at the 25-yards in a mine like the Greta Mine it would require some bratticing. Places might be 20 yards in, or less, and then I have known complaints to be made. The specific gravity of heated air being less than pure air, consequently it must lodge in the face.
6861. Was the mine ventilated by fan or by furnace? When I first started to work in the mine, in 1888, the furnace was in operation.
6862. Was there a fan in operation later on? Yes; Mr. Robertson put up a fan, and abolished the furnace.

6863. During the periods you have referred to, with regard to the defects in the ventilation, was that during the time the fan was there, or during the time the furnace was there? I am under the impression that it was after the fan was in operation; it was in the time of the fan.
6864. Will you look at section [49] 46, sub-section 3, on page 23 of the Bill (*see Appendix A*). You will see a provision there for bratticing the places. The section proposes that the air shall be taken by brattice or otherwise to within 15 yards of each working-place. What do you think of this provision? It would be an improvement.
6865. Do you think it would be a great improvement on the present system? Decidedly.
6866. Do you think that brattice would be a very costly matter to the mine-owners? It is a thing I have never worked out, but I cannot see that it would be a costly matter.
6867. Have you given the matter any consideration? No; not to go into figures.
6868. Is the Greta Colliery a dry colliery? Yes; but there have been places wet to the dip.
6869. What is the average height of the seam? The working seam upon an average is about 8 feet high, and to go up to the brassy tops it would range from 12 to 15 feet.
6870. What is the usual height that is worked? When I was in the colliery it was worked from the floor up to the white stone, something like 8 feet, and I have known it 6 feet.
6871. Have you a lot of gob refuse in the mine? Yes, a good deal; there was more gob there than any other colliery in the district as a rule.
6872. Is that owing to the refuse you got out of the seam? Yes.
6873. Do you think that any portion of that refuse could be utilised on the side of the road, to act as a conductor in connection with brattice, to gob up a portion of the side? I dare say it could be utilised.
6874. Is there much brattice used in that mine? I should say, as a rule, very little, and only in the main levels. I have worked in main levels where bratticing was carried up to the prescribed distance in the Act.
6875. Was that in the leading roads? Yes; where there was gas.
6876. Is there fire-damp given off at Greta? Yes; I was nearly burnt once, and I have heard tell of other men who have nearly been burnt by the explosion of gas.
6877. Have you heard tell of any accident occurring from gas exploding? I have not heard of any serious accident; just a little singe.
6878. Have you known of any men being incapacitated from following their work through gas exploding? No; not during the time I have been at Greta.
6879. When you were check-inspecting, had you occasion to draw the manager's attention to the gas? No, I cannot say that I have.
6880. Do you always look upon it as an important matter where there is gas given off—fire-damp? Yes; the only danger with gas was in some of the leading places.
6881. Was that where you were winning out new ground? Yes.
6882. Did you ever work any pillars at Greta? No, I have never done any pillar work at Greta.
6883. Did you see any pillars worked there? Well, scarcely; I have seen places going loose at one end; two bords running together.
6884. Do you mean to say that you have seen pillars cut through when working a bord? I would not say that was the case, but I have known one bord that was working alongside of another old one; the two places were not going at the same time.
6885. Were the bords driven by any line? As a rule, they were; it was compulsory in Greta. It is a different seam as far as the cleavage is concerned. The backs or facings do not run parallel as in other seams.
6886. Was there any large fall, while you were at Greta, in connection with pillar-working? Not that I am aware of.
6887. Do you know anything about the system of weighing at Greta? The system was an average; they do not weigh every skip.
6888. Do you know that there is a proposal in the Bill to shorten the hours of employment to eight per day (*see Appendix A*)? I believe there is.
6889. Will you look at section 36, on page 17 of the Bill,—what hours did you work at Greta while you were there? I went down before 7 o'clock.
6890. When did you come out? After 4 o'clock. The hours for winding were from 7 o'clock to 4 o'clock, exclusive of the meal hour—from half-past eleven till half-past twelve.
6891. Do you live in Greta at the present time? Yes.
6892. Have you lived there since you left the mine? I have lived in Greta for seven and a half years.
6893. Have you ever heard the men discussing this question of eight hours amongst themselves? Yes, I have often heard them talk about it.
6894. Do you think the men wish the hours to be regulated by Act of Parliament? Decidedly; that is the expression of opinion I have heard.
6895. As far as you can form an opinion yourself, do you think this can be better managed by mutual arrangement, or would you rather see it done by Act of Parliament? I would rather see it done by Act of Parliament.
6896. Do you know any of the reasons the men advance for this opinion? I know the reason I give myself, and that is,—that under present conditions the men are not in a position to make a bargain that would be satisfactory to them.
6897. You think that the men are not in a position to come to a mutual arrangement on this matter? No; they are not, simply on account of the conditions under which they are working. They would have the worst of the deal in the position they are in; they are not able to do it.
6898. You think that at the present time the bargain is all on one side? Yes; that is what I mean.
6899. Do you think it would be a very difficult matter to arrange the working hours under present conditions? Yes; decidedly it would.
6900. Do you think the output could be got at the Greta Colliery that the company would wish by working the eight hours. Could they get the same aggregate output? Yes; I think, on the whole, the same output could be got.
6901. Are there many men employed at the Greta Colliery. Has the Colliery much trade? As a rule they go up to 700 tons per day; I am speaking of the time when I was connected with the mine.
6902. Did you always think that eight hours was long enough to be in the mine yourself? Rather.

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6903. Did you work shorter hours in England? Yes; considerably shorter hours; five or six hours a day in the seventies. The back shift worked from 10 till 4.
6904. What time did you go down the mine? The front shift went down at 4 o'clock, and the back shift men went down at 10 and relieved the front shift men. The back shift men came out again at 4 o'clock or 4:30.
6905. Would the pit not wind from 6 till 10 o'clock? No; from half-past 6 till half-past 4 o'clock.
6906. Would that not virtually make your hours about six and a half hours? Yes.
6907. By the time you got out of the mine? Yes.
6908. Do you think the men are asking for anything very unreasonable when they are asking for eight hours to be stipulated in an Act of Parliament? I do not think so; practice has proved that as much coal is got out, if not more, during the shorter hours in England than the longer hours.
6909. Do you think that the same thing would apply to every mine? I think so.
6910. Are you speaking of the aggregate output? Yes; we could always do as much in the shorter hours as we could do in the longer hours. The men would work a little harder.
6911. With better ventilation in the mine, and shorter hours of working, you think that men could apply themselves more vigorously to their work? Yes.
6912. Were the wages reduced in any way under the system you have mentioned? Oh, no.
6913. Did you still earn the same amount of wages as you did under the longer hours? Yes.
6914. Had you worked there when the hours were longer? These hours I have given were the longer hours; the hours were shortened a little afterwards. The hours had been from half-past 10 to 4 o'clock, and they came back afterwards to from 10 o'clock till half-past 4 o'clock.
6915. Had the hours been longer than this at one time? Yes, before I had any experience at a coal mine myself.
6916. When that joint inspection took place at Greta, do you know whether the inspectors enjoined upon the manager the necessity of getting more vigorous ventilation? I cannot remember anything said of that character; there was nothing said in my presence.
6917. Will you look at section 21, sub-section 5, on page 8 on the Bill (*see Appendix A*), and read the clause over? Yes.
6918. Do you see that that sub-section gives an inspector power to withdraw the men in case of danger? Yes.
6919. Do you think that an inspector should have that power, or do you think the power should be left in the hands of the manager? I think the inspector should have the power, myself.
6920. Do you think the manager would withdraw the men at all times in case of danger? I would not trust some of them.
6921. Do you think that in many cases he might leave the men working in the mine until they came out of their own accord? I think so; I think the Government inspector should be better able to judge than the average manager.
6922. Do you think that the inspector would stand in a more independent position than the manager in a matter of that kind? I think so.
6923. Do you think there would be anything to harrass his mind, such as getting the output out of the colliery? Not a bit of it.
6924. From what you have seen in the Greta mine do you think that an inspector wants more power? I think so.
6925. *Mr. Gregson.*] Do you mean that he wants more power, or that it is desirable that he should have more power? I think it is desirable that the inspector should have more power.
6926. *Mr. Curley.*] Did you ever know of any creep at the Greta Colliery? When I was in the mine there was nothing of any consequence, but I have heard enough about it since.
6927. What have you heard about it? I have heard possibly the whole of the history, as far as conversation is concerned.
6928. Was this information received from men that worked in the mine? Yes.
6929. And who knew about it? Yes.
6930. What did they tell you? I have heard men say that it was a danger, and go as far as to say that it was causing danger to the shafts of the colliery. The Greta shaft was in the vicinity of the creep.
6931. Which shaft do you refer to? The main shaft.
6932. Have you heard men who were working in the mine express themselves in this way? Yes.
6933. When was this? The first start of the creep was about 1889 or 1890. What makes me remember this is that while going in and coming out of the mine I have sometimes seen officials taking away crushed coal and dirt from the side of the travelling road.
6934. Have you seen that yourself? Yes.
6935. Did that give you an idea that there was a crush on? Yes; as a practical miner I knew what it meant.
6936. Was that far from the shaft? Not more than from 5 to 10 chains—10 chains possibly.
6937. Do you know the size of the shaft pillars anywhere near the shaft? I cannot say. While going my rounds as check-inspector I have noticed a great space, just in behind the main level, where the coal had been all taken away. It has been generally stated that the shaft pillars were not of sufficient size.
6938. When the check-inspectors saw this did they move the company to take steps to try and chock it? Not that I am aware of.
6939. By putting in chocks? I cannot say chocks, but I have seen large timber put in. I may state that even the officials considered those dangers, inasmuch as they dare not make a little road past the shaft bottom for any skips. It was, however, done ultimately.
6940. Did you ever inspect the shaft while check-inspecting? No; we would have had to do that at night-time.
6941. Did you not consider that part of your duty? I did at that time, but of course there were obstacles in the way.
6942. Do you think the company would have offered any objection? I cannot say; I never asked them.
6943. Did you ever notice anything wrong with the shaft yourself? I cannot say that I have ever noticed anything wrong. I have heard from the men at the bottom of stones coming down the shaft on several occasions.

6944. *President.*] Do you mean stones falling from the sides? Yes; loose ground falling from the sides.
6945. *Mr. Curley.*] Did you hear of this at the time you were check-inspecting, and if so, did it not imbue you with the idea that the shaft should be inspected? I knew that the check-inspectors had no power to do anything in connection with the matter, at least the Act did not provide any power.
6946. The check-inspectors are there to draw attention to any grievance; should they not have drawn attention to the condition of the shaft? Yes; but I was under the impression that the Government-Inspector knew as much about it as we did.
6947. Do you not know that the Government Inspectors are not always on the spot—that they only come at intervals? I would not say the Inspectors' attention was not drawn to it, but we never drew his attention to it.
6948. Had you not the power to inspect the shaft as check-inspectors? Yes.
6949. Do you know that the Home Secretary has requested the inspectors at Home to take notice of anonymous communications? No; I did not know that.
6950. Do you believe that substantial pillars should be left at all times in a mine? I think so. I think it would be both economical and safe.
6951. Are the pillars got out at less cost by leaving larger pillars? I think the management get a larger percentage of good coal from the large pillars.
6952. Is the coal got out at a less price? Yes; pillar working is done at a less price.
6953. By leaving larger pillars would you not get the coal at less cost, and better coal? Yes, because it would not be crushed so much.
6954. *President.*] Do you know that under this Bill managers must pass an examination;—and, if so, don't you think they would know the best way of working a mine without it being laid down by law? Yes; but we also know that two managers differ, even in England, where the Act is so strict in these matters, but I am not sure whether the English Act provides for the size of pillars.
6955. The English Act has no provision in this respect? I was under the impression the size of pillars was in the English Act.
6956. In England it is left to the manager if he is a competent man, and is not that the best way? Yes, if he is a competent man.
6957. *Mr. Curley.*] Do you know that in this Colony there have been a series of crushes owing to small pillars? Yes.
6958. Would you be disposed to say that there should be no limit to the size of pillars? I think there should be a limit in the Bill.
6959. Do you know that there is no provision in our present Act with regard to the size of pillars? Yes.
6960. Do you know that every manager has had absolute freedom in this respect? Just so. I think it would give greater power into the hands of the inspector if there was a limit to the size of the pillar.

[Witness withdrew.]

Mr. William Kennedy sworn and examined:—

6961. *President.*] What is your name? William Kennedy.
6962. What are you? I am a coal miner.
6963. Where? Greta.
6964. How long have you been at Greta? About seven years.
6965. Where were you before you went to Greta? I was at New Lambton before I went there.
6966. How long were you at New Lambton? About two years.
6967. Where were you before you went to New Lambton? I was at Burwood.
6968. In this Colony? Yes; in what they call the Old Burwood mine.
6969. How long were you at Burwood? Only a few months.
6970. Where were you before you went to Burwood? At Minmi.
6971. How long were you at Minmi? About three months.
6972. Where were you before that? In New Zealand.
6973. Were you coal-mining in New Zealand? Yes.
6974. How long were you in New Zealand? About three years.
6975. What part of New Zealand were you working? At Brunner, about 7 miles from Greymouth.
6976. Was that a coal mine? Yes.
6977. How long were you at that mine? About three years at that mine.
6978. Where were you before that? I was in several very small places on the east coast of New Zealand; at one place called Springfield.
6979. Were you ever in England? No; I have been in Scotland.
6980. Were you coal-mining in Scotland? Yes.
6981. *Mr. Curley.*] How long have you been at the Greta Colliery? Seven years.
6982. *President.* How long were you coal-mining in Scotland? Well, I was reared there; I would be in the mine about six or seven years I should think.
6983. Were you getting coal there? Yes, I was getting coal before I left England. I wrought in the mine as a boy and got coal afterwards.
6984. Did you go to New Zealand from Scotland? Yes.
6985. *Mr. Curley.*] Have you virtually been following mining the whole of your life? Yes, nearly the whole of my life.
6986. Were the seams you worked in in Scotland very thin seams? Some of them were thin seams.
6987. What was the thickness of the seam? The first mine I was in the seam was about a yard thick, and the other seam in the same pit was about 5 feet 6 inches thick.
6988. Were there many men employed in that mine where the seam was 5 feet 6 inches thick? Yes, a large quantity of men.
6989. Were there more than 100 men? Yes.
6990. Were there 200 men? It may be about 200.
6991. How long is that ago. It might be fourteen years. I can hardly say the exact date.
6992. Were you working under the English Act of 1872 when you were in Scotland? I was only young when I was there.

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6993. *President.*] What years were you working in Scotland? About twenty-seven years ago.
6994. How long is it since you left Scotland? I left Scotland about fourteen years ago.
6995. *Mr. Curley.*] Is it about fourteen or fifteen years ago since you worked in the 5-ft. 6-in. mine as a working miner? Yes; the seam was about 5 feet 6 inches thick when I left there.
6996. Was it worked on the long-wall system, or bord and pillar? The last mine I worked in was bord and pillar.
6997. Can you recollect how that colliery was ventilated? Yes.
6998. Do you know the width of the bords? Eight feet; they drove them this width to get to the boundary, and left the pillars 10 yards square; they drove to the boundary, and worked the pillars backwards.
6999. What distance would you go before you put a cut-through over? Ten yards.
7000. Did you have a cut-through every 10 yards? Yes; the pillar was 10 yards square, or supposed to be.
7001. Was there good ventilation in the mine? Very good.
7002. Was it fan or furnace ventilation? I am not positive.
7003. Did you work in different parts of that colliery? I only wrought in one section of it.
7004. Coming to the Greta colliery—you say you have been there seven years? Yes.
7005. Have you worked in all the different parts of that colliery? I have wrought in every district—in nearly every part of the pit.
7006. *Mr. Gregson.*] Are you still working at the Greta Colliery? Yes.
7007. *Mr. Curley.*] What has been your experience at that colliery with regard to the ventilation? The ventilation has been very slack.
7008. Has that been confined to certain sections of the mine, or are you speaking in a general way? Some sections in the pit are worse than others; some of the rise sections, are particularly deficient.
7009. Did you always find the rise sections the worst? Yes.
7010. *President.*] Does not the air travel to the rise? Not very well.
7011. *Mr. Curley.*] Have you ever acted as check-inspector at Greta? I have.
7012. How long have you acted as check-inspector? I believe for six months.
7013. Is this some time ago? Yes, a good while ago, about the latter part of 1891.
7014. When you were acting as check-inspector, had you to draw attention to defects in the ventilation? Yes, several times.
7015. What were the nature of the defects; were they that the air was not getting up to the working face? Part of the difficulty was, that the air did not get up to the working face; I do not think the current of air was large enough.
7016. Have you any check-inspectors' reports with you? I have.
7017. Do they refer to when you acted as check-inspector yourself? Yes.
7018. Are there any defects mentioned in these reports? Yes.
7019. Will you let us know what these defects are? This is an inspection made in the rise workings on the 7th, 8th, and 9th October, 1891:—

Miners' Inspection Report of Greta Colliery, 7th, 8th, and 9th October, 1891.

MAIN intake for No. 3 split, little jig workings, taken top of jig: 3,932 feet for forty-two men, boys, and horses, giving an average of 93½ feet of air per minute. We found the air very slack in this section, owing to the canvas regulator being out of order bottom of long jig.

We found three canvases in need of repairs in No. 4 split, straight in between front and back level, allowing a large quantity of air to escape.

(Signed) ROBERT HINDLEY,
WILLIAM KENNEDY,
Miners' Check-inspectors.

7020. Have you any other reports that you wish to refer to? Yes; but they are not my own inspections.
7021. Will you tell us what these reports say?

Miners' Check-inspectors' Report of Greta Colliery, May 8th, 9th, and 11th, 1891.

MAIN intake of little jig workings, 2,838 cubic feet per minute for thirty-six men and horses, allowing each 78 cubic feet per minute.

Report that the air is deficient in little jig No. 3 split. We could not get the anemometer to register in any of the cut-throughs next working places, owing to canvases being in a bad state of repair and cut-throughs not filled up; canvas wants repairing at bottom of No. 16 heading.

(Signed) ROBERT DUNN,
ROBERT HINDLEY,
Miners' Check-inspectors.

7022. Have you any other reports of inspections? I have another report for the same year on the same place.

7023. What does this report say?

Miners' Check-inspectors' Report of Greta Colliery, March 23rd, 24th, and 25th, 1891.

Main intake for No. 2 Split, straight in, 3,465 cubic feet per minute for thirty-four men and horse, allowing each 102 cubic feet of air per minute.

(Signed) ROBERT DUNN,
JAS. L. FERGUSON,
Miners' Check-inspectors.

7024. *President.*] Will you look at rule [40] 38 on page 30 of the Bill, "Periodical inspection on behalf of workmen"—(see *Appendix A*)—do you see the words there, "Not being mining engineers, who are practical working miners"? Yes.

7025. Looking at the fact that mining engineers may make it their business to get appointed, and might get a knowledge of any mines, don't you think these words that I have drawn your attention to are properly left in the rule;—if you have facilities for making the appointment, would not your own men, or any two men from another mine, who are not mining engineers, quite satisfy you? So far as the check-inspecting of the mine is concerned, I think we could do without mining engineers.

7026. *Mr. Curley.*] Do you think that check-inspectors should be men appointed from the colliery? I would be in favour of men being appointed from the colliery, as long as the colliery was of the standing, say of 100 men. Where there is a greater number of men, you always have practical men to appoint.

7027. Do you know that in a small mine, it is difficult to get these men appointed? Yes; I am aware of that.

7028.

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7028. *President.*] Have miners friends in other mines? Yes; always some friends in different mines.
7029. *Mr. Curley.*] Would not that create some friction in some places;—might not the managers object to them leaving? I believe there would be friction if strangers were coming about a mine appointed from other places.
7030. *President.*] Would there not be friction also if they were men who made a regular business of making these inspections? Yes; I think the engineers would be the worst.
7031. *Mr. Curley.*] I am putting it, that in a small mine they might not be able to get men of their own, and might wish to bring two men from some other colliery, and the manager might object to these men leaving their work to come and do this work, and then there could not be any check inspection, unless they appointed them from their own number? Yes; there might be friction in that way.
7032. Do you think that the men to be appointed should be men from a particular colliery itself? Taking the district as it stands, I believe in men being appointed at the colliery.
7033. Have you noticed any defects in connection with the ventilation at other collieries you have worked at in the northern district? Not very many. One of the collieries was worked on the long-wall system, and the ventilation is always good there.
7034. Was that the New Lambton Colliery? Yes.
7035. Would the current of air sweep right round the working face? Yes, it was sometimes very cool. I was close to the shaft-bottom at Burwood, working near the shaft-bottom, and at Minmi, of course in the new tunnel, there was always a very good current of air.
7036. Was that in the Duckenfield Mine? They call it the new tunnel.
7037. How many years ago is it since you were there? Between nine and ten years ago.
7038. Were there very many men employed in that tunnel? At that time I think there were about 150 men—there may have been more.
7039. How long were you at Minmi? About three months only.
7040. Did you work in all parts of the pit? No, only in one section of the mine.
7041. Have you given any attention to the question of pillars in a mine? Yes.
7042. Have you noticed anything in connection with the pillars at any of the collieries where you have been employed? Yes, at Greta, when she took the creep.
7043. Were you at Greta when this creep took place? Yes.
7044. Were you working at the colliery at that time? Yes.
7045. Did this creep affect many of the pillars? They had to draw one section of the dip workings altogether; it affected between forty and fifty places, and they had to take the men out.
7046. Where the men were withdrawn did they timber the places, or did the places come in? They only timbered close to the main headings, and no one was allowed back off the main road.
7047. Did they stop the place? Yes.
7048. What section of the pit was that in? The north side of the dip.
7049. Is that the only place where you have noticed the pillars thin? They were thin, on the straight, in the south side.
7050. Is that in addition to the other place you have mentioned? Yes.
7051. What did you notice in this part? That the place was generally working and throwing coal off the pillars, and they stopped the splitting of some of the pillars there.
7052. Were they splitting pillars? Yes.
7053. And did they stop splitting these pillars in consequence of this creep? Yes.
7054. Does that impress you with the idea that larger pillars should be left in these collieries? Yes; a lot of places want larger pillars, and especially when they are next the main roads.
7055. Away from the main roads have you to go on to interior workings further in? Yes.
7056. Do you regard the principal headings as the main roads when you get further in? Yes.
7057. Do you think there should ever be any doubt about the size of pillars? Pillars should always be of sufficient size.
7058. Is that a man's only escape if anything occurs? That is the only way if they come down to get out.
7059. Do you think the Bill should stipulate there should be a minimum size for pillars? Yes.
7060. Would you leave that matter in the hands of the manager? No.
7061. Do you think that there should be legislation on the eight hours? Yes; I think it is long enough for any man to work.
7062. Say it has been a slack week, that there has been nothing to do all the week, Monday, Tuesday, Wednesday, and Thursday have gone by, and on the Friday there is some pressure, and you want to earn a little more money, would you like to work ten hours to make that money, owing to the slackness of trade during the week;—would you let a man do that? It is my opinion that in eight hours a man does a sufficient quantity of work—that he does all that is required.
7063. Do you think that is the general opinion amongst the miners? Yes; I believe it is the general opinion of all the miners in the district.
7064. *President.*] Would you like to send a man to gaol for working eight and a half hours? Yes; in a general way.
7065. *Mr. Curley.*] Did you work under the eight-hour system in New Zealand? It was in full operation when I left.
7066. Was that agreed to mutually between the men and the manager or was it the law? I would not like to say it was the law.
7067. *President.*] When did you leave New Zealand? About ten years ago. We used to be called out of bed at any time, and we were practically there and dare not move away at any time of the day. At 7 o'clock at night sometimes you would be called away, but the men and the manager came to an understanding that the front shift would go to work at 6 o'clock and the back shift at 9 o'clock. It worked very well, and the trade increased instead of going away; but whether this was owing to the new system I will not say.
7068. Under what conditions did you work? Under the new system we were free to go away, on what we call an idle day.
7069. Do you say that trade increased on account of this? No; but it did not decrease.
7070. *Mr. Curley.*] Was it a fact that the trade did increase notwithstanding the alteration in your hours? Yes.

- Mr. W. Kennedy. 7071. You had a definite time of going in and coming out? Yes; that was agreed to and not broken.
- 9 Oct., 1895. 7072. How long was this system in operation before you left New Zealand;—was it an eight-hour system? Yes; strictly eight hours.
7073. How long did you work under this system? I believe about two years; the last two years I was at that mine.
7074. Was there any hitch between the men and the managers about the hours when this system was once adopted? No, there was never any hitch between the managers and the men.
7075. Would you judge from that that the system worked satisfactorily? Yes; I base my judgment on that.
7076. Will you look at section 21, subsection 5, on page 8 of the Bill, "to require the manager to withdraw the men in case of danger" (*see Appendix A*);—do you think that the power given in that section should be invested in the inspector? Yes, if he sees the danger necessary for doing so.
7077. *President.*] Do you think a manager would risk the men's lives if he saw pressing danger? I would not like to charge a manager with risking men's lives, but I think the Government inspector should have power to withdraw the men.
7078. *Mr. Curley.*] Is it not possible that the manager might have a different opinion to the inspector—that he might be anxious to get out a quantity of coal, and that might weigh to some extent with him—I do not say that it would make him keep the men there, but he might think he could get another day's output without withdrawing the men? I think it is possible such a case might arise.
7079. *Mr. Gregson.*] Do you think the men have power to leave where there is danger? That would be to set up the men's opinion against the manager's.
7080. If the danger was great, would you want the manager's permission to come out of the mine? No, not if the danger was great. If the danger was great you would come out to see the deputy, and he might say the place is quite safe, and then, if you should leave the mine, perhaps you might be wrong. You would have to put your opinion against his.
7081. *Mr. Curley.*] Has not the manager the discipline of the mine, and are not the men subject to his control? Yes.
7082. Has not that very frequently great weight with the men? It has.
7083. As to whether they will come out in opposition to the manager's opinion? A man must see great danger before he will come out in opposition to the manager.
7084. In the case of those pillars working, did you say the manager withdrew the men from there? Yes.
7085. Do you think the men would have come out if the manager had not withdrawn them? They were still working when the manager withdrew them.
7086. Did they feel over-satisfied upon the matter? There was a lot of talk about it.
7087. Did they look to the manager to withdraw them? Yes.
7088. Did they come out till the manager withdrew them? No.
7089. In the event of an inspector coming to the colliery, and the manager not seeing fit to withdraw the men, and the inspector thinking they should be withdrawn, should the inspector have power to act in that case? Yes.
7090. Would you give the inspector that power under the Bill? Yes.
7091. Did you ever inspect the Greta shaft when you were there? No.
7092. Did you ever inspect the main shaft? No.
7093. Did you not consider it a part of your duty to do so? No, not then.
7094. Do you know that, under the Act, check-inspectors have power to inspect the shafts, levels, planes, return airways, ventilating apparatus, old workings, and machinery;—you see that you have this power under the present Act? Yes; but the men do not like, when they are appointed check-inspectors, to retard the work of the pit, except there might be some great danger apparent.
7095. Could not the check-inspectors inspect the shaft after the pit was done winding? Of course, they could do it at dinner-time if they wanted to do it.
7096. *Mr. Gregson.*] Did you ever make a complaint to any of the Government inspectors in respect to any of these deficiencies you have found? I have only made a report in the book in the colliery office, and the inspector reads that report when he comes.
7097. Were you ever a sufferer personally? Yes.
7098. Do you not think it would have been a wise proceeding on your part to let the inspector know these things? The inspector always knew as far as the check-inspectors were concerned, because the book was in the colliery office.
7099. Did you ever send the inspector a note, to ask him to come to the colliery? He has come by invitation, but not from me personally.
7100. What was the result of his visit? The air was very defective.
7101. What was the result of the inspector coming to the colliery? He found the quantity of air in certain places not what it ought to be.
7102. Was the defect remedied? Yes.
7103. Is not that a legitimate and desirable proceeding to take when a man finds himself in deficient ventilation? That was the proceeding at that time, but that proceeding could not be taken now.
7104. Why not;—you need not write your name? I understood that the Government inspector would not recognise anonymous letters.
7105. *President.*] In cases where men would be liable to dismissal, or where things might be made unpleasant for them, it would alter the case, and it might not be undesirable for them to write anonymously. In England it is absolutely invited? I do not think it is generally known that the inspector would take any notice of a letter of that description.
7106. I think he ought to? I do not think it is generally known.
7107. *Mr. Gregson.*] Did you not say that there was one case in which an inspector did take notice? Yes; but there was a signature to that letter.
7108. *President.*] If a letter was sent to the inspector drawing attention to some grievance, and you ended up by saying, "I should like to sign my name, but if I do so I will be dismissed,"—do you not think an inspector would take notice of that letter? It is the general impression that the Government inspector would not take notice of such a letter, because he might get a terrible lot of this correspondence.
7109. *Mr. Gregson.*] Of course, he would use his own judgment? Just so.

7110. *Mr. Curley.*] Do you know that the Secretary of State in England has pointed out to the inspectors there, that they are to take notice of anonymous communications? I was not aware of that.
7111. Have you given any opinion this morning with regard to the clause in the proposed Bill, providing for increased ventilation? I do not think so.
7112. Will you look at section 50, 47, rule 1, on page 23 of the Bill, "ventilation of mines." The words erased and in large letters denote the amendments made by the Legislative Council, and the clause as it stood originally is as it left the Legislative Assembly (*see Appendix A*);—do you think that there should be a stipulated minimum quantity of air in the Bill? Yes.
7113. Do you think the word "adequate" would meet the case? I do not think it would, especially in the northern district of this Colony.
7114. Do you believe that there should be a stipulated minimum quantity? Yes.
7115. This Bill proposes to increase the minimum quantity of air from 100 to 150 cubic feet;—do you think it is necessary to increase the minimum from 100 to 150 cubic feet? Yes; so far as our experience has gone lately it is.
7116. Do you believe in the cut-throughs being shortened to 25 yards—the Bill originally proposed that, and the Council have reinserted 35 yards;—do you think that 35 yards is too far away? I think 25 yards would make a great deal better ventilation.
7117. *President.*] If the air was conducted into the working places would it matter what length you went before a cut-through was put in? If the air was conducted into the working places it would not matter.
7118. Whether it is to be done by brattice or shorter cut-throughs, does it matter so long as you get the air? Our experience under the 35 yards is, that it is very difficult to get the air near the working places. Even with brattice, there are plenty of parts where there may be a sufficient quantity of air at the mouth of the in-take, but in the working places you cannot get it.
7119. Suppose there was something like this in the Bill, "An adequate amount of ventilation, not in any case less than 150 cubic feet of pure air per minute, for each man and each boy, shall be constantly produced in every mine, and shall be conducted along the airway, and into each working place";—do you think that would meet the case? Yes, with a minimum of 150 cubic feet.
7120. You want it put so that the air shall be conducted into each working place? Yes.
7121. Do you care how this is done so long as you get the air? No, not so long as they put the air into the working face.
7122. *Mr. Curley.*] You know the system of working that is carried on at the present time? Yes.
7123. You know that under the present practice of working the cut-throughs are a certain distance apart? Yes.
7124. Do you think the men are more likely to get proper ventilation with the shorter cut-throughs? Yes, decidedly.
7125. Do you think the men would be more likely to get the air in those rise-places by shorter cut-throughs? Yes.
7126. In the absence of the Inspector of Collieries coming to the colliery, might not the manager say, for a certain section of the mine, or for the whole mine, that in his opinion there was adequate ventilation, as far as he was concerned? I think the word "adequate" is too broad, and that a great deal of friction would arise between the men, the inspector, and the manager as to its interpretation.
7127. If the minimum was in the Bill, do you think that would secure to the men more guarantee of getting the air? Yes; that would secure a certain amount of air.

[Witness withdrew.]

Peter Bowling sworn and examined:—

7128. *President.*] What is your name? Peter Bowling.
7129. *Mr. Curley.*] What is your occupation, Mr. Bowling? I am a coal-miner.
7130. *President.*] Where are you working at present? At West Wallsend.
7131. *Mr. Curley.*] Have you worked at any other collieries? Yes.
7132. Where have you worked in this Colony? At Greta, Minmi, Dudley, and Cardiff.
7133. Are those the only mines you have worked in in this Colony? Yes; I have worked in Gippsland, Victoria, as well.
7134. Was that in the Coal Creek mines? Yes, in the Korrumburra district.
7135. Have you worked at coal-mines in the United Kingdom? Yes; in Fifeshire, Scotland.
7136. What mines have you worked in there? In one called Town Hill, and Cowdenbeath, and I was for a little time in a place they call the Wreath Colliery.
7137. Were you working there as a coal-getter? Yes.
7138. Were the seams there thick or thin seams? They varied from about 3 feet high to 5 feet high.
7139. In which mine was the 5-foot seam? It was a section of the Town Hill seam.
7140. Did you work long at that mine? The first three years of my working experience was in that mine.
7141. Were you working there as coal-getter? Yes; for about eighteen months, as a coal-getter.
7142. What was the system of working there? In the 5-foot seam it was bord and pillar, and longwall in the 3-foot seam.
7143. Do you recollect the width of the bords? Yes, if you could call them bords; they would not be called bords here.
7144. What would you call them here? They would be called narrow bords in this country if they were worked here.
7145. What was the width of your pillar? I cannot be certain, but as near as I can say, perhaps 9 or 10 yards, perhaps more, perhaps less. I was a young lad at the time, and I did not take particular notice then.
7146. Do you know the distance the bords went up before you put a wall, or a cut-through over? It was the length of the pillars I mentioned; what they call the main levels were just the same as the other bords. They were worked square, and the pillars were taken out afterwards.
7147. Did you extract the pillars after you got up to the boundary? Yes: we got all the coal coming back.
7148. Did you bring the pillars back? Yes.

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7149. How was the mine ventilated;—was there any brattice used? No brattice. If you call screens brattice, there was brattice.
7150. Was it canvas? Yes.
7151. Did you ever see any wood brattice put up in this mine? No.
7152. How long have you worked at West Wallsend? About fifteen months, but I would not be certain. It was shortly after they started, after the pit had been shut down.
7153. Did you find the ventilation fairly satisfactory there? Yes; I have very little to complain of.
7154. Is it an extensive mine;—are the workings very far in? The workings at present are not very far in.
7155. How far are the workings in? About 400 or 500 yards at the most.
7156. Are there many men working there? At present there are 210 miners. I do not know the number of wheelers and shift men, but if I say 350 in all I would be underneath the mark.
7157. Have you had an addition to the men there recently? Yes; there are three men in a bord there now. The reason of this is, that the manager asked us to share our work with the Seaham men, and we did so, in consequence of the closing down of the Seaham Colliery.
7158. Is the West Wallsend Colliery ventilated by fan or by furnace? By fan.
7159. Do you know if there have been any complaints there about the ventilation? There is one section that we call the dip, where I have heard men complain that the stopings of the old workings were not closed up enough, and that they would have better air if they would do so.
7160. Was the air scaling over the old workings? Yes; scaling over the old workings.
7161. I understood you to say that you had worked at the Minmi Colliery? Yes.
7162. How long ago is it since you worked at Minmi? When I came to the country twelve years ago I worked there for twelve or fourteen months.
7163. What mine did you work in there? I worked in both; they cavilled alternately. It was called the New Tunnel, and is known as No. 2 now; but it was called the New Tunnel at that time.
7164. How did you find the ventilation there then? It was not very good the first time.
7165. Have you been there since? Yes, about fifteen months ago.
7166. What mine did you work in then? In the New Tunnel again. That was on the last occasion.
7167. How did you find the ventilation then? I did not find it sufficient, as I thought; not nearly so good as when I was there before. It seemed to be more heated and less of it.
7168. In any defect that you have noticed in connection with the ventilation, have you observed whether it was owing to the current of air not coming in strong enough or that it was not conducted up to the working face? I believe if the current was conducted to the face it would be enough in most cases.
7169. How long ago is it since you worked at the Cardiff Colliery? Three years ago.
7170. How did you find the ventilation there? It was so near the surface when I was there, that it was very inferior ventilation. I was driving a heading there and it was very hot. You could not see for powder smoke. There is a lot of powder used there.
7171. Is it a hard coal to work? It is a very hard coal to shoot—a rough, hard coal. My mate whom I worked with had often to go home on account of the powder smoke. He was an older man than I was and could not stand the smoke.
7172. What other mine did you say you have worked at? Dudley.
7173. When did you work there? Previous to going to Cardiff.
7174. Is the Dudley Colliery a comparatively new colliery? Yes; a comparatively new colliery.
7175. How did you find the ventilation there? Very good, all that I saw of it. There was a little gas there; but the air is led into the face with brattice in most cases where there is fire-damp given off.
7176. *Mr. Gregson.*] Do the men there work with safety-lamps? No, not in Dudley.
7177. *Mr. Curley.*] Did they depend on the ventilation? Yes.
7178. Do you know the provision in the proposed Bill, with regard to ventilation. Will you look at section 50 [47] Rule I, on page 23. The lines you see scored out there indicate the amendments proposed by the Legislative Council, and also the insertion of those two words at the bottom of the page, "thirty-five yards." If you read the clause right through without noticing those lines, and the introduction of the words "thirty-five yards," that is the clause as it came from the Legislative Assembly to the Council (*see Appendix A*);—do you wish to say anything about this rule? Yes; I have read the clause, but I cannot thoroughly understand it.
7179. Do you see the provision there to increase the minimum quantity of air in the mine? Yes; the minimum quantity is 100 feet under the present Act, and there is a provision here, scored out, that provides for 150 cubic feet.
7180. Do you think that there should be a stipulated minimum quantity of air in the Bill? I am sure that there should be a minimum quantity stipulated.
7181. Do you see the object of the Legislative Council in striking out those words;—they wish the word "adequate" to cover everything? Certainly; that would do if an adequate amount was specified.
7182. Do you think that would be leaving the matter too indefinite altogether? Yes; it could not work very well.
7183. *President.*] If a manager gave you all the air that you wanted, would you not be satisfied? Some managers think we should have a lot of air, and other managers think we need no air at all; some will give you enough, and others not enough.
7184. *Mr. Curley.*] Do you think that the increasing of the minimum quantity of air to 150 cubic feet is a necessary provision? I do; because I have worked in places where check inspectors have made a report, and have specified that we had all the air that is required by the Act, and I knew, to be healthy, we should have more air than 100 feet.
7185. Was that your own experience? Yes; my own experience.
7186. Can you say where that was? Yes; at Greta.
7187. Have you worked at the Greta Colliery? Yes; for five years after I left Minmi the first time.
7188. Was the air you have referred to deficient in the rise or the dip workings? In the rise workings; generally the dip workings were comparatively very well ventilated.
7189. Do you think the cut-throughs should be shortened to 25 yards? Yes; I think that would be a very good improvement.
7190. *President.*] Supposing there was a minimum amount of air specified—say, 150 cubic feet—and it is

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to be conducted along the air-ways into the working places—that that was laid down in the Bill—would there be any necessity to say whether it shall be got by cut-throughs, bratticing, or anything else; suppose it says an adequate amount of air, not less than a certain amount—you say 150 cubic feet—and it specifies that the air shall be conducted into the working-places—would it not be better to let them find out how this is to be done? Scarcely, because there are certain seams where heat generates in the bord—what we call white-damp. That could not be driven out very easily in workings that go to the rise, not by brattice or any other way; but I think the cut-throughs, being shorter, would do it.

7191. If you read the section you will see that the air is to dilute and render harmless noxious gases to such an extent that the working-places shall be in a fit state for working and passing therein;—it is an adequate amount of air, not to be less than 150 cubic feet, to be conducted along the airways and into the working-places, constantly produced, to render harmless noxious gases, &c.;—would not that do all that you require? Yes; if it rendered harmless noxious gases. According to that, then, it would be absolutely unnecessary to have any cut-throughs at all.

7192. They would have to render harmless noxious gases in the working-place? I understand; if you led the air up to the face it would render the gases harmless in the working-place.

7193. I am suggesting to let the manager devise what means he likes to render harmless noxious gases, and give adequate ventilation? If it is practicable to do that it would do. If it is practicable to lead the air without cut-throughs or brattice it will do.

7194. I should let the manager choose what method he likes;—you are to have the air there, no matter how it gets there? Yes, in the working-place. It is a matter of opinion as to how it shall be got.

7195. If you had an adequate amount of air, to be in any case not less than 100 cubic feet, and as much more as is necessary, to be constantly produced along the airways, into each working-place, to dilute and render harmless noxious gases to such an extent that the working-places, &c., shall be in a fit state for working and passing therein, would that be all that is required? Yes; that is what we want.

7196. *Mr. Curley.*] Would you be more likely to get the required quantity with the shorter cut-through? Yes; that would cool the place very much.

7197. What do you think of the provision in section [49]46, sub-section 3 (*see Appendix A*);—do you see what is said there about brattice? Yes; that is to work the mine in splits. That is how the place I am in at present is worked.

7198. Is that a principle you believe in? Yes.

7199. Do you see that by this subsection 3, the air is to be taken to the working places to within 15 yards where gas does not exist, and to within 3 yards where gas does exist, by brattice or otherwise;—do you agree with that subsection? I would certainly.

7200. Do you think that brattice would be a very costly item at West Wallsend? I think the cost would be nominal; I do not think there would be much cost.

7201. *President.*] Is labour not required to put brattice up? There is a little labour putting it up, but after the first cost of material, according to the number of tons put out at West Wallsend every day, I could keep it going at something a little over a $\frac{1}{2}$ d. a ton.

7202. *Mr. Gregson.*] What would be the cost of the material? About 6d. or 7d. a yard.

7203. What would that make it per yard per ton of coal? The pit yields about 460 tons of coal per day, and in the average amount of places, you would not have more than 15 yards of brattice to put up. I know there is little or no labour in putting it up, because the props are put up by the men for their own safety, and the canvas is only nailed up by two or three nails. That is done where I am at present.

7204. *Mr. Curley.*] Is there canvas used in every bord? Yes, where I am.

7205. *Mr. Gregson.*] How much do you say it would cost per ton? About $\frac{1}{2}$ d. per ton.

7206. Does that include finding the stuff? No; after the first cost you would take seventy bords and 15 yards of brattice for each bord, at West Wallsend, and one breadth of canvas does from the top of the seam to the bottom. The original cost should come to about £30.

7207. How long would the canvas last? I have had practical experience of that, with a man specially looking after it, it will last for two years.

7208. In how many places could you use it over again? Until it was finished.

7209. How many times do you think it could be used? It depends on how continuously the pit works. If the pit is working full time the places will be worked down quickly.

7210. What would the cost be in the first instance? My estimate does not include the first cost of the material. After the first cost I would be prepared to carry it out at $\frac{1}{2}$ d. per ton.

7211. I want you to explain how you could do it? I estimate the cost of looking after it would be 10s. per day, and the cost of material in the first instance would be about £30.

7212. How long would it last? At least two or three years; but of course that would depend on circumstances.

7213. If you worked one day in the two years it would cost 1s. 4d. per ton? Yes.

7214. If you worked two days in the year would it cost half of that amount? Well, I cannot say. I have not worked it out; but I am prepared to say that it will cost me $\frac{1}{2}$ d. per ton to keep it up at West Wallsend.

7215. When you made this calculation, how many working days did you allow in the week? Four days a week.

7216. Would you call four days a week good work? Yes, very good work.

7217. *Mr. Curley.*] Do you think the amount you have mentioned would cover the cost? Yes; as far as I have worked it out it would come to a fraction over $\frac{1}{2}$ d. per ton. I would be willing to take it at that amount, leaving out the first cost.

7218. Would this include the canvas for the whole of the mine? Yes; there are seventy bords, each 15 yards.

7219. *President.*] Did you say that your daily output was about 450 tons? Yes; that was what the check weighman told me the output was.

7220. *Mr. Curley.*] Did you ask him for the purpose of obtaining accurate information upon this matter? Yes; and he would be the most likely person to be able to tell me.

7221. Do you think that bratticing in connection with these collieries would cost anything like 5d. or 6d. per ton? There are no collieries that I know where it would be likely to cost that amount.

7222. Would you consider that an exaggerated statement? Yes; very exaggerated, as far as I have seen.

7223. Would you think that an estimate of that kind had been very much overgauged? Yes; I cannot think how an estimate of that kind could have been arrived at.

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7224. *President.*] Would it not depend on the number of days the pit was working? Yes; that would make a great deal of difference, but not sufficient to make that difference.

7225. *Mr. Curley.*] In estimating these matters, have you not to take a number of years to arrive at a fair estimate of the cost? I think if you averaged the mines for three years you would come close to the average working. There is another way to look at it, namely, that the more a mine works, the more profit the employer makes.

7226. *Mr. Gregson.*] Might it not be the other way on, that the more the mine works, the more the mine-owner loses? I have never looked at it in that way; I never thought the mine-owner lost.

7227. *Mr. Curley.*] Have you thought over the question of hours in connection with collieries? Yes; I have formed an opinion on that question, in the same way as other men.

7228. Do you know the provision in the Bill to make the working hours eight? Yes.

7229. Do you agree with that provision? If a thing is worth doing, it should be carried into effect, and if there is no other way than by making it a penal matter, it should be done.

7230. *President.*] Do you agree with making eight hours a legal days work? I have never worked anywhere. In Gippsland we worked from 8 o'clock till 4 o'clock, from bank to bank. There is an Act framed and hung up in the pit in Gippsland making it compulsory. I never heard anything said against it, it worked very well, and I think eight hours is long enough to work.

7231. *Mr. Curley.*] Was there any friction between the men and the manager there, in connection with this matter? No; there was not. I was asked by the manager to work, not only overtime, but on Sunday and Christmas day. There is a specific clause in the Bill that allows for special work.

7232. Have you any objection to that clause? Not the slightest, I think it is necessary. I worked on Sunday and Christmas day twelve months ago last Christmas.

7233. Was that in order to execute special work that had to be done? Yes.

7234. Do you think that there should be legislation upon this matter? I do, decidedly; on any good matter.

7235. Do you think that there should be legislation upon this eight-hour question? I believe there should be legislation.

7236. Do you think that this matter could be better carried out in a mutual way between the manager and the men? No; the present system of competition amongst the employers has reduced wages almost as low as possible, and the same factor (I mean the force of competition) might force the good employer to increase the hours of labour. Some of the employers are good and some bad; if they were all good there would be no necessity for legislation. As it is, I think it is necessary there should be legislation on the matter. That is my opinion.

7237. How are you paid with regard to weight? There are different systems of weighing. They have a different system at West Wallsend to what they had at Minmi. In the former place if I was weighed three times during the fortnight (say) 11 cwt. the first time, 12 cwt. the second, and 13 cwt. the last, that would give me an average of 12 cwt. per skip for the whole fortnight. Under this system I might be weighed 13 cwt. the first day of the pay and not be weighed again until the last, when through some circumstance I might be caught on 8 or 9 cwt., or less. I have been caught on 7 cwt. 1 qr.; and that would reduce me considerably, and put me out in calculating my income.

7238. Do you look upon that as unsatisfactory? Yes, very unsatisfactory.

7239. Do you think when your weights are taken for a day that your skips should be averaged at that weight until you are weighed again? Yes, I would be agreeable to that, if we got so many skips per day weighed of those that come out of the pit.

7240. *President.*] What percentage of skips do you want weighed? I would say one in every three.

7241. *Mr. Curley.*] Do you know the manager of the Wallsend Colliery says he weighs one out of every eight skips? I did not know that.

7242. What is your estimate? About thirty out of a hundred, or one out of every three or four.

7243. Do you think the men would be satisfied with an average if a certain number of skips were weighed? Yes; if one out of every three or four were weighed, and each weight should stand until I am weighed again, and then when I am weighed again that weight should stand till the next time, and so on.

7244. *President.*] Is not that the present system? No; if I am weighed to-day, and weighed again later on, those weights are taken on the average, and I am paid on the average for the pay.

7245. *Mr. Curley.*] You do not believe in the system of average that you have spoken about? No; I believe if we got one out of every three skips weighed, that average should stand till I was weighed again.

7246. Is that a different system of averaging to anything that you have been used to? Yes; I prefer the old system of averaging; allowing each day to stand for itself, for that weight to carry until I am weighed again.

7247. Would you prefer to have every skip weighed in preference to that? Yes.

7248. Do you think that every skip should be weighed? I do.

7249. Is that the only way to get the exact average? It is the only way that I can see to get the exact production.

7250. Have you worked at any collieries where you have noticed the pillars to be very thin? In Minmi twelve years ago I went through into the next place; I worked right through into the other bord.

7251. Do you think that more substantial pillars should be left in the mines? Yes; I do not see why they should not.

7252. Have you noticed the provision in the Bill with regard to the powers of inspectors? Yes.

7253. Will you look at section 21, sub-section No. 5, on page 8 of the Bill (*see Appendix A*)? Yes.

7254. Do you see any reference there to the inspector having power to withdraw the men in case of danger? Yes.

7255. Do you think that the inspector should have power to withdraw the men in case of danger? Yes, I think he should.

7256. Would you leave that power in the hands of the manager? No; I would like the power to be in the hands of an independent party; one who has nothing to lose or gain by ordering the men out of the mine.

7257. When you say the inspector has nothing to lose or gain, what has the manager to lose or gain? He has this to lose—if those in a position above him should take it into their heads that he should not order the men out, they might get someone who is not so conscientious to replace him. He might lose his position unless he was forced to withdraw the men by the inspector.

7258.

7258. If a manager was pressed for a certain output of coal, would that have any weight with him. Say, he wanted to supply an order and was menaced by a danger in the mine, might he not think he would wear the day out? He might. Mr. P. Bowling.
9 Oct., 1895.

7259. Might he hazard the danger? He might.

7260. Do you know any manager that would? Yes.

[Witness withdrew.]

Mr. James Cook sworn and examined:—

7261. *President.*] What are you, Mr. Cook? A miner. Mr. J. Cook.
9 Oct., 1895.

7262. Where are you working? At Burwood.

7263. Where were you before you were at Burwood? At Minmi.

7264. Have you worked in England? Yes; in Scotland.

7265. Have you worked as a miner in Scotland? Yes.

7266. How many years have you worked in Scotland? About fourteen years.

7267. How many years in Minmi? Sixteen years.

7268. And how long at Burwood? About six months.

7269. Are Minmi and Burwood the only two mines you have worked at in this Colony? Yes. I have worked at Joaja Creek, but that was only for five weeks. That is the only time that I have been away from the Northern district.

7270. *Mr. Curley.*] Was the Minmi Colliery the first colliery you worked in in this Colony? Yes.

7271. Have you been in mostly all the mines up at Minmi? Yes.

7272. Are there not two or three different tunnels there? Yes, four; but there is one standing now.

7273. Have you worked in several sections in the different collieries? I have worked in three of the different tunnels, and in all the different sections of the three separate tunnels.

7274. What are the names of the tunnels? The Duckenfield, or Old Tunnel; then No. 2 and No. 4 Brown's Tunnel. Those are the only three I have worked in.

7275. What was the width of the bords where you were working? Eight yards, generally.

7276. What was the width of the pillars? I have seen some of the pillars as thin as 1 yard, but they were supposed to be not less than 5 yards; it was turned away 5 yards. I have seen them go to within a yard.

7277. Were the bords driven by any line? No.

7278. Who was the man who regulated the width of the bord if it got too wide or too narrow? The overseer; if he saw you too wide he would tell you to draw in; chalk your bord.

7279. Were you expected to respect that mark? Yes.

7280. Had you to obey his orders? Yes.

7281. Was the whole of the control of the business in the hands of the overman? Yes; or oversoor.

7282. Have you worked in pillars at Minmi? No.

7283. Have you never worked in pillars at any of these tunnels? No; I never did.

7284. Not in those sixteen years you speak about? No.

7285. Do you know whether there were any pillars worked? Yes; in the No. 2 tunnel, in the old No. 6, section, and in what we call the rise.

7286. Have you any idea what the depth of those mines is from the surface? No.

7287. Do the workings go under the mountain range, or how are they situated? Mostly all the Minmi workings are under the mountain ranges.

7288. Have you any idea of the depth? I cannot be positive; I remember Mr. Drurie saying it was 112 feet below the surface, in one part of the workings.

7289. Who was Mr. Drurie? The overseer.

7290. Do you know of any extensive fall that has taken place in any of these tunnels? Not an extensive fall; I knew of a crush coming across one of the sections.

7291. Did that creep come over the pillars? Yes.

7292. What section of the mine was it in? In the fault heading section of the old tunnel.

7293. Do you know if it came over any main road? The main road, now, is a complete block of wood, on both sides from one end to the other; what we call pig-styes are built as close to one another as they can get.

7294. Was that the main road where this crush took place? I think so.

7295. Do you know if it came over the main road at the time? I am not aware that it come across the main road; but I know that the main road is composed of these pig-styes.

7296. Do you know that this is where the crush took place, or were you told about it? It was told to me.

7297. Did this crush happen while you were at the colliery? It happened when I was working in the new tunnel; in No. 2.

7298. Do you know something about this, through conversations with men about the place? Yes.

7299. Were any men thrown out of work at the time it happened? Yes, all that section.

7300. Do you know the number of men? I cannot say the number of men.

7301. Did you ever notice the ventilation to be in any way defective, in any of those tunnels you have worked in? At times I have seen it so.

7302. Was the defect that there was not sufficient air going into the heading, or that it was not going into the working face? There was one defect in the Duckenfield Colliery, that the air was not going into the section in sufficient quantities.

7303. Can you give any reason why that was not done? It was not conducted in the manner to put it into the workings. We had to call the attention of the Inspector of Collieries to the matter, and a joint inspection was made by Mr. Jno. Dixon, Inspector of Collieries, Mr. Geo. Nix, and myself.

7304. What came out of this joint inspection? That the manager found ways and means of conducting the air into that section.

7305. Was that after this joint inspection took place? Yes.

7306. Had that any connection with a prosecution that took place? No.

7307. Do you know of any prosecution? Yes; that was for a deficiency of air in another section of the mine altogether.

7308. Was it in the same tunnel? Yes. 7309.

- Mr. J. Cook, 7309. Was there a joint inspection on that particular occasion, or did you only send for the inspector? I cannot recollect whether there was a joint inspection or not.
- 9 Oct., 1895. 7310. Did this happen some time ago? Yes, a good few years ago.
7311. *Mr. Gregson.*] Do you recollect if any complaints were made to the inspector? I was not acting-secretary for that tunnel at the time.
7312. *Mr. Curley.*] Had complaints been made? Yes.
7313. Do you know whether any complaints were made to the inspector at that time? I cannot say; I know a deficiency was found, and Mr. Croft as manager, was taken to the Wallsend court, and Mr. William Penman was one of the witnesses.
7314. Had complaints been made to the inspector? I believe so.
7315. And was this the result? Yes.
7316. From the experience you have had at these collieries, do you think that more attention should be paid to the ventilation? In one of them more attention should be paid.
7317. Did that impress you with the idea that more attention should be paid to the ventilation and that there should be an attempt to get it up to the working face? Yes.
7318. *Mr. Gregson.*] What was the result of the prosecution? The manager was fined for the infringement of the Act, but I forget the amount; he was fined; costs of Court and witnesses expenses.
7319. There was a conviction then? Yes, against Mr. Croft.
7320. Was there any improvement made in the ventilation in the same place afterwards? Yes.
7321. *President.*] Who brought the manager to the Court? I believe the Inspector of Collieries.
7322. Who put the inspector in motion? Complaints had been made.
7323. *Mr. Curley.*] Have you read the proposed Coal Mines Bill? Yes.
7324. Will you look at section [50] 47, rule 1, on page 23 of the Bill (*see Appendix A*). The lines you see there represent the amendments suggested by the Legislative Council, and the words "35 yards" are inserted by the Council instead of 25 yards. The clause without these words is as sent to the Council by the Legislative Assembly. Do you think the minimum quantity of air should be increased from 100 to 150 cubic feet? I do.
7325. Do you believe that there should be a stipulated minimum in the Bill? I do.
7326. The Legislative Council think that this can be met by the word "adequate";—do you think that that would be leaving the matter too indefinite? My opinion is that it would be a bone of contention between the two parties as to what would be an adequate amount.
7327. Do you think the provision in the Bill with regard to the minimum quantity will help you over that difficulty? Yes.
7328. What do you think about shorter cut-throughs? I prefer shorter cut-throughs to bratticing.
7329. Do you think bratticing is required if there are these shorter cut-throughs? In my opinion, the shorter cut-throughs would dispense with bratticing.
7330. If the cut-through is to stand at 35 yards, would you require brattice to get the air up to the face? Yes.
7331. Will you look at section [49], 46, sub-section 3 (*see Appendix A*); it says the air shall be taken to each working face by brattice or otherwise;—do you consider, if the cut-through is to remain at 35 yards, that that provision should be in the Bill? I do, if it is to be 35 yards between the cut-throughs.
7332. With regard to the matter of pillars you have referred to, did that impress you with the idea that larger pillars should be left in a mine? I think there should be larger pillars than some of the pillars that are left in Minmi.
7333. Do you think that some effort should be made to endeavour to leave the pillar the size that it is intended to be left? Yes.
7334. *Mr. Gregson.*] Who robs the pillar now? I consider he is an unpractical miner who does so.
7335. Who robs the pillar now? The miner.
7336. If he was a practical miner could he not carry his pillars straight through? Yes.
7337. *Mr. Curley.*] Does not the manager regulate the pillars? Yes; if he finds the most practical miner widening out, he will chalk him off.
7338. Has he not deputies in the mine every day to look after these matters? Yes.
7339. With regard to the colliery you are working at now, do you say that you have worked there about six months? Yes.
7340. Is there any fire-damp given off at that colliery? Not to my knowledge.
7341. Is that the next colliery to Dudley? Yes.
7342. How far is that colliery away from Dudley? The men tell me it is twenty minutes walk over-land.
7343. Is it practically the same coal-field? Yes.
7344. Do you know whether this is comparatively a new mine;—are the workings far from the shaft? No; it is Old Burwood Colliery which is going towards the new shaft.
7345. Are their workings near the old shaft? It takes me a quarter of an hour or twenty minutes to travel to the working face.
7346. How is the Burwood Colliery ventilated? By furnace. Last week we could not get up our own shaft through something being broken, and we had to go out the other road. We had occasion to go by the old pit past the furnace shaft through the rope breaking in the new pit.
7347. How have you found the ventilation in that colliery? I have only been in one section all the time I have been there.
7348. What section was that? No. 8 heading, and I cannot complain of any deficiency in the ventilation there.
7349. Is any brattice used where you are? Yes, in the bord I am in now, there is brattice led into it.
7350. Taking your experiences, where you have worked with brattice and where you have worked without it, do you find brattice to be a considerable advantage? Under some circumstances it requires brattice; because the bord where I am working is being driven back, what was No. 1 bord of that section they are driving back, splitting the big pillar, and the canvas is laid down backwards to get the air into us.
7351. *Mr. Gregson.*] Do you approve of the effect of the brattice? Yes, I do.
7352. Do you think it is an improvement? Yes.
7353. *Mr. Curley.*] Have you to use much powder there in blasting your coal? Very little.
7354. When you have to use powder, with the brattice put in the way you have described, does it clear away the smoke pretty freely? Yes; it does not lie long beside us.

Mr. J. Cook.

9 Oct., 1895.

7355. How are you paid at that colliery? By average weight.
7356. *Mr. Gregson.*] Not by standard weight? No.
7357. *Mr. Curley.*] Is there no standard weight at that colliery? Not at that colliery.
7358. Is it not one of the Scottish-Australian Mining Company's collieries? Yes.
7359. Do you get a fair amount of skips weighed during the day? I am weighed once or twice a day; I cannot say if others are as lucky.
7360. Is there a fair number of skips weighed? Yes; I can see by the weigh-slate that they weigh as many as sixty to seventy-eight skips in a day. The check-weighman always puts on the slate the average for the day.
7361. Do you think that is a fair proportion of skips to weigh? Yes; for the number of tokens running—100 tokens.
7362. Would that represent 200 men? Yes; and they fill seven and eight skips per two men per bord.
7363. Would that be from 700 to 800 skips per day? Yes.
7364. How many skips are weighed out of that number? Sixty to seventy skips.
7365. Have you heard any complaints about having more skips weighed at that colliery? No; not at that colliery.
7366. Does each day's average stand for itself;—supposing you were weighed on the Monday, would that weight stand till you are weighed again? Yes, they do not average the two weights.
7367. They do not average the two weights unless you have two or three weights on the same day? No; they are averaged if you have two or three weights on the same day.
7368. *Mr. Gregson.*] Can either the weighman or the check-weighman choose the skips to be weighed? I have no knowledge of that.
7369. Can they see the skips? No, not at Burwood.
7370. Are the weighmen at the foot of the weigh-screen? Yes.
7371. *Mr. Curley.*] Will that be 10 or 12 feet below what is known as the pit-top? Yes; about 15 feet.
7372. Have they some signal to the banksman, if they want a skip? I do not know.
7373. *Mr. Gregson.*] Do you keep the weighbridge going all day? There is a lad who puts the skip on the travelling belt when he knows the weighbridge is empty.
7374. *Mr. Curley.*] Do you think the weighbridge is kept going pretty well all day? It must be, to give sixty or seventy skips per day.
7375. Do you think the weighman is exclusively employed at that work, judging from the weights? He must be.
7376. Have you thought over the question of the working hours? I think that eight hours is enough for any man to work.
7377. *President.*] Supposing a man has had a spell of idleness, and chooses to work half an hour, or two hours extra, do you think he should be punishable for that? He might not be made punishable, but I think it should not be allowed.
7378. Suppose he says, I must work a little more to pull up, and he makes up by overtime, would you punish him for that? Well, I would, if he was to make a custom of it.
7379. *Mr. Curley.*] Don't you think this would eventually become a custom? I think so, if it was allowed to one or two, it would draw the others on.
7380. Do you think it would become a regular matter to work long hours? It has been in the past.
7381. Would that be quoted by other collieries, and adduced as a reason why they should do a similar thing themselves? I believe it would.
7382. Do you think that this is a matter that should be legislated for? I do.
7383. Do you know of any instances where men have worked very long hours? I have heard it reported that some men have worked twelve or fourteen hours, but I have never worked beside them.
7384. Where was this? In Minmi.
7385. Do you go in there mostly by tunnels? Yes.
7386. Do the men go in very early in the morning? As a general rule, they go in between 6 and 7 o'clock in the morning, and come out again from 3:30 to 4 o'clock in the afternoon.
7387. May certain men not go in earlier? It has been reported that certain men have gone in at 2 or 3 o'clock in the morning, and have not come out till 4 o'clock in the afternoon.
7388. Do you think that men should be allowed to go in and out when they like? No.
7389. Might they not go in before the fireman went his rounds, and if they did so, might not something occur? Yes; I have known two men sent out by the fireman in Minmi for being at their work when he went round; on the first occasion he cautioned them, and the next morning he sent them home, because he had received orders from the manager to do so if he caught them again.
7390. *Mr. Gregson.*] Do you approve of that? Yes.
7391. In the interests of the men's own safety? Yes.
7392. *Mr. Curley.*] Was there any fire-damp given off at that time? There was; perhaps not in their bord, but in that section of the mine.
7393. Was not that really a very serious matter for these men to come in before the fireman? It was.

[Witness withdrew.]

MONDAY,

MONDAY, 14 OCTOBER, 1895.

[The Commission met in the Board-room, Chief Secretary's Office, at 10 a.m.]

Present:—

FRANCIS EDWARD ROGERS, Esq., Q.C., PRESIDENT.

JAMES CURLEY, Esq.

JESSE GREGSON, Esq.

Mr. Robert Hay sworn and examined:—

Mr. R. Hay. 7394. *Mr. Curley.*] What occupation do you follow, Mr. Hay? I am the manager of the Oakey Park Colliery, at Lithgow.

14 Oct., 1895. 7395. Have you been manager at any other collieries? Yes, in England; but not in this Colony. I have been employed at other collieries in this Colony, but not as manager. I was overman at the Mount Kembla Colliery.

7396. How long ago is it since you were at the Mount Kembla Colliery? I left Mount Kembla on the last day of the year 1890; very nearly five years ago.

7397. What were you at Mount Kembla? I was getting coal, and was also underviewer there.

7398. Would that be practically manager of the colliery? I had a say in the management.

7399. *Mr. Gregson.*] Were you getting coal when you went there first? Yes.

7400. *Mr. Curley.*] How long were you there getting coal? Two and a half years.

7401. Have you a fair knowledge of the Mount Kembla Mine? Yes, of what was then the Mount Kembla Mine.

7402. Is not what was then, pretty well Mount Kembla still? There is new management there now; of course, the coal would be much the same.

7403. Would not the conditions generally be much the same? I cannot say that; I have never been there since.

7404. Was there much timber used in the Mount Kembla Mine when you were there? As much as was required; we took care not to let the men be without props or timber.

7405. Did they use this timber on each side of the roadway? Yes, where necessary.

7406. How was the mine worked when you were there? The ordinary bords in one part, and longwall in another part.

7407. In the bords, what distance would the timber be set apart; would you put a row of props on each side of the roadway? Yes.

7408. How many? About 3 feet apart, closer if necessary; if dangerous, we put them thicker.

7409. What would be the average; what would be the distance apart of the roadside props on each side of the bord, taking the good with the bad? I should say the average would be about 2 ft. 6 in. or 2 feet.

7410. Is that taking the good with the bad all round? Yes; speaking approximately. Wherever there were props needed we always put them.

7411. Did you ever drive a bord where the timber was much further apart than that where the roof was good? I have driven bords in every part of that mine, and I should give that as a fair average distance in the bord.

7412. Did you use much timber in the longwall? Yes; we packed it and used timber. We did not use timber in the roadway.

7413. Had you any trouble with the ventilation at Mount Kembla? It was not as good as it should have been, until we got the furnace-shaft down, and that remedied everything.

7414. Was the furnace erected when you were there? Not the new furnace. There was a new furnace erected at the bottom of the new shaft. The ventilation was very much improved by the new shaft.

7415. What number of men were employed when you were there? About eighty to 100 numbers were generally running. I should say, speaking approximately, about 150 or 160 men.

7416. Did you find much difficulty in the ventilation of the places to the rise? No, we did not find much difficulty. We worked the longwall mostly to the rise, where the seam was under 5 feet.

7417. You took the current of the air right round? Yes; the current went across the faces.

7418. Was the furnace you have spoken about commenced when you were there? It was just completed, and the ventilation was improved very much.

7419. Have you given any consideration to the difference between furnace ventilation and fan ventilation? Yes; if you have a deep shaft, and not much gas, furnace-ventilation is the best. Even with gas, I think furnace-ventilation is the best. For a shallow shaft I think the fan is the best.

7420. You think the fan is the best for a shallow shaft? I do.

7421. Would you call the shaft at the Helensburgh Colliery a shallow-shaft? There is a tremendous amount of gas there, and if there is much gas a fan might be preferable.

7422. Have you read any mining authorities on the contrast between the cost of furnace ventilation and the cost by fan ventilation? That must be regulated by the circumstances. Where you sell the small coal the fan will be cheaper, because if the small coal is a drug you can use it in the furnace.

7423. Cannot you use the small coal also in connection with the fan? A little of it.

7424. Have you seen what Mr. Percy says about the contrast between the cost of ventilation by fan and the cost of ventilation by furnace? Not as to the cost.

7425. Will you look at this book, and see what Mr. Percy states with regard to the cost of these two methods of ventilation? [*Witness reads.*]

THE MECHANICAL ENGINEERING OF COLLIERIES. By C. M. Percy, Consulting Engineer, &c., &c., &c. (Volume II, page 29.)
The ordinary Guibal fan cannot avoid the vibration, whilst the improved fan can work at practically any speed, and set up no vibration. The fan erected by the Wigan Coal and Iron Company is 30 feet in diameter; and was erected to take the place of two ventilating furnaces, which produced 142,000 cubic feet of air per minute, and to do so consumed 12 tons 17 cwt. of coal in the twenty-four hours. The fan now working produces the same quantity of air with a consumption of 4 tons 2 cwt. of fuel for the same period; and there is this considerable distinction in the fuel: the furnace used good Arley Mine mixture, whilst the fan consumes common Buzzard slack. The saving in fuel alone is over £3 in twenty-four hours, and the calculation for a year is easily made.

7426. What have you to say upon that statement? In the Wigan district the mines are deep and very hot, and there is a great advantage there on this account. They have the heat of the mine to assist in the ventilation as well as the fan, and this, of course, would aid in that result. Mr. R. Hay.
14 Oct., 1895.

7427. Do you think that furnaces are going out of date, and that fans are taking their places in recent years? I do.

7428. Do you not think that furnace ventilation will eventually become a thing of the past? I think that too; but furnace ventilation can be applied with splendid advantage under certain conditions.

7429. How long have you been the manager of the Oakey Park Colliery in the Lithgow district? Since the beginning of January, 1891, about four years and a half.

7430. Did you work there previous to being manager? No, I did not.

7431. Do you hold any proprietary interest in that colliery? Yes; I have a little interest in the colliery, although I did not hold any interest when I went there first as manager. I was there three years before I took any interest in the mine financially.

7432. Do you enter the mine by tunnel or by shaft? We have two shafts.

7433. What are the depths of your shafts? 315 feet from the surface—105 yards.

7434. Are both shafts the same depth? About the same depth.

7435. Can you tell us the diameter of the shafts? One is about 11 feet and the other 10 feet. I cannot speak definitely, because I was not there at the sinking of these shafts.

7436. Which is the 11-foot shaft? The present upcast shaft.

7437. And the downcast shaft is about 10 feet? Yes, about 10 feet.

7438. How many men have you employed at the Oakey Park Colliery? We have twenty men getting coal.

7439. Have you employed more men than that number? When I went there there were forty-five men employed.

7440. Is the number of men employed affected by the condition of the trade? Yes; trade has not fluctuated much on the right side lately.

7441. Have your workings extended far into the mine? They have extended pretty rapidly lately on account of the boundary of the Vale Mine coming near us.

7442. What distance are your workings in? Forty-two or 43 chains.

7443. Is your furthest working place half a mile in? Yes, about that; 42 or 43 chains would be slightly over that I think.

7444. Will they be three-quarters of a mile in? Not so far as that; I give the distance as 42 or 43 chains.

7445. Have you a system of furnace ventilation at that colliery? We have not. We ventilate by steam and a waterfall. We are on the point of completing a furnace there.

7446. Is it only a matter of thought, or have you entered practically upon the work? The men at the bottom are clearing out for it now.

7447. Has any actual work begun in this direction? Yes; two men have been working at the pit bottom all the last week widening out for it.

7448. What is this waterfall you have spoken about? It is coming down the downcast shaft on account of it not being properly cemented at first.

7449. Is it water conveyed down the shaft? No; it falls down naturally. It comes down 30 feet from the top.

7450. Is there much body of water behind where this water drops from? There is evidently a spring, because the water is always there.

7451. Is it simply what percolates through the strata? It falls incessantly and continuously.

7452. How does it approach the mine? A way from the surface, 30 feet from the top of the shaft; but we do most with steam.

7453. Is there any chance of that force of water during any heavy rainfall endangering the condition of your colliery? I can assure you there is not, but the steam is used all day in the upcast shaft.

7454. Does the steam influence the ventilation in the shaft? There are pipes laid down to the big pump at the bottom of the shaft.

7455. *Mr. Gregson.*] Do you exhaust into the shaft? Yes; and of course there is the heat of the pipes all the way down.

7456. *Mr. Curley.*] Does your ventilation ever change—does your downcast ever become the upcast? I have never known that, although a very hot day will militate against us a little, but it will never put the ventilation in a really bad state.

7457. Do you know that, as a rule, the smaller shaft is used for the upcast? It should not be.

7458. Do you think that is the opinion of mining authorities? Circumstances might force a man to that opinion, but I would put the upcast larger than the downcast.

7459. Have you read what Mr. Wardle says on this matter? No. Again, the system of furnace, or fan, ventilation, comes in here. If you use a furnace the upcast shaft must be the largest.

7459½. This is what Mr. Wardle says on this subject:—

REFERENCE BOOK ON PRACTICAL COAL-MINING. By W. Wardle, F.S.S.C. (3rd edition.)

Section 239 on Ventilation.—Which shaft do you consider should be the downcast—the larger or the smaller one—when fan ventilation is applied? The downcast should be the larger if there is any difference, whatever may be the power employed. The ventilating fan placed at the top of the upcast only reduces the atmospheric pressure on the top of the upcast to a partial vacuum; the atmospheric pressure upon the top of the downcast then comes into operation, and forms a ventilating pressure or power, propelling the air through the airways and upcast shaft, and the greater the depth and diameter the greater will be the weight of the column of air in the downcast. This will be understood when we consider that a column of air 1 foot square, and of the full height of the atmosphere, weighs nearly 1 ton. Another column of air in the underground air ways, and at the bottom of the downcast, are compressed in the higher layers in the shaft, and the atmosphere above the shaft, and the greater the depth and diameter of the downcast the greater will be compression. Air is also elastic—that is it can be expanded by heat or by reducing the pressure at the top of the upcast. The ventilating fan would, therefore, create a large vacuum at the top of a 10-foot upcast that it would at the top of a 16-foot upcast; consequently by making the 10-foot the upcast, and the 16-foot the downcast, two natural powers would assist the ventilation, viz.: a large column of air in the downcast (once put in motion is power), and the large vacuum at the top of the upcast caused by the fan. The late J. J. Atkinson, speaking upon this point, says "The intake air in dip or descendent-workings acts as a ventilating power assisting any other ventilating power that may be in existence;" and as already quoted, that "the downcast should be made of the greatest practicable area."

7460. What have you to say to this statement? With regard to the sinking of shafts, my opinion is that you sink the big shaft cheaper than the small one. 7461.

- Mr. B. Hay: 7461. Have you ever noticed defects in the ventilation under the conditions you have stated just now;—you said that a hot day occasionally militated against the prevailing conditions? A very hot day will militate a little.
- 14 Oct., 1895. 7462. Have you ever noticed the ventilation stagnant? It was not as brisk as it was at other times, but it could not be called stagnant.
7463. Are you aware that there would be a considerable amount of friction to be overcome with the air travelling? Yes.
7464. How do the men fare when the conditions are as you have stated? Very well; there have been no complaints made to me about the ventilation.
7465. Do you know whether the men have complained to anybody else? I do not know.
7466. If the men had complained, do you think they would have a reason for complaining? Not a sufficient reason; still, if they had complained, I would have taken it in a friendly way.
7467. A man would not complain without a reason, you think? It depends upon the sort of man very largely.
7468. Is a man who is not given to complaints a fine fellow? I would not like to say that; but if a man complained to me, I would believe in the complaint enough to investigate it, and see if anything was wrong. A man would not be dismissed for giving me information.
7469. Is it not possible that a man may submit to a great deal before he would make a complaint? I do not think my men would; we are on pretty good terms.
7470. Do you work in a very friendly way with your men? We do.
7471. How do you interpret the present Coal Mines Act of 1876? I interpret it in its literal sense.
7472. *President.*] Supposing a miner complained of want of air, how would you interpret the Act as to the quantity of air you or the manager would have to supply? The Act specifies that he should have 200 cubic feet of air per minute.
7473. Which Act do you refer to? The Act of 1876.
7474. Do you give your men 200 cubic feet of air? We give them as much as we can; more than 200 cubic feet of air goes into the mine.
7475. *Mr. Curley.*] What about the air travelling into the working face? There is a loss before it gets there. You cannot find any quantity of air in the working place if a man is 35 yards before the current of air.
7476. Will you look at section 12, subsection 3, of the Act of 1876;—what is the minimum quantity of air mentioned in that section? 100 cubic feet; I always understood that it was 200 cubic feet, but I could not have read it so. Perhaps it is the new Bill that stipulates for 200 cubic feet.
7477. Have you, as manager, measured the air yourself? I generally measure the air on Friday.
7478. When you measure the air, where do you measure it? In the far end of the mine.
7479. Do you measure the air on the main air-way? On the main heading.
7480. What distance do you measure the air from the working face? I measure it at a distance of not more than a chain from the headings.
7481. Can you give us a brief sketch of your mine? Yes [*tracing of colliery workings produced*]; this tracing is not mine, it belongs to the Mines Department.
7482. Is the tracing an accurate one? Yes. [*See Appendix 3.*]
7483. *President.*] How far apart are your shafts? About $4\frac{1}{2}$ chains apart. The air goes in at the number 2 shaft, and finds its way along the back heading; then it goes along the travelling road.
7484. *Mr. Curley.*] Do you know on what scale this plan is drawn? Yes, 1 chain to the $\frac{1}{4}$ inch.
7485. When you measured the air, where did you measure it? In number 2 heading; then I measured it to the furthest cut-through, between the two headings—the furthest stenton.
7486. What quantity of air did you find? I got 7,000 cubic feet of air in the first measurement.
7487. Was that at the intake? Yes.
7488. What quantity of air did you get further up? 4,000 feet at the far end of all.
7489. Where did the other 3,000 feet of air go to? It had been lost in the stoppings. The furthest place has a much larger area than the first one, and there is always a less quantity of air there.
7490. Do you mean to say that a certain quantity of air had scaled over the stoppings? I think so.
7491. What kind of stoppings do you use? Small coal stoppings, but we are altering that now, and commencing with brick stoppings.
7492. Are the stoppings in your mine all small-coal stoppings? Yes; up till the present time.
7493. Have you small-coal stoppings in your main air-ways? Yes; the main heading is stopped with small coal.
7494. Do you say that you are now starting to put in brick stoppings? Yes; to come right out with brick stoppings.
7495. Have you measured the air in the return? I did not take the return; but I would get more air in the return than in the intake.
7496. Did you not take the air in the return for your own satisfaction, to see what air was in the return? No, I did not.
7497. Did you take any reading at any other time when you took the air? Yes.
7498. If you did not take a reading, you must have taken it for granted that there would be more air? I took it for granted; if fresh air can be got in the main heading it is bound to be got in the return.
7499. Is that a satisfactory way to take the air? In Lithgow we grow lax, on account of the harmless nature of the mines.
7500. Do you mean that you are not so particular as if there was gas there? Not nearly so.
7501. Have you ever seen any fire-damp in your colliery? No; we have never had any fire-damp.
7502. Have you ever seen any carbonic-acid gas or black-damp? No; I have never seen anything like that.
7503. Have you ever seen gases of any description? No gases of any description have ever been seen there.
7504. Did you say that at one time there were forty-five men employed at your mine? Yes; it was a new mine then. It had not been extended.
7505. Have you any idea what the velocity of the air travelling was when you took it at that time? There was one place, of an area of about 40 feet, where we got close upon 200 revolutions per minute.
7506. Was that quantity of air registered by the anemometer? Yes; Dickenson's anemometer—one of the latest.
7507. Did you take a reading at the return at any other time besides this;—you say you took no reading when you took the last measurement? I got 16,000 feet half-way. 7508.

7508. Can you tell us the last time you took a reading at the return? Yes, about a month ago, half-way in on the return. Mr. R. Hay.
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7509. What quantity of air did you get? 16,000 cubic feet.
7510. What quantity did you get in the intake? I only took the return.
7511. What was your object in doing that? Something else, I suppose, cropped up to take my attention.
7512. Can you give us any idea of when you took the air, both in the intake and the return? I cannot give you a date.
7513. Have you done so within the last three months? No.
7514. Do you work bord and pillar system at your colliery? Yes.
7515. What is the width of your bords? The bords at the present time run from 4 to 8 yards wide, but we have had some wider bords.
7516. What is the size of your pillars? They vary from about 15 to 20 yards.
7517. Are they all large pillars? Yes, fairly good pillars.
7518. Are the pillars all the size you have mentioned? I am not speaking of the workings before I went there; the pillars then were not that size.
7519. What size were the pillars before you went there? They varied very much.
7520. What sizes were they? In some instances 12 yards, and down to as low as about 4 yards.
7521. Have you seen these pillars in the colliery yourself? Yes; I have seen them that size.
7522. What kind of pillars do you think should be carried for a colliery of that depth? They should be good pillars. The strata is much thicker where the coal is worked now than it was at the pit bottom. The shaft is in a gully.
7523. Have you to carry more weight as you proceed further in? Yes; but it is a marvellous roof.
7524. Will the roof not require something to support it? In some instances it will require very little indeed.
7525. Is it your experience that when the pillars have to be taken out that the roof comes down? It is better when it does so.
7526. Do you think that mining operations are conducted with a view to the roof coming down eventually, when the pillars have to be removed? Yes; if I had to remove pillars I would like to see the roof come down, although there would be some trouble to get the roof down at Lithgow.
7527. Do you think a mine should be conducted from that point of view? I do.
7528. How do you pay your men at Lithgow? By weight.
7529. Have you a system of averaging? Yes; if they are weighed more than once, the weights are averaged, but if not, the last weight taken prevails.
7530. How often do you weigh? We have not weighed very much lately; we have had the screens down lately.
7531. Before you started to make any alterations, how many skips did you weigh? We used to weigh once or twice a week, but very much oftener when the men kept a check-weigher. When trade was bad the men could not afford to keep a check-weigher.
7532. Would the check-weigher stop you from weighing;—has he anything to do with the number of skips that are weighed? I always let him have a say.
7533. In what way? If he came to me and said, "Do you not think we had better weigh a few skips?" if I could do so, I would do it, if I had nothing else particularly on.
7534. Have you a weighman for the Company at your colliery? We have no weighman.
7535. Do you weigh the skips yourself? Yes, when they are weighed.
7536. How often do you weigh at present;—do you weigh once a day, once a week, once a fortnight, or once a month? We have not weighed for the last four months. The screens had decayed, and I was compelled to pull them all down, and the weigh-bridge at the same time.
7537. In such cases, is it not usual to take one screen down at a time? The alteration was of such a nature that we had to stop the use of all.
7538. How did you get your coal away while these alterations were going on? We were idle for a fortnight, and then commenced before we were ready, and did what we could during the time. It was a month before we got the principal screens in working order. Then we commenced the weigh-screen.
7539. How long is it since you got the screens and the weigh-bridge in order? About a month ago.
7540. Is it a month ago since the weigh-screen was in position? The weigh-screen was put up about a month ago, but we have been adjusting the machine, and so forth.
7541. Do I understand you to say that this has reference to the last four months? Yes.
7542. How often did you weigh for the four months preceding that time? We used to weigh pretty often then.
7543. How often? Once or twice a week we would weigh ten or twelve skips, but I cannot speak accurately as to the time we weighed, since the check-weighman has not been there.
7544. How long is it since the men have been without a check-weigher? Two, or two and a half years. The men had a check-weighman there when trade was so as the men could keep him.
7545. Did you ever make any comparison between the weights you paid the men for and the weights you sent away? I have not done so lately. I have not made any comparisons during the last six or eight months.
7546. When did you make a comparison before that time? I have made comparisons, but not lately.
7547. How did these comparisons come out? They came out on both sides. One fortnight the Company was about 20 tons behind, and another fortnight they had an over-weight of 15 tons. As a matter of fact, we had two daymen filling coal one day, but we had actually that over what we paid the men.
7548. Do you say that you have not bothered about making any comparisons during the past six or eight months? I am pretty certain that during the past two or three months it ran pretty accurately, although we had no weigh-bridge. Of course, the men knew they could trust us, and saw we could not help not weighing.
7549. Is your roof a fairly good roof? Yes, a splendid roof; it is really a coal roof.
7550. Do you leave so much of the coal up? 5 ft. 6 in. of the coal is considered good, and that is worked. The tops run 4 ft. 6 in. in some places, and down to 2 feet.
7551. What hours do you work? We blow the whistle for the men at a quarter to 8 o'clock in the morning, and they commence to go down then—that is, after the deputy has looked round, and we blow the whistle for them to come out again at half-past 4 o'clock in the afternoon.

Mr. R. Hay. 7552. Do you inspect the mine every morning before the men enter? Yes, every working-place.
 14 Oct., 1895. 7553. Is this done by the deputy? Yes; the deputy is the only man with any authority, and he does this.
 7554. Does he make a report in any book kept for the purpose? He generally signs a book, stating how he finds the mine. He says, "I have examined the working-places, &c., &c."
 7555. Do you inspect your shafts? Yes; about once a week.
 7556. Are your shafts walled? They are walled down to the rock; not beyond that.
 7557. Do you inspect your ropes? Yes.
 7558. Your boilers? Yes.
 7559. What ropes do you use? Three-inch ropes.
 7560. Do you calculate the life-time of these ropes? They run very much under their working power. As soon as there is a broken wire I take it out.
 7561. How often do you inspect your boilers? We blow them off occasionally, and the engine-man inspects them.
 7562. What life-time do you give your boilers? That would depend on the class of boiler.
 7563. What class of boilers have you? Cornish boilers—one with one tube and another with two tubes.
 7564. How long have these boilers been in use? One has been in use five and a half years, and is in splendid condition. One is a second-hand boiler, but it is a good one.
 7565. Do you know how long it was in use before you bought it? No; I cannot say; but it is really a good sound boiler.
 7566. Have you never inquired how long it was in use before you bought it? I have only examined the boiler.
 7567. Do you keep an engineer? We have an engine-man, not an engineer.
 7568. Does the whole responsibility of the boilers depend upon yourself and this engine-man? Yes.
 7569. Who pays attention to the examination of the boilers? I pay attention to this myself.
 7570. You say that you do not know how long that boiler was in use before you bought it? No.
 7571. Is not that a matter that you should inquire into for your own information? I think if the boiler is good, and worked under pressure, there can be no danger.
 7572. Do not you think that length of days has something to do with a boiler remaining good or bad? Certainly.
 7573. Have you ever requested the men to work longer hours lately? Not more than the pit time.
 7574. What system would you call that? That the men were working about eight hours.
 7575. Do you think eight hours is long enough for a man to work in a mine? I would not ask a man to work any more than eight hours in the coal-face.
 7576. *President.*] Do you work the bord and pillar system at your mine? Yes; I have what is called the Welsh bord.
 7577. Do you use brattice? Yes; in the main headings.
 7578. How do you get air into the bords? We do not put anything in to conduct the air; we always take care to have a cut-through in under the 35 yards.
 7579. Are the men working 35 yards before the air? Yes.
 7580. How do they get the air? That is a difficult point; but they do get it. I never had a man come out to get air.
 7581. Is it very hot in your bords? Not very hot; it is not nearly so hot as I have seen it in the Yorkshire mines. I should say it was from 60 to 70 degrees Fahrenheit.
 7582. *Mr. Curley.*] Have you ever tried the temperature? No, I have not.
 7583. *President.*] How many skips do you weigh every day? We have had all the pit top pulled down during the last few months.
 7584. How many skips do you weigh in a day, when the mine is in full swing? When the check-weighman was there we weighed considerably more than we do now. I should think we weigh about 3 per cent. since the check-weighman left.
 7585. Why do you weigh a less number of skips now than when the check-weighman was there? Because there are much fewer men.
 7586. How many skips did you weigh when the check-weighman was there? About 5 or 6 per cent.
 7587. Why has the weighing fallen off 3 per cent.? The Company never kept a weighman there; I do the weighing myself.
 7588. Do you still do the weighing? Yes.
 7589. Have the men complained to you about the number of skips that are weighed? No, they have not. As a matter of fact the men were just filling as they liked for about three months.
 7590. What average did they get paid on during that time? At the weight they stood at when they were last weighed.
 7591. *Mr. Curley.*] Is it your colliery that works on Sunday? No; I would not do that. We have no necessity to work on the week-days, even with our few men, in the present condition of trade. Our men will make from 9 to 10 shillings per day while they are at work.
 7592. Is your seam a clean seam, or have you any refuse? There is a band which runs from about an eighth of an inch to an inch in the seam.
 7593. What is the height of your seam? About 5 ft. 6 in. high.
 7594. Is it an easy seam to work? Yes, a very easy seam to work.
 7595. Do you use any powder? Not in the coal; sometimes we come upon what is called a roll, and we put a shot or two in. These rolls sometimes cut the coal completely out.
 7596. How many men do you employ? Twenty men on the coal, besides wheelers and day men.
 7597. How many men do you employ altogether? Thirty men and boys.

[Witness withdrew.]

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Thomas Broughall sworn and examined.

Mr. T. Broughall. 7598. *President.*] What are you, Mr. Broughall? I am a colliery manager.
 7599. Where is your mine? I am manager of the Vale of Gwynedd Colliery, Lithgow.
 14 Oct., 1895. 7600. *Mr. Curley.*] Have you managed any other collieries, Mr. Broughall? I have not managed any other collieries in this country, but I have in the old country; I have had little mines of my own in this country, at Tigue's Hill and Watford.

Mr.
T. Bronghall.
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7601. Have you managed these little mines of your own? Yes; both at Tighe's Hill and at Waratah.
7602. How long have you been connected with mining pursuits? For about forty-nine years.
7603. How long have you managed at the Vale of Clwydd Colliery? A little over six years.
7604. Do you hold any proprietary interest in that colliery? Yes; I have a few shares.
7605. How do you enter the mine there? By a shaft.
7606. What are the depths of your shafts? Both shafts are 230 feet deep.
7607. How is your mine ventilated? By furnace.
7608. Do you know the diameter of your shafts? The winding shaft, the downcast shaft, is 14 feet by 6 feet, and the furnace shaft, the upcast shaft, is 8 feet.
7609. What is the system of working at that colliery? Bord and pillar.
7610. How do you find the ventilation at your colliery? It is very good on one side, and I have over the quantity required by the Act on the other side, but I have a long way to take the air to the lower workings.
7611. How far have you to take it? 1,400 yards, but that will not last for any length of time, because in six or seven months we hope to finish there.
7612. When you say you have over the quantity required by the Act, what do you mean by that statement? I have ten men in that part of the colliery on the average, and I have 2,500 cubic feet of air.
7613. You have over the stipulated minimum quantity of air? Yes; and on the other side of the pit I have any amount of air.
7614. Although you have the quantity of air you state, does the ventilation appear at any time still somewhat deficient? Not in the workings. It is pretty warm in the main headings. I carry steam 1,200 yards to the pumps; that is in the outlet.
7615. If you carry steam down to where you speak of, if it is in the return going out, it will not affect the men? It does not affect the men at all. I carry steam in the pipes 1,200 yards, but that does not come near the men at all.
7616. Will not those hot pipes increase the temperature? No; that is in the return.
7617. The whole of it is in the return? Yes; both steam and water and everything.
7618. Have the men ever complained to you about the ventilation in any of those parts? I have never had any complaints, for some few years. I had complaints at first, because I had to make airways about 800 yards through old workings. There were no airways at all; the air found its way through the old workings, till I made the airways.
7619. Did you find the ventilation very defective when you took charge? Yes; it was at that time.
7620. How many men would there be working at the colliery at that time? In that part of the district, about twelve or fourteen men, that is including the men who were working the airways. I made two airways outside where the pipes were in altogether. The exhaust steam does not travel up the main heading, but in a separate course by itself.
7621. Does it go into the return? Yes; there is one return through the old workings, and there is another return through the main heading, that is the outlet, where the steam pipes are in.
7622. At the pump you are speaking about, is there anything given off there that goes into the intake? No; it all goes into the return.
7623. How many men have you employed in the mine altogether? About twenty-six at the present time.
7624. *Mr. Gregson.*] Is that the number of men employed underground? Yes; the number employed underground.
7625. *Mr. Curley.*] Is the system worked bord and pillar? Yes.
7626. What is the width of your places? Eight yards.
7627. What is the width of the pillars? Four or 4½ yards. The pillars on the side of the Ganning bord, or main heading, are 10 yards.
7628. What kind of a roof have you? There is from 4 ft. 6 in. to 5 feet of inferior coal, and then we have a hard sandstone.
7629. Is there any bad roof in any part of your mine? No; there are a few places where the coal comes down to the rock, but nothing past that.
7630. Do you use much timber to keep that up? Yes; to keep the coal up. In some places it takes a good deal of timber, and in others not so much.
7631. Had you an accident at that colliery some time ago? Yes; I was driving through the end of an old bord—a bord that had been worked sixteen or seventeen years ago. I drove back into it in the new workings, and an accident happened, but that is the only accident I have had.
7632. How did that accident occur? I was in the place five minutes before the accident occurred, and ordered the man to put some timber in. He had five or six props, and I told him to put sleepers instead of the short lids. He went to put the timber up, and the top coal came away. It was entirely his own fault; in fact, I would have punished him for it, but I thought he was punished enough by being hurt.
7633. Do you always keep plenty of timber supplied to the men? Yes; I have never had a complaint yet in this respect. It is a thing I am very particular in watching.
7634. Have you any fire-damp in your colliery? No.
7635. What stoppings have you? Just the slack stoppings.
7636. Are they slack stoppings all over the colliery? Yes, pretty nearly; they are built with the tops, or anything of that sort. They are quite good enough for that class of coal.
7637. Are they quite good enough in the main intakes? Yes.
7638. Is that your opinion? There is nothing at all to alter my opinion, because the coal there will never catch fire, or anything of that sort. I have seen coal where if you put 5 or 6 tons of slack it would be afire in a fortnight, but not in this Colony.
7639. Have you known of collieries being on fire in this Colony? I have heard tell of them, but I have never worked in one.
7640. How do you pay the men at the colliery? By the average weight.
7641. Do you weigh many skips? I weigh sometimes two or three times a week, and sometimes I go for a fortnight without weighing.
7642. Do you weigh the skips yourself? Yes.
7643. Have you no weighman? No; I just weigh when I have a bit of time.
7644. Have you had any complaints about weighing? No; I have not had any complaints for the last three years.
- 7645.

- Mr. T. Broughall. 7645. Have the men a check-weighman at your colliery? They have never been without a check-weighman there.
- 14 Oct., 1895. 7646. Do you weigh when the check-weighman asks you to weigh? He never asks me to weigh. I have never been asked to weigh for, I dare say, the last three years.
7647. You simply weigh of your own accord? Yes.
7648. And at times when it is convenient to yourself? Yes.
7649. Has the check-weighman never suggested to you that more skips should be weighed? No; not of late.
7650. Has he complained to you at any time about the number of skips that were weighed? Yes; two or three years ago.
7651. Do you weigh the coal you send away for the company on the same weighbridge? No; it is weighed on the Government railway bridge.
7652. Do you ever make a comparison between the weights you send away and the weights you pay the men? Sometimes I am a little behind, and sometimes I am a little ahead; taking it all through, there is not much difference at the year's end.
7653. Who has the advantage? Sometimes the men have had a few tons to the good, and sometimes I have had a few tons to the good.
7654. Can you give us the exact quantities for last year? I have not worked it out; I do not think I should be called to answer these questions.
7655. How many skips have you weighed during the last month or two? I cannot exactly say; I weighed last Monday, a week to-day.
7656. Have you weighed any coal since last Monday? No.
7657. *Mr. Gregson.*] What is the check-weighman doing when you do not weigh? He sits there smoking his pipe.
7658. Do the men pay him for doing that? Yes; he has a better billet than I have.
7659. *Mr. Curley.*] Can the check-weighman weigh in your absence? No.
7660. Can he weigh when you are there unless you are weighing? No.
7661. Is the weighing a matter that he has nothing to do with? Yes; I give him a chance to weigh when he likes, when I am present. If I weigh, he sees I do not cheat him; and on the other hand, I see that he does not cheat me.
7662. What hours do you work at the Vale of Clwydd Colliery? Eight hours.
7663. Do you work with one shift, or with two shifts of men? I have been working with two shifts of men during the last two or three weeks. I have had five or six men on at night.
7664. Does your colliery make very much water? Yes; the workings that have been worked out for years all work down into the one place. I cannot pump a great body of water on account of the distance the steam is taken; I have not much power.
7665. Does the water affect the men's places very much? No; I work their places up to the rise.
7666. Are these men that you speak of, in the farthest-in places, working to the rise? They are now.
7667. Does your place rise much? No; not more than 1 in 40; there may be a place or two in swallow's a little more. It is a very flat mine as a rule.
7668. When did you last measure the quantities of air there? I think it was about a fortnight ago.
7669. What was your record? I did not measure it in the new workings.
7670. What do you mean by the new workings? I have one lot of workings going north, and another lot of workings going south; north are the old workings. I took no register of the new workings, but the register of the other workings was 2,520 cubic feet.
7671. Did you take the register in the return? Yes; in the main return. I had about 7,000 cubic feet in the main return.
7672. Were both these readings taken in the main return? No; one was taken in the intake, about 50 yards from the men.
7673. What section of the mine was it where you took the reading? In the inlet section, before it went to the men. I have only ten men at the most in that section where I measured the air, and four miners, a wheeler, and a day-man at night—six altogether.
7674. What time does your furnace-man begin his work? I do not keep a regular furnace-man; the road-man attends to the furnace first thing in the morning, and then about 3 o'clock in the afternoon, and if I go down the mine I stir the furnace up myself.
7675. Do you know the quantity of coal you burn in a day in the furnace? About four skips day and night; the skips carry about 10 cwt.
7676. That is about 2 tons a day? Yes.
7677. Do you use all small coal? Yes.
7678. Day and night? Yes; we only bank the furnace up at night.
7679. What time does the road-man go into the mine? About 6 o'clock.
7680. Does he go to the furnace when he goes in? Yes, first thing.
7681. Have you ever attempted to work your mine longer than the eight hours you have spoken about? No.
7682. *President.*] How do your men get supplied with air in the bords? I never work them beyond 25 or 30 yards before a cut through. If I run a bord over the distance I put in brattice.
7683. Until they get to the cut-through, is there lots of air? Yes.
7684. How do you explain this? The air will always strike in if it goes from the second cut-through. I have brattice in the second cut-through, and turn it up, then it goes to the whole lot.
7685. *Mr. Curley.*] Do you know anything about the size of the pillars, about your shafts? I cannot say; on the one side there are no pillars at all.
7686. What side is that? The winding shaft; there are no pillars 30 yards from the pit bottom. There is an acre and not a pillar in it; from what they tell me, it has been like that for the last fourteen years.
7687. Do you know the reason of that? At that time they took all the pillars—everything out. That was in the good times, when they wanted coal, but it has not moved since.
7688. Is that at the main downcast shaft? Yes; nothing has moved, not a pound of anything since I have been there.
7689. Is there no support? Nothing at all.

7690. Can you send the Commission a sketch showing this? I should have to survey the part first. These pillars are 30 yards from the shaft, what we call rolls. It has been a water-course at one time, and they are about 6 or 7 yards through. They run at an angle; the rolls support the roof, and as long as they are there it will never move. Mr.
T. Broughall.
14 Oct., 1895.
7691. What are the other pillars round about that shaft? Some of them are 8 and 10 yards, some more. The tops have fallen, and you cannot get in to see them.
7692. Do you know what condition the upcast-shaft is in? The pillars are good round that shaft. They seem very fair good-sized pillars.
7693. What size are they? Some of them are 8 yards and some 10 yards. Of course the tops are down, and you cannot tell exactly what they are.
7694. If the roof is good, could you not travel over the tops? Yes; but it would not be very pleasant. Some of the places are only 9 and 10 inches high, and a man like myself could not get through them very well.

[Witness withdrew.]

Mr. John Wilson sworn and examined:—

7695. *Mr. Curley.*] What are you, Mr. Wilson? I am colliery manager of the Zig-zag Colliery, Lithgow. Mr.
J. Wilson.
14 Oct., 1895.
7696. Have you been manager at any other colliery? No.
7697. How long have you been connected with coal-mines in this Colony? Since I was 12 years old.
7698. What mines have you been connected with? The Vale of Clwydd Mine, at Lithgow; and I was at the South Bulli Colliery for six months.
7699. What were you doing at the Vale of Clwydd Colliery? I was working under my father there.
7700. Have you held any position such as deputy or overman? I was working about the screens, and in the office, and used to go round down below with the overman.
7701. Did you do the same sort of work in South Bulli? I went there for the purpose of surveying and looking after things; but that was while I was manager of the Zig-zag Colliery.
7702. *Mr. Gregson.*] How many years have you been coal-mining altogether? Nineteen years.
7703. Have you ever seen any other mines than the three you have mentioned? Yes; I have seen other mines.
7704. Have you ever worked at any other collieries? No; those are the only three collieries I have worked at.
7705. *Mr. Curley.*] How long have you been manager at the Zig-zag Colliery? About ten years, I think.
7706. How many men are there employed at that colliery? About twenty-six miners.
7707. Have you had a larger number of men employed at any time? We had, miners and shaft men, all told, close on 100 men at one time.
7708. What system of working have you at that colliery? Bord and pillar.
7709. What is the width of your bords? Twelve yards.
7710. What is the size of your pillars? Six yards.
7711. Do you build packs in the middle of the bord? No; we have no packs.
7712. Have you a double roadway? Yes; a double roadway.
7713. Do you use much timber? About four rows of props.
7714. How far are these props apart? They are in rows, going up the bord, about 6 to 8 feet apart.
7715. Do you enter your mine by a tunnel or by a shaft? By a shaft.
7716. What is the depth of your downcast shaft? 200 feet.
7717. How is your mine ventilated? By furnace.
7718. Is your upcast-shaft the same depth as your downcast-shaft? The upcast-shaft is 160 feet deep.
7719. Do your workings rise towards the upcast shaft? Yes; they rise towards the upcast.
7720. Do you know the size of your pillars at the upcast-shaft? I cannot tell you the different sizes; when they were sunk, we were working 8-yard bords. It is only two years ago, since I started the 12-yard bords. The pillars round the shaft are different sizes.
7721. *Mr. Gregson.*] What cover have you over the workings generally? At the present time our workings have about 130 feet of cover.
7722. Have you any workings extending under the hill? We are not working there at the present time.
7723. Have you worked under the hill? Yes.
7724. What cover would there be there? About 900 feet of cover.
7725. What was the size of the bords there? Eight-yard bords and 4-yard pillars, but, as a general rule, some of the pillars were left larger.
7726. *President.*] Were not those very small pillars to leave for such a cover? I do not think so. It a good strong roof.
7727. What kind of a roof was it? Sandstone, and fire clay on top of that.
7728. *Mr. Curley.*] Have any of those pillars been worked out on the side you are now? No.
7729. Have you not started to take the pillars out? No.
7730. What is the size of your pillars on your main roads at the present time? I generally level them about 6 to 8 yards.
7731. Cannot you give us any idea of the size of those shaft-pillars you have referred to? No; not from memory.
7732. Have you never noticed what the size was? I have seen them occasionally.
7733. Can you get round about these pillars? Yes.
7734. *Mr. Gregson.*] Have you never noticed the size of these pillars? When the surveying was done, I knew the size of them, but I cannot tell the size from memory.
7735. *Mr. Curley.*] Do you know the size of the pillars round about the downcast-shaft? I cannot tell the size of them.
7736. Have you any records in the office that will show the size of these pillars? The plans will show the size.
7737. Have you any idea of the area of the ground you are not working now, where you say these 4-yard pillars are standing? Something like 150 acres.
7738. Has all that ground been worked? Yes. 7739,

- Mr. J. Wilson.
14 Oct., 1895.
7739. What is the area where you are carrying out this 12-yard bord system; the area you are going over, and what you propose to go over? That would be rather a difficult question to answer.
7740. What is the area you have gone over at the present time? About 40 acres.
7741. Have you not some idea of the distance you are going beyond that? Yes.
7742. Is it an extensive area? No; the property is only about 400 acres altogether; I think it is about 90 acres, the other side of where we are working.
7743. Do you give any attention to the carrying capacity of your strata, and what it will take to support the weight; is that a matter you have given much attention to? The attention we give to it is based on the experience we have had in the 8-yard and 4-yard pillars.
7744. Whom does this property belong to? To trustees.
7745. Who are the proprietors of the colliery at present? Mr. Thomas Saywell and my father, Mr. Wilson; it is leasehold property.
7746. Have you any interest in the colliery yourself? No.
7747. How do you find the ventilation in that colliery? We generally keep up to about 20,000 feet, but we can rise up to 50,000 feet if we like.
7748. Is there plenty of ventilation going at the present time for the men that are there? Yes.
7749. Have you measured the air recently? Not within the last twelve months.
7750. Have you not taken any measurement of the air within the last twelve months? No.
7751. Is the colliery inspected in the morning before the men go to work? No.
7752. When does your furnace-man commence his work? He gets down the pit about twenty minutes to 7 in the morning.
7753. When does he come back again? At 5 o'clock at night.
7754. Is he at the furnace the whole of the time, or is he doing other work? He has other work to do.
7755. When do the men go down? They commence to go down at a quarter to 7 o'clock in the morning.
7756. When do they cease work? At 3 o'clock in the afternoon; they are generally on the surface at 3 o'clock. Sometimes they work a little overtime if it is necessary.
7757. Do they work overtime when you want them to do so? Yes.
7758. An hour or two sometimes? No; an hour.
7759. Did you ever request them to work on Sunday? I did once.
7760. When was this? Just after last Christmas.
7761. What was your object in requesting them to work on Sunday? We were behind in our trade. I had to send machinery to Sydney, and we could not keep our trade going; so I thought I would put a few men in on the Sunday; the extra trade would only last for a week.
7762. Did the men object? No.
7763. Did they not say they would rather not go to work? No; only a few of them turned up; I only wished them to work half a day.
7764. Did you give them any intimation on the Saturday that you wanted them to go to work on the Sunday? Yes; on the Saturday evening.
7765. Did you see the men yourself upon this matter? No; I put up the usual notice on the pit requesting them to go to work on Sunday.
7766. Could not this trade have waited rather than go to this extent? No; because people sending orders want to get them as soon as they can—at once. The orders were urgent.
7767. Did you do this entirely on your own responsibility, or was it the wish of your proprietors? I did it on my own responsibility; I was not asked to do it by the proprietors.
7768. Do you not think we can do without Sunday work? I think so. That is the first time we have worked on Sunday for a number of years. I do not believe in Sunday work if it can be avoided.
7769. Did the law step in and interfere in this matter? Yes.
7770. *Mr. Gregson.*] Were you summoned? Yes.
7771. *Mr. Curley.*] Were the men summoned as well as yourself? Yes.
7772. Were you all convicted? Yes.
7773. Were you all fined? Yes; we were all fined.
7774. Were the men fined as well as yourself? Yes.
7775. Who paid the fines? The fines were returned, but I did not ask for my fine.
7776. Did you pay the fines for the men? No.
7777. Did the company pay the fines for the men? No.
7778. How are the men paid at that colliery? They are paid by weight.
7779. Have you any standard weight there? No; we have no standard weight.
7780. Do you pay on an average? Yes; on the average of the coal that is weighed.
7781. How often do you weigh—do you weigh very much? We weigh once a week sometimes; sometimes once a fortnight; and we may weigh two or three days following.
7782. Who weighs the coal? I do.
7783. Have the men a check-weighman? Yes.
7784. Has he any say in the number of skips that shall be weighed? No.
7785. Did you weigh any coal last week? Yes; I think I weighed on one day last week.
7786. How many skips do you weigh when you do weigh? Different numbers; sometimes half a dozen, sometimes twenty, sometimes ten.
7787. Were you manager at that colliery at the time you had about 100 men employed there? Yes.
7788. How many skips did you weigh then,—did you weigh then in a similar way to what you do now? We generally used to weigh more at that time.
7789. Did you do the weighing yourself then? Yes; I used to weigh then.
7790. What do your skips carry? The average is 14 cwt. 2 quarters; some men fill 16 cwt. and 16½ cwt.
7791. Does your coal vary very much in the mine;—do the men ever get into soft or tender coal? No; the difficulty is that it is too hard; it keeps just about the one thing.
7792. Have the men ever complained to you about not having a sufficient number of skips weighed? Not latterly.
7793. Did the men complain to you upon this matter some time ago? They used to complain sometimes.
7794. *Mr. Gregson.*] How many years ago is it since they complained? Perhaps three or four years ago.
7795. Have you had any complaints from the men during the last three years? No.
7796. *Mr. Curley.*] Has the check-weighman ever complained to you? No.

7797. Has he never asked you to weigh more skips? No.
7798. Has he never suggested to you that it would be advisable to weigh more skips? No; sometimes he has asked me when I was going to weigh.
7799. Do you not look upon that as a request to weigh? I suppose it is in one way.
7800. How many skips did you weigh when you had this larger number of men working at the colliery? I cannot tell from memory.
7801. Did you weigh every day then, or only occasionally? Just occasionally.
7802. Has your present system of weighing been in operation since the colliery was opened out? Yes.
7803. Have you ever made any comparison between the weights you send away, and the weights you pay the miners for? I have not done it for a couple of years.
7804. Before that time did you make any comparison of these weights? I used to run it up sometimes.
7805. How did it run up? Sometimes we had a little over, and sometimes we had a little under; we could not always get at it exactly, because we would have trucks standing in the siding loaded.
7806. Has there been a check-weighman at the colliery all the time? For the last nine or ten years there has been a check-weighman at the colliery. When the colliery first started, there was no check-weighman for a while.
7807. Is your mine a very dry mine, or have you any water to contend with? Some of the places in the mine are wet; we have a good drop of water to pump.
7808. Have you to bail any water from the men's places? Very little; we are working all to the rise.
- 7808½. Have you any water to the dip? I have not worked the dip for a number of years.
7809. How many places have you working where there is water to contend with? Five places.
7810. Do you bail the water in these places? No; the water runs away from them. If there is much water we take it out, but if not they take it out themselves.
7811. Have any of the miners to wait for any length of time before they get to their work in consequence of this water? Occasionally they have to wait.
7812. Is there any fire-damp given off in that colliery at all? No.
7813. Have you never noticed any fire-damp? No; no gas whatever.
7814. Have you ever noticed any black-damp? No.
7815. Do you use any brattice to carry the air up into the men's places? No.
7816. What kind of stoppings have you? Small coal stoppings.
7817. Are the stoppings all small coal stoppings? The majority of them are; I think we have one brick stopping.
7818. *Mr. Gregson.*] How do you put the small coal together? We pile it up.
7819. *Mr. Curley.*] Have you these small coal stoppings on your main intakes as well? Yes.
7820. Do you ever notice that the small coal shrinks in these stoppings occasionally? Yes; we generally go round them when they shrink.
7821. And pile them up again? Yes; there is always a large body of the slack.
7822. How much do you put there? About 8 feet at the bottom, and I suppose a couple of feet at the top.
7823. Is this slack coal that you get from the working of the mine? Yes.
7824. Is it all good slack coal? Yes.
7825. Have you much of a market for your slack coal? No; a very poor market.
7826. Do you send some slack coal away? Yes; we send some away.
7827. How much do you send away? Perhaps a couple of hundred tons a month; I cannot say exactly.
7828. How many tons of round coal would you send away a month? I suppose we would average about 1,900 tons a month.
7829. How many tons of small coal would you consider there would be stowed in these bord ends that you use for stoppings? I cannot tell you; I have not gone to the trouble to calculate it.

[Witness withdrew.]

Mr. Joseph Brown Barclay sworn and examined:—

7830. *Mr. Curley.*] What are you, Mr. Barclay? I am Mayor of the Municipality of Hamilton at the present time.
7831. Have you been an alderman there for some considerable time? During the last three years I have been an alderman there.
7832. Have you been an alderman of the Municipality of Wickham for some time? Yes; this is my sixth year.
7833. *President.*] Are you an alderman for both municipalities, Wickham and Hamilton? Yes.
7834. *Mr. Curley.*] Have you held the position of Mayor of Wickham? No; I have not been Mayor of Wickham.
7835. Will you look at sub-section 3, of section [30] 28, on page 14 of the Bill;—you will notice in that sub-section a provision for a surface plan, showing all the streets, roads, buildings, creeks, rivers, bays, swamps, navigable waters, and limits of any tidal waters within the boundary? Yes.
7836. Do you think a clause of that description is necessary? Decidedly; it is what the Council has been endeavouring to procure for years.
7837. You will see that the clause says: "If required, a surface plan, &c.";—do you not think it ought to be a positive matter? I think it ought to be compulsory; more especially as regards Wickham.
7838. *President.*] Why do you say especially as regards Wickham? I think it ought to be in possession of the Municipal Council, seeing they have the maintenance of the streets, and are liable in case of any accident, no matter whether it is caused by undermining or not.
7839. ~~Supposing the underground mine-owner has absolute right to do what he chooses, and the municipality comes there after and makes streets, and the mine-owner lets down the ground and causes a subsidence, what are you going to do in a matter of that kind?~~ The mine-owner has no right to dedicate the street.
7840. ~~Or how does he dedicate the street? Does he sell?~~ The street must be dedicated from the owner to the council before it can be made a public thoroughfare, and the law does not allow the council to spend the ratepayers' money unless it is so. The mine-owner makes it over to the council as a deed of gift, as it were.

Mr.
J. Wilson.
14 Oct., 1895.

Mr.
J. B. Barclay.
14 Oct., 1895.

- Mr. J. B. Barclay. 7841. *Mr. Curley.*] Do you know of any streets that have been undermined in the Municipality of Wickham? Oh, yes; North Wickham is practically ruined.
- 14 Oct., 1895. 7842. *President.*] Does the mine-owner sell the surface? Yes, exclusive of the mineral; but the Ferndale people reserved no mineral in some cases.
7843. *Mr. Curley.*] Where have the streets been undermined? From Flemming-street up to Smedmore-street, was all undermined by the Maryville Colliery Company, and the Wickham and Bullock Island Company. Practically speaking it was not the fault of the Wickham and Bullock Island directorate; it was the fault of the Linwood Colliery. The Wickham and Bullock Island Colliery, had to suffer for all Mr. Walker's misdeeds. A great many people got a verdict against the colliery proprietors for damage done.
7844. Can you mention any other part that was affected by undermining? Only the northern part was affected—no other part that I am aware of.
7845. Do you say that the Wickham and Bullock Island Company had to suffer for the misdeeds of the Linwood Company? Yes.
7846. When the Wickham and Bullock Island Company allowed the Linwood people to take that portion of their lease could they not have reserved the right of supervision by their own manager to see that the work was carried on in such a way that no undermining could have taken place? They ought to have done that, but mining several years ago was carried on in a very loose way, without regard either to safety of limb or property.
7847. Do you know of the undermining of streets in any other locality? Not streets; there is a good portion of the Hamilton Municipality at the Newcastle boundary, that has fallen away during the last few years, from Melville-street, on the tramway line, that is the boundary between the two municipalities. The subsidences have taken place between Melville-street and the Raccourse.
7848. Does this property come up to Melville-street? Yes, right up to Melville-street; it was all ratable property.
7849. Has the Municipality of Wickham been put to any inconvenience in connection with this undermining? The residents have complained of being afraid of their places coming from under them.
7850. Have your streets in Wickham been affected? Not to any great extent.
7851. Do you know of any undermining that took place near Tighe's Hill? Yes, it is pretty well honey-combed there all through.
7852. Do you know whether this undermining has given the Municipal Council any trouble? Yes; there was a great deal of expense incurred there, through a party by the name of Bevan mining a part of the old Ferndale Colliery.
7853. Was it ever discovered who it was that did that undermining? There was some trouble, but that was the supposition.
7854. Was there not some difficulty in finding out who had done it? Yes.
7855. Do you think that municipalities should be run into expense or litigation in matters of this description? No; I think that every mine-owner should be compelled by law to secure the streets in all instances.
7856. Do you think that the mines ought to be worked in such a way that they would not be a menace to the public, as far as safety is concerned? Certainly.
7857. And that municipalities should not be thrown into litigation? Yes; there is a great deal of money spent by municipalities in keeping the streets in repair.
7858. Have the municipalities any money to throw away; I suppose they are not too affluent? I am sorry to say they are not. The Municipality of Hamilton is pretty sound, but I cannot say so much for Wickham. The whole of the northern part of the Wickham Municipality is resting on water; it is honeycombed right through; it is only the water that is keeping it up. The water has filled the whole of the Maryville workings.
7859. Do you think the Maryville workings have been flooded by Throsby's Creek? Yes.
7860. Can you say that is so beyond dispute? I made the cylinders for the shaft, and I was an eye-witness to the tide ebbing and flowing, and have seen the sea-weed there. There were two air-shafts put in the Maryville property; the first one was lost.
7861. Will you look at rule 25, on page 29 of the Bill (*see Appendix A*)? Yes.
7862. Do you think that is a necessary provision in the Bill? I think so; I think the Minister ought to have that right.
7863. The marks you see drawn through both these clauses indicate that the Legislative Council is opposed to them being in the Bill. From your experience in connection with municipalities, do you think that these clauses are essential in a Coal-mines Bill? I think so; I see no necessity for opposition to the clauses. I fail to see why the mine proprietors ought to be hampered, but, at the same time I think there ought to be a provision by law to secure life and limb and property.
7864. Do you think that there should be any question about the safety of the public streets? None whatever.
7865. Did you refer just now to some undermining towards the Glebe—what did you refer to? That belongs to the A.A. Company. I should think it affected from 15 to 20 acres.
7866. Is that near Melville-street? Right up to the fence of Melville-street.
7867. Do you think that has gone over the street? I am not prepared to say that; I know there was great difficulty in laying the tramway there, and that a lot of expense was incurred.
7868. Have you had any subsidences in connection with any of your streets in Hamilton? No.
7869. You do not know of any subsidences in Hamilton? I am told that some four or five years ago, one of the telegraph poles went down in James-street, but I am not prepared to say that was caused by undermining, because if a telegraph post went down, something else would be likely to go also. It might have been caused by the strata, water percolating, or something of that kind.
7870. Do you know of any undermining towards the Glebe in any way? There is no undermining there to my knowledge.
7871. Have none of the streets over that way been affected? None of the streets there have been affected to my knowledge.
7872. Is the undermining of streets a matter that the municipalities have had under consideration for some time? Yes; a few years ago there was great agitation in Wickham; a committee was formed, and several deputations were sent from it upon this matter. We demanded an inspection of the Ferndale mine, and asked to see a plan, but our requests were refused.
- 7873.

7873. Whom did you make the request to to see the plan? I think the request was made to the manager, Mr. Jno. Powell.

7874. Could you get no information from anybody? No.

7875. Do you think that is a proper position for a municipality to be placed in where mining is carried on? Decidedly not.

7876. Do you think there is any disposition on the part of municipalities to harass collieries in any way? No, quite the opposite; I speak for the two municipalities I belong to. In fact, as regards Hamilton, the A.A. Company has been both father and mother to that municipality. It is a town that has been practically built up by that company.

7877. You say there is no disposition on the part of aldermen to harass a company? No.

7878. Do you not think that you ought to be able to form a very good opinion on that matter, taking into consideration the experience you have had? I ought to be able to form an opinion on it.

7879. When you made this mild request, do you not think the information should have been forthcoming? I think the information should have been given.

7880. Have you found it necessary to take a legal opinion upon these matters? I believe a legal opinion was taken outside the Municipal Council by the committee that was formed at Wickham as to whether they could demand an inspection, or to see the plan.

7881. Can you give us any idea what the legal opinion was? I have no knowledge myself; I only know from hearsay.

7882. You have not seen the opinion yourself? No, I have not.

7883. Have the municipalities had this matter under consideration at different times? Yes, more especially at Wickham. We have no knowledge where the Ferndale Company has mined through or what streets they have gone through.

7884. *President.*] You spoke about the A.A. Company being both father and mother to one of the municipalities;—what municipality did you refer to? Hamilton and Wickham as well.

7885. Have they let down any streets in Hamilton? No, not to my knowledge.

7886. I will read you what the Legislative Council has to say about this rule 25:—

The Legislative Council insists upon its amendment in clause 50, page 26, which omits rule 25,—because it is the business of the Crown when leasing coal to see that sufficient provision is made for protecting the surface, and that owners of the mineral long before any improvements in the shape of roads or townships were in existence ought not to be punished now by losing their coal, as it is by no action of theirs that circumstances have produced an apparent necessity for not mining the coal which they are entitled to. Practically in nearly all mining townships the large companies make provision, even at the proprietor's expense, for the maintenance of the surface where the safety of the travelling public has to be considered. It is notorious that roads have been made long after the coal has been taken out, and the authorities ought to have known this would one day result in a settlement of the surface before they made the roads.

What do you say to that? In a great many cases what is stated there is correct.

7887. The difficulty in providing legislation is that the mine people have a right to the mineral? If that is so the municipality ought to put up with whatever arises. The Council has accepted the dedication of the streets, and after they have spent thousands of pounds they cry out; but why did they accept the dedication.

7888. Whom did they accept the dedication from? Building Societies.

7889. Have the Building Societies built the houses? No; they have bought large tracts of land where the mineral was actually reserved, and they have cut the land up into allotments, and have sold these allotments at high prices, with a surface right only, and the Council are bound by the consequences.

7890. Supposing a man has a mine where coal has not been taken out; that he has an absolute right to the mineral, but somebody else has the surface without any rights being reserved, would it not be hard to prevent the coal-owner from taking his coal out? If I was a coal-owner I would have the coal.

7891. Would you take the coal out? Yes.

7892. Is there not a difficulty in legislating for a matter of this kind? Yes.

7893. You do not know what the rights of the people are? No, that is the difficulty; if one person has got the coal he has the right to take it, and if he endangers life and limb then the trouble ensues.

7894. Does not the trouble come in by the surface people chancing it? Legislation should have stepped in to prevent them dealing in that way. I think the mine-owner might be assisted by the Government to take all means necessary to protect any road from being dangerous. I think the country should take the matter in hand.

7895. How could the Government assist the mine-owner? If the A.A. Company left coal on each side of the street it would be impossible to take that property down.

7896. Why should they be prevented from taking the coal out underneath a road? That is a knotty point.

7897. Is it not confiscation? Yes, confiscation.

7898. *Mr. Gregson.*] I suppose you know that these troubles are not peculiar to this country: that they have the same thing in England;—have you heard how they get over the difficulty there? They have the same troubles in England. Although I was reared amongst them, we had no municipalities to contend with; it was mostly private owners, and they generally got over the difficulty.

7899. Have you heard of a street that has been let down where the colliery owners have made it good? Yes; I have heard of that in Newcastle, but the difficulty is that everybody is a mine-owner now-a-days.

7900. How can you legislate for one without affecting the other? The difficulty is that these small proprietors have not the means to remedy any of these matters. At New Lambton you might pass over a road to-night, and to-morrow it might collapse. It is all honey-combed at the present time. I think under the present system in the Colony that it would be a great injustice to put too many restrictions on the mine-owners, because they could not cope with them. If they want to put restrictions such as to compel them to put up brick arches to support the strata, many of them could not do it. I think that legislation should treat the coal in the same manner that gold and silver is treated. I think at the present time the wealth of the Colony is being squandered—given away under its value, by allowing the coal to be sold at such a ridiculous price.

7901. How can you regulate that? I think it is hard to regulate the coal industry. I can buy silver at a certain price, and make a profit, if I was allowed to make what I buy into the coin of the realm, but I am not allowed to do that; they will not allow me to do what I like with it.

7902. *President.*] Do you mean that you are not allowed to coin it? Yes.

7903. There is nothing to prevent you, if you are a jeweller, in making it into anything you might like?

Mr. J. B. Barclay. I know that; but what I mean is that coal is the greatest source of wealth we have in the country, and if legislation is going so far as to put restrictions upon men and masters, it should put a minimum selling price on coal.

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7904. Would not the trade, if such a thing was done, be taken by other countries? I do not see it; the Newcastle coal is going for half of its value at the present time. The men that have been mostly the cause of this, have been the small coal proprietors, and they have also caused the damage to the streets.

7905. *Mr. Curley.*] Do you not think that some of the large proprietors have set the small proprietors going? Yes.

7906. Even when they were bound by an agreement with the workmen? Yes; but I believe the principal proprietors are prepared to deal fairly with their men.

7907. *President.*] Supposing people have the right to get all the mineral in a certain part of ground, how can you hamper them by having certain matters referred to the Minister? In place of the Minister I would prefer a committee of three. We may get anybody as a Minister of Mines, and I think it is a dangerous thing to give one man this power, because he might not be a practical man. On behalf of the municipalities I should object to them being answerable to the Minister.

7908. *Mr. Curley.*] Do you know a municipality where they wrote to a company some time ago in connection with the undermining of a street, drawing attention to what the Council had done, and asking them to consider the matter, and that they never received a reply to their communication? I would not be sure about that; but I have heard something about Brookstown and Wallsend. I am of opinion that where mines are worked under public streets, it would do no harm for an inspector to report to the Minister as to their stability or otherwise.

7909. Is this not one of your difficulties in connection with the dedication of a street—that you do so without any information whatever? Yes; we have no information; but if the owners of the property did not sell the surface there could be no municipality. Take, for instance, Mimmi, and also Hamilton; if the A. A. Company had not sold the surface, there would be no municipality. Hence the municipality arose.

7910. *President.*] Did they agree to leave supports? That I cannot say.

7911. *Mr. Curley.*] Will the same thing apply to Wickham? Yes; Mr. A. A. Dangar's property was sold in the same way; but I understand from the deeds that in some instances there was no reservation whatever, and in other portions the mineral was reserved.

7912. Do you mean to say that in one case there was no reservation of mineral, and in the other case there was? Yes; the people were satisfied in the case of no reservation for the mineral that they were taking the mineral out, but they could not get an inspection. The mine was worked by the Ferndale Company, and is full of water now.

7913. *President.*] Would a plan of the mine have shown you that? Yes; in Lambton the Minister is actually preventing them from taking what they have actually purchased.

7914. By what authority does he do that? I only know that he does it; I think they can claim compensation from the Government for the value of the coal.

7915. *Mr. Curley.*] I suppose, apart from the past, you can understand that there is a good deal of coal to be gone on with in the future, and to be leased to companies? I would think so.

7916. If irregularities have taken place in the past might they not be remedied in the future? I think we should try to prevent a recurrence in the future.

7917. *Mr. Gregson.*] How are you going to deal with a thing like this;—it is all very well to say a thing ought to be done, but how are you going to do it? It is a knotty point. It might be this way. If the municipality had a main road or street running through the property, well knowing by the plan it was going to be undermined, and considering it dangerous, I think, as has been done in the past in several cases, that the municipality and the mine-owner ought to come together.

7918. If it is a proclaimed road, it is the Government, and the municipality might have a claim against the Government for permitting it to be done? Yes; every street, after the *Gazette* notice, is a proclaimed road.

7919. It seems to me that the Government should be held responsible just as much as the mine-owner? The difficulty is, that any unpractical man can go and make the Minister do what he likes.

7920. That is the objection to the clause as it stands;—the objection is that the Minister deals with coal land outside the Government? Yes; that is the objection.

7921. *Mr. Curley.*] Many owners of the coal also own the surface, which they have sold, and got value for that surface, and if people come and put their residences on the surface, where comes their right later on to depreciate the value of that?

Mr. Gregson: They have no right.

—*Witness:* If I purchase the surface, and in the deed the mineral is reserved by the owner of that property, I am contributing to letting down my own property. I buy it with all risks, so that it is a knotty point to determine which way to deal with it. At the same time life may be lost.

7922. *Mr. Gregson.*] That very seldom happens? Very seldom.

7923. Do you not think that more is made of this than circumstances warrant, and that it will make municipalities more careful in the future before they take the dedication of roads? Yes; I think so. In municipalities, like other things, unpractical men get into them, and if they are asked to accept the dedication of anything, they will accept. One set of aldermen may do this, and another set of aldermen may not.

7924. *Mr. Curley.*] Do you know that wherever a mine is opened, a good deal of land has been offered, and a good deal of land is sold, and must not that be the natural condition of things? About the only exception is Brown's property, in the Northern district. They are the only people who have retained their property. The other companies have all sold.

7925. Do you think, judging from the past, you may anticipate that the same thing will occur again? Yes; most decidedly.

7926. Do you think it is desirable for persons who have purchased the surface to be thrown into litigation in these matters;—should coal-owners have the right to ruin homesteads when they have sold the surface? The difficulty is when they have sold the surface and the mineral to different parties.

7927. Will not persons be taking up coal in the future, in the same way as they have done in the past? Yes; I think it should be provided against in the future. In the future, if a company takes up a large tract of land, and they sell the surface, I say that after selling the surface and getting that value, it would be unfair to let them practically ruin it by taking the mineral out afterwards.

7928.

7928. *Mr. Gregson.*] Do you know of any case in which coal has been worked under a lease from the Government in the Northern District? No.

7929. Supposing that coal has been leased by the Government, and that afterwards the Government have sold the surface over this very tract of land, and then by-and-bye that the coal is worked out, and the allotments tumble down, who is to blame in this matter? The Government, I presume. They have done so; the Government have sold part of the commonage near Newcastle, and it is practically undermined. They have actually sold the pillars, allowed the lessees to take the pillars out, and the whole thing will collapse. The present Government has done this, so that we need not go to private owners for an example. The Minister has done this. In one place the Government have sold the ground in allotments of a quarter of an acre, and have refused permission to one man to take coal out of his own allotment, and a little way from this, they have let the pillars that are left in to other parties, to mine the coal and let the whole surface down. That has been done this year.

7930. Do you approve of that being done? No; but there is no doubt that it has been done.

7931. What municipality is that in? The Waratah Municipality.

7932. Do you know that this has been done there? Certainly; it is a rabbit warren, as it is, and now the whole thing will collapse from start to finish.

7933. *Mr. Curley.*] That question may arise with regard to present conditions; could not that be got over to some extent by Valuation Boards of Arbitration? It might be got over in that way. Those who have bought the coal have a perfect right to get their coal, and there ought to be a midway, say—that the Government, the Council, and the mine-owner should decide what each ought to pay for keeping life and limb safe. I do not think the mine-owner should be made culpable for the whole lot; he bought the mineral in all good faith, and I do not think he ought to suffer.

7934. Would you not make the mine-owner responsible where he purchased both the surface and mineral? Certainly; where he purchased the surface and mineral, but not where it is sold to different parties.

[Witness withdrew.]

Mr. Thomas Arthur Lloyd sworn and examined:—

7935. *Mr. Curley.*] What are you, Mr. Lloyd? I am connected with the Borough Council of Newcastle.

7936. What office do you hold under the Council? I hold several offices; but I am known as the Inspector of Nuisances.

7937. Is it your duty, as Inspector of Nuisances, to look pretty well round the Municipality? Yes.

7938. Will you look at the proposed Bill, section 30 [28], sub-section 3, on page 14 (*see Appendix A*). Do you notice that that rule provides for a surface plan showing all streets, roads, buildings, creeks, rivers, bays, swamps, navigable waters, and limits of any tidal waters within the boundary? Yes.

7939. Do you think that is a necessary provision in a Coal-mines Bill? I would think so.

7940. Do you know anything about the undermining of streets in or around your municipality? Yes; as regards the surface.

7941. Where do you refer to? In the vicinity of Melville-street, within the Municipality of Newcastle.

7942. What are the streets there that you know with regard to a subsidence of the surface? The whole of the surface has subsided, I should say, to an extent of perhaps 20 acres.

7943. *President.*] Twenty acres? I should imagine so; 20 acres on the western side of Melville-street, extending towards Hamilton.

7944. *Mr. Curley.*] Does the subsidence come over on to Melville-street at all? I believe it does, it comes to the boundary of Melville-street nearly its whole length, and where the tramway at present runs, it took some months to fill up. It was filled up to the surface level, and subsided again and again.

7945. Do you know that this was directly in consequence of undermining? I only know from hearsay; I have inquired from miners the cause of this.

7946. Have you had a conversation with the miners about this subsidence? Yes, with numbers of miners.

7947. What opinions did these miners express on the subject? They said it was owing to taking away the pillars from under the street.

7948. *President.*] What was the name of the mine? I think it is the Borehole Mine.

7949. *Mr. Curley.*] Do you know who filled the street up? The Council filled the street up in the first instance, and the contractors for the tramway-line, in the second, and third instances.

7950. Did this run the Council into much expense? I know a considerable sum was collected amongst the ratepayers, and that the Council added to this sum, and formed the street.

7951. Do you know whether the Company was appealed to, to contribute anything towards this matter? Not to my knowledge.

7952. Do you know if the Council made any appeal on the matter themselves? It is not within my recollection, but I have some idea that when Mr. Buchanan was Mayor, something of the sort was spoken of.

7953. Do you know with what result? I do not.

7954. Did you not hear Mr. Buchanan refer to the matter, and make any statement about the business? I have no recollection of his doing so. The only thing I remember was the putting down of an iron bore to ascertain the depth. I think he said he put a bore down some 100 feet, and failed to find the bottom.

7955. Do you think that the bore was put down to the depth the seam lays at? Perhaps not; I scarcely think it was.

7956. Do you say he found a vacuum where the roof was broken away? I judge it was something of that sort.

7957. Did Mr. Buchanan say to what extent that vacuum was? He said it extended a considerable distance.

7958. If the subsidence came to the surface, do you think there would be much of a vacuum—the strata over the coal? No; I scarcely think that, from what I have heard since from miners who say that a large bed of sand existed there.

7959. Would it be sand and rock and clay, together? I suppose so.

7960. If it came to the surface, would not that body go down? I think so.

7961.

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- Mr. T. A. Lloyd.
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- 7960½. If you put down a bore in that situation, would you discover much of a vacuum? You might in places where the coal was taken out.
7961. Have you any idea what it cost the Council to fill up this place? No, I have not; I would not like to say.
7962. How long was this ago? About six and a-half years ago, as near as I can remember.
7963. Have you noticed any undermining in any other places, anywhere about Newcastle? Only at the Borehole, and at the Sea Pit. I have been down the Borehole Pit, and the Sea Pit.
7964. Is that the only locality you can speak about? Yes.
7965. You cannot speak of any other localities round there? No.
7966. Will you look at rule 25, on page 29 of the Bill, (*see Appendix A*), and see what is said in that rule about working coal under any proclaimed or made road? Yes.
7967. Do you think that the Minister should have some say about the working of coal under a proclaimed road? Yes, I think so; and I have often thought—adjacent to a proclaimed road.
7968. Do you think a clause like that should be embodied in a Coal-mining Bill? Yes, I should think so, for the protection of the roads and the public.
7969. Do you consider that the public has any right to be menaced in any way with regard to public roads? I think that companies getting coal from under roads should be compelled to protect the surface in such a way as it would not subside.
7970. Do you think that municipalities are liable to be run into a good deal of expense if they have to look after the maintenance of roads where undermining is allowed to go on? Possibly; I should think heavy damages at times.
7971. Do you think they might be held responsible if any accident should take place? I think so.
7972. Do you form that opinion owing to your knowing that they have the control of the streets? Yes; because they have the whole management of the roads and streets.
7973. Do you know of any actions that have been brought against the Council in connection with the keeping up of streets about Newcastle? I know of one or two, and of others that have been settled privately rather than go to law.
7974. From what you know of these circumstances, what opinion have you formed with regard to this undermining? I am influenced by the opinion of Judge Backhouse in connection with a place where lights were not exhibited where the street was hoarded. This case cost the Council £200. At that time the Council gave evidence that they had advertised in the newspapers that the road was closed against traffic, and Judge Backhouse's opinion was that for an advertisement to that effect to be of any value, evidence would have to be given, that the injured party had a knowledge of that advertisement. Since that decision I have been most cautious to report any defects I may notice in the roads.
7975. How long is that ago? About three years ago.
- 7976-7. Was that subsequent to this undermining you have been speaking about? Yes.
7978. Did you make any report about that undermining? Only verbally, to the different Mayors, with reference to the nuisances caused since the land subsided.
7979. Was this a dedicated street at the time of this occurrence? Yes, to the best of my knowledge.
7980. Do you know if traffic had to be stopped on the street? Yes.
7981. Was the street made at the time? Yes, the street had been made; I remember that, because a concrete culvert gave way at the same time.
7982. Do you think that companies who sell and dedicate the surface, should have some respect for it? Yes, I think so; I think no one would purchase unless they thought so.
7983. Do you think that a great number of people who purchase the surface, knowing that the mineral is underneath it, expect that the surface will be respected? Yes.
7984. Do you know if the Council has ever taken any action in connection with undermining, either by itself or jointly with any other municipality? I am inclined to think they took joint action with the Wallsend Council.
7985. Was this matter much spoken about at the time in the Newcastle Council? I do not know that it was very much spoken about; it would be at an improvement committee meeting if it was.
7986. Were you present at those meetings? Very seldom.
7987. The meetings you would attend would be the Council meetings? Yes.
7988. How far along the street did you say that the street was affected? Nearly its whole length, from Parry-street to Kemp-street.
7989. What distance would that be? Roughly speaking, about $\frac{1}{4}$ of a mile.
7990. Can you estimate what the subsidence would be in depth—in feet? I would not like to undertake to say what depth it would be. In some places, judging by the fences and what is known as the back road to the racecourse, I suppose it would be some 6 feet there.
7991. I want you to refer to Melville-street principally;—can you give any estimate of the subsidence there in a general way? No, I cannot, because the fences and paddocks have all disappeared; some of them have disappeared altogether.
7992. Has the surface gone away bodily? It has subsided very considerably.
7993. Cannot you give an estimate of the average depth of the subsidence itself? I would not like to say what the depth was, because almost immediately after it subsided they had to fill it up again. I know one particular place, known as the 2nd culvert, went down to a depth of 10 feet, I suppose. That was after the tram contractors had filled it up once, and the second time it had subsided, then it was bottomed with ti-tree scrub.
7994. Would the Council get the material from the company to fill this up? It was filled up with sand.
7995. Had you plenty of sand close by? Yes; on the street.
7996. The Legislative Council have objected to the two clauses I have drawn your attention to, being embodied in this Bill. Can you understand why there should be any objection to them yourself? No; I do not see any objection to them; they seem, as far as my knowledge goes, to be very necessary. I suppose the sanction of the Minister could be obtained to work the coal under roads and streets.
7997. Don't you think that a surface plan showing streets, roads, and buildings, and the other things mentioned, would be very necessary information for a municipality? Yes, I think it would be very necessary.

7998. Are you aware that at the present time the Council cannot get hold of any plans, to inspect? I have heard so.
7999. Can you see any reason why these clauses should not remain in the Bill, as originally proposed? In my opinion they should remain in the Bill.
8000. Are you aware that there is a good deal of mining going on beneath the City of Newcastle? I have been so informed.
8001. Would you like to see the streets of Newcastle honeycombed by any process of mining? Certainly not.
- 8001½. Would you like to see the buildings of the city shattered? Certainly not; it would be an enormous expense to the Councils, if such was the case, and to private people as well.

[Witness withdrew.]

TUESDAY, 15 OCTOBER, 1895.

[The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.]

Present:—

FRANCIS EDWARD ROGERS, Esq., Q.C. (PRESIDENT).

JAMES CURLEY, Esq.

JESSE GREGSON, Esq.

Mr. John Owen sworn and examined:—

8002. *Mr. Curley.*] What are you, Mr. Owen? A miner.
8003. *President.*] Where are you employed? At Lithgow.
8004. How long have you been a coal-miner? About twenty-five years.
8005. Have you been coal-mining at Home as well as in this Colony? I have had between five and six years' experience at Home.
8006. Where were you employed in England? In various mines in South Wales.
8007. Have you been employed the rest of the time in this country? Yes.
8008. Where have you been employed in this Colony? Mostly in the Lithgow collieries.
8009. *Mr. Curley.*] Have you worked in many of the mines in Lithgow? I have worked in nearly all the mines there.
8010. What are the names of the mines you have worked at in Lithgow? At the Vale of Clwydd Colliery, the New Vale, or the Vale Colliery, as it is generally called, and the Oakey Park Colliery; also at the Iron works, adit, and at the Eskbank Colliery. I am working at the Eskbank Colliery at the present time.
8011. How many years have you been in the Lithgow district? I have been in the Lithgow district about eighteen years, with a slight intermission of a few months.
8012. Did you work long in the Vale of Clwydd Colliery? I worked for some years there.
8013. How long did you work there? About five years.
8014. Is it long since you worked there? Four years—perhaps a little over four years.
8015. Were you coal-mining there? Yes; I was a miner there.
8016. Have you filled any other position in the colliery? Yes; I have been deputy and underground manager.
8017. Have you a thorough knowledge of the Vale of Clwydd Colliery? Yes; a pretty fair knowledge of that colliery.
8018. What was the system of working when you were there? Pillar and stall.
8019. Do you know the width of the bords? As a rule they were 8 yards wide.
8020. Do you know the size of the pillars? They were about 8 yards, as near as I can remember.
8021. Had you a good roof in that mine? Yes, a very good roof.
8022. Was it a strong roof? Yes, a strong roof.
8023. Did you do any pillar-working when you were there? No.
8024. Is there any pillar-working going on there now? No, not to my knowledge.
8025. Do you know anything about the pillars round about the shaft? Yes, I do.
8026. What size are the pillars about the shaft? There are one or two substantial pillars; otherwise it has been mined very extensively in very close proximity to the shaft.
8027. Which shaft do you refer to? The winding shaft—the downcast shaft.
8028. Is that on one side of the pit? Yes.
8029. Which side of the shaft is that on? On the north-west side.
8030. Do you say that the coal has been mined very extensively close to that shaft? Yes, very extensively indeed.
8031. Would you consider that that side of the shaft is left without any protection whatever? Without the slightest support, with the exception of the pillar or two near the shaft.
8032. Do you know the size of those pillars? No, I cannot say the size.
8033. Do you know anything about the pillars around the air shaft? There are better pillars there, but the roof is not so good—it is a very bad roof.
8034. *President.*] Where you say these pillars near the shaft are insufficient, is the roof good? Yes.
8035. Do you think it is safe there? At the present time it is safe; but in the event of other pillars being worked out I would say it will not be very safe.
8036. Does the inspector see that mine? Yes; he is down there pretty often.
8037. What inspector visits that colliery? Inspector Rowan.
8038. *Mr. Curley.*] You have spoken about the roof being very bad near the air shaft? Yes.
8039. Does that prevail all round the workings in that district? Yes.
8040. What section of the mine would you call that? Nearly south-east.
8041. Is this rock or top-coal? Rotten rock; they have to drive very narrow in order to get through it; in fact, when I was there they had not gone through it.
8042. Do you know anything about an accident that occurred there recently? No.
8043. How long ago is it since you worked at the Oakey Park Colliery? About two years ago.
8044. Were the workings very close to the shaft bottom at that time? Yes, at Oakey Park.

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- Mr. J. Owen. 8045. Did you notice what pillars, or were there any pillars left at the shaft bottom at that time? Yes; good pillars.
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8047. What size are the pillars about that shaft? There are very large pillars there.
8048. What is your system of working at that colliery? Pillar and stall.
8049. What sized pillars do you leave? In the Eskbank Colliery it is different to the other collieries. The Eskbank Colliery is worked under the town of Lithgow, and they are obliged to leave very large pillars. The proprietor of the estate values the surface as much as the coal, therefore it is to his interest to leave very large pillars, and large pillars are left at that particular colliery.
8050. How many men are employed at the present time in the Eskbank Colliery? Twenty miners.
8051. Have you ever had more than that number of miners employed there? Yes; about fifty or sixty miners.
8052. Does the number of men at these mines fluctuate a good deal according to the trade? Yes.
8053. Will you look at section 2 of the proposed Bill, sub-section 3 (c) on page 2 (*see Appendix A*). You will notice that the word "ten" has been erased and the word "thirty" has been introduced by the Legislative Council, as the number of persons that may be employed below ground without being under the control of a manager. The Legislative Assembly has agreed to the word "twenty" being inserted, as the number of persons to be exempt from this section. Do you think that a mine, with a limited number of men, should not be under the control of a manager? I consider that any number of men should be under the control of a manager. In that case nearly all the mines in Lithgow would be exempt from the jurisdiction of the inspector. If this clause was passed, as it has been amended by the Legislative Council, all, or nearly all, the mines in Lithgow would not be required to have a manager.
8054. *President.*] Do you say that, no matter how many men may be employed in a mine, you would have a manager? Yes; I would have someone in charge, even for the ten men, because I consider their lives are quite as valuable as twenty tons. In my opinion, some person should be in charge of a mine irrespective of number, otherwise there would be no form.
8055. *Mr. Curley.*] You think that there should be some authority to enforce discipline, and that proper mining regulations should be adhered to? Yes; I am of that opinion.
8056. Do you think that there is a great deal of discipline up in the Lithgow district at the present time? I think there is as much discipline there as anywhere else.
8057. Have you looked at the provisions in the proposed Bill with regard to ventilation? Yes.
8058. Will you look at section 50 [47], rule 1, on page 23 of the Bill (*see Appendix A*). You will notice the lines that are erased in this rule—they represent the amendments suggested by the Legislative Council—and the clause without these amendments is as it originally went from the Legislative Assembly. You will also see the words "twenty-five" struck out, and the words "thirty-five" yards inserted. What do you think of that section;—do you believe in a stipulated minimum quantity of air for a mine? Yes; I think it is advisable to have a stipulated minimum quantity of air.
8059. Do you think that the men should always have a certain quantity of ventilation absolutely assured to them? Yes; there is no question about it.
8060. Do you think that 35 yards is too far in advance of the air? I think that 35 yards is too far in advance of the air at the present time.
8061. Have you worked in places that have been going to the rise in some of those mines? Yes.
8062. Does the air travel very fast up-hill? No; not without being forced.
8063. I notice, when you were examined before a Select Committee of the Legislative Assembly, on the 18th of April, 1894, you made reference to 50 cubic feet of air being quite sufficient for the Western collieries;—will you read what you are reported to have said when giving evidence before Mr. Fegan's Select Committee?
2658. And I suppose you are acquainted with the various systems of ventilation? Yes.
2659. What do you think is the best system, as a practical man—I suppose splitting? As I told you before, it is necessary to adopt various methods, according to various circumstances. It would not be practicable, for instance, to work a colliery like the Helensburg Colliery in the same way that you would work collieries like those at Lithgow.
2660. How is that? In the first place, the western collieries do not generate gas at all, whereas the Helensburg Colliery does; and, in order to ensure safety, you would have to work the Helensburg Colliery in a different way to that which would be necessary in the western collieries.
2661. You mean that more ventilation would be required? Yes.
2662. But not that it would be necessary to alter the system of work? In the western collieries, owing to the coal being damp and the depth shallow, 50 cubic feet of air per man would be quite sufficient at the present time. That seems remarkable, but it is nevertheless a fact.
2663. Do I understand you to say that where it is shallow and damp 50 cubic feet per man is sufficient? It would be safer in some cases to work with 50 feet of air than in other cases with 300 feet. We could do with 50 feet.
2664. I understand that you are referring to the danger of explosion;—you say that if you had only 50 cubic feet in Lithgow there would be no explosion, whilst if you had double that quantity at Helensburg or any other colliery generating gas there would be an explosion? Certainly. At Lithgow there would not be the same danger to life.
2665. At the same time, you would not say that 50 cubic feet would be sufficient to keep a mine in a good sanitary condition? Certainly not.
- What I wished to convey in my evidence before that Select Committee is not here. Although I rectified my evidence when the proof was sent to me, before it was printed, my revisions do not appear. What I wished to state was this, that one mine may be better off with 50 cubic feet of air than another mine under different conditions may be with 500 cubic feet of air. I never wished to advocate that 50 cubic feet of air was sufficient.
8064. Did you intend to convey that 50 cubic feet of air was a sufficient quantity of air for anybody? No, certainly not.
8065. Do you think some effort should be made to get the air into the working face, so that the men should have the advantage of it? Yes.
8066. How do you think the present Act has been read with regard to the minimum quantity of air;—how has it been interpreted? I think, as a rule—but I may be wrong—that 100 cubic feet of air is taken as the maximum.
8067. Do you think that is the way the Act has been read? Yes.
8068. Is that the way the Act has been read by the managers? Yes; by the managers and the inspectors, although I have always thought differently. I thought that the 100 cubic feet of air was the minimum quantity, with as much more as was necessary.
8069. In the Vale of Clwydd Colliery, did you ever notice the ventilation to be defective occasionally? Yes, very defective; I have seen it in such a state that you could not burn a candle. 8070.

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8070. What section of the colliery was that in? In the dip workings.
8071. Was that defect owing to black damp? It was due to a defective return.
8072. In what way were the returns defective? By being allowed to fall in; this stopped the ventilation, and then black damp, or carbonic acid gas accumulated.
8073. Had you many men in that section of the colliery when this occurred? Yes.
8074. How many men were in that section? As near as I can remember, about twenty men; it might be a few more or less.
8075. Would all these places be more or less affected by this black damp? Yes; we have had several times to go home, and could not go to work in consequence of this.
8076. In the conducting of mining operations do you think that more attention wants to be paid to these returns? Yes.
8077. How are the men paid up in the Lithgow district? By average weight.
8078. Do you know anything about the system of weighing that is carried out in that district? Yes.
8079. Do all the managers up in that district weigh their own coal? Do you mean without a check-weighman?
8080. Without a weighman of their own? The manager, as a rule, weighs all the coal.
8081. At the different collieries? At the different collieries.
8082. Does that apply to all the collieries? Yes; I think so.
8083. Do you think they would do that if a larger number of men were employed? No.
8084. Would they have a weighman in that case? At some of the collieries; but, as a rule, the manager has always been in the habit of weighing at all the collieries.
8085. Have the men been satisfied with the number of skips that have been weighed at the different collieries? No.
8086. Has this been a matter of long standing complaint? Yes; almost chronic. It has caused many troubles in the west. The weighing has caused more trouble than anything else.
8087. Have you frequently appealed to the managers upon this matter? Yes.
8088. Do matters still remain as they were? Sometimes they do not weigh for twelve months. I have known instances where no skips have been weighed for eighteen months.
8089. Where was that? At the Vale of Clwydd Colliery; but not under the present management.
8090. Were the men paid on the same average as they had been paid when they were last weighed? They were paid on the average of the last skips that were weighed. If a man gets weighed to-day, and does not get weighed again for six or seven months, he will be paid on that particular weight.
8091. Have the skips grown in size during these periods of weighing? I do not know.
8092. Have you seen them sent to be repaired occasionally? Yes.
8093. Did you notice if they had grown? Sometimes they sent them to be repaired.
8094. Is that a matter you cannot speak definitely upon? Yes.
8095. Do you look upon that as a most unsatisfactory piece of business? I look upon it as very unsatisfactory.
8096. Could you get no redress? We appealed to the Government through the Minister for Mines, the late Mr. Fletcher. Mr. Want was Attorney-General at the time, and we were advised by the Government that we could not compel the manager to weigh any certain number of skips; that so long as he had a weighbridge at the mine the Act was complied with. Anyhow, we could get no redress.
8097. Did you ever take a test case to the Court? No.
8098. Do you not think that under the Act you could demand that every skip should be weighed? I do not think so; that is, of course, judging by the opinion that we have received from our legal advisers. At times we have had counsel's opinion on the subject.
8099. Do you know that legal men differ in their opinions occasionally? I admit that.
8100. In the absence of your having tested the point, the question still remains in doubt? Yes; all that we have done is to consult a gentleman in Sydney.
8101. What was his opinion? Similar to the opinion we received from the Attorney-General,—that we could not force the manager to weigh any certain number of skips; in other words, that we could not claim to be paid according to the weight of the mineral gotten.
8102. Although you had an agreement with the manager to that effect? No.
8103. Had you not an agreement with the manager at the particular time? There was no agreement; when a man seeks employment he is put on, and it goes by custom.
8104. Had you no agreement at that particular time you refer to? No agreement.
8105. In the absence of an agreement, would there not be some understanding of some description? We were supposed to be paid according to the provisions of the Act.
8106. Have matters improved much since;—how do they stand at the present time? They stand about the same; at some of the collieries the weighing is satisfactory, but at others it is not. Some of the managers, if they happen to get down to a low weight, will not be in a hurry to weigh again, but if the weights happen to go up, it very soon follows that the manager weighs again.
8107. Do you know that to be a fact? It is an absolute fact. I do not say that there is a motive, but that it occurs.
8108. Can you judge what the motive is yourself? My opinion, perhaps, would not be evidence.
8109. Undoubtedly your opinion is evidence? I am not sure of motive, but I know it occurs. The coal does not always remain the same; sometimes a man is in good coal, and in that case he can fill good weight. In other places the coal will be tender, small, brittle, or rotten, and if he happens to be weighed in that coal he would not get good weight, and when he got into good coal again he would not be satisfied with the weight he got in the rotten coal, although the manager would keep him at that weight. I have known that to be done for months and months, although the men have appealed to the manager to be weighed.
8110. Is this a matter of occasional occurrence? It happens now and again.
8111. Is not that a reason in itself why men should be weighed oftener in your district? Certainly.
8112. Do you think the men are satisfied with the average weight? The men would be satisfied with a fair average weight.
8113. *President.*] What would you call a fair average weight? For the men to get a certain number of skips weighed, say five, or two and a half per cent., or a certain percentage of the output weighed. Say I fill 100 skips, and I get five weighed, I would be prepared to take one in twenty as an average, and I believe the men would be perfectly satisfied if we could insist on that being done.

8114.

- Mr. J. Owen. 15 Oct, 1895. S114. *Mr. Curley.*] Is there any general feeling in your district that every skip should be weighed? In consequence of this gross injustice, naturally the feeling is that way.
- S115. Have the men the idea that they are being plundered or robbed? They do not say much; they seem to tolerate it.
- S116. Do you think that it is owing to this practice prevailing that gives rise to wishing for every skip to be weighed? Yes, I do.
- S117. What do you think about the regulations in the proposed Bill for the working hours—the stipulation in the Bill providing for eight hours, section 36, on page 17, of the Bill (*see Appendix A*)? I believe in it; I believe it should be in the Bill.
- S118. Do you think it is a matter for legislation? Yes, I do.
- S119. Would you not rather leave it to the manager and the men to agree between themselves in a mutual way? No.
- S120. Is this the feeling of the men generally in your locality? Yes.
- S121. Have you had an opportunity of knowing their opinions? Yes.
- S122. Have you held any official position in connection with the miners' organisation? Yes; I have been District Secretary for a number of years.
- S123. And you know this to be the general feeling of the men? Yes.
- S124. Have there been many attempts to work longer hours in your district? No; not to work longer hours, with the exception of keeping the men down the pit—that is to say, eight hours in the face, irrespective of an hour for meals. It used to be eight hours altogether.
- S125. From bank to bank? No; from bank to face; but eight hours altogether. Now it is nine hours in some of the collieries, although they reckon it is only eight hours, because they have two breaks—one for breakfast and one for lunch.
- S126. Do they insist upon the men remaining nine hours in the mine? Yes.
- S127. Where is this? At the Lithgow collieries.
- S128. Will it take the men long to get to their working places there? About twenty minutes.
- S129. Do they ever work longer at the Zig-zag Colliery? Yes; they have worked on Sunday there on one occasion.
- S130. Was that only on one occasion? Yes; fortunately only on one occasion.
- S131. They did not repeat it? No.
- S132. Would you argue, from the step taken in that instance, that there should be some regulation with regard to the working hours? Yes.
- S133. Have you given any attention to the question of pillars in a mine;—do you think substantial pillars should be left in a mine? Yes, until you get to the boundary and work back. Unless you have substantial pillars it will not be safe when you are coming back; especially in the heading.
- S134. Have you noticed any very small pillars left in any of those mines at Lithgow? Yes, sometimes. Sometimes a large pillar may be split, and made into two pillars.
- S135. Are the bords driven by line there? As near as practicable.
- S136. Will you look at section 21, sub-section 5, on page 8 of the proposed Bill (*see Appendix A*);—you will notice that there is a provision there for the inspector to withdraw the men in case of danger? Yes.
- S137. Do you think the inspector should have power to withdraw the men in case of danger? Yes, I do.
- S138. You agree with that provision? Yes.
- S139. Would you leave it altogether in the hands of the manager, or do you think it better to be left in the hands of the inspector? I think the manager should also have the power, because the inspector is not always on the job.
- S140. Do you know that the manager has this power at all times? Yes.
- S141. In the event of a difference of opinion between the manager and the inspector, do you think the inspector should have power to withdraw the men? I think the inspector should have the power to withdraw the men.
- S142. If the inspector was on the spot, and there was an apparent danger, and a difference of opinion arose between him and the manager, do you think that the inspector's opinion should override the manager's opinion? Yes, I do.
- S143. There is a provision in the proposed Bill with regard to the appointment of a check-weigher, suggesting that he can be appointed from anywhere the men may choose; the Legislative Council are opposed to this and are of opinion that he should be appointed from the workmen of the colliery;—do you think that the men should have the right to appoint any man they like from anywhere? Yes; as they do in England. I consider, seeing the miners have to pay the check-weigher, that they should have the same privilege of employing him as anybody else.
- S144. Do you ballot for the check-weighman up in your district? Yes.
- S145. Do you ballot for him every quarter? Yes; every quarter.
- S146. If he is balloted out cannot the manager ignore him if he thinks fit, and not take him back to the mine? Yes.
- S147. Have you ever known that to be done? The manager, as a rule, always re-employs him.
- S148. Have they always taken the check-weigher back in your locality? Yes, I think so.
- S149. I notice a part of your evidence given before the Select Committee, of which Mr. Fegan was chairman, refers to the visits of the inspector;—you say that there is a system of telephoning from one mine to the other when the inspector is in the district? Yes.
- S150. Are you sure that they know at the different collieries when the inspector is about to visit them by that means? Yes; we are peculiarly situated in that district. The Southern District inspector, Mr. Rowan, comes up every six or eight weeks to the Western District, and it is known by all the managers that he is there on his official visit, and through all the mines being connected by telephone, it is an easy matter for them to let one another know the inspector's movements.

[Witness withdrew.]

Daniel M'Auliffe sworn and examined:—

8151. *President.*] What are you, Mr. M'Auliffe? I am a colliery manager.
8152. What colliery are you the manager of at present? The Stockton Colliery.
8153. How long have you been there as colliery manager? For nearly five years—say, about four-and-a-half years.
8154. What were you before you were manager? Overman.
8155. For how long were you overman? For nearly five years.
8156. What were you before that? I was deputy for about three months.
8157. Have you ever worked yourself in a mine? Yes; I have been in a mine since I was about 9½ years old.
8158. How long ago was that? I have had about thirty-four years experience in mining.
8159. *Mr. Curley.*] Is the Stockton mine the only mine you have managed? Yes; the only mine I have been manager of.
8160. When you were deputy there, what was the system of working in the Stockton colliery? Bord and stall.
8161. What was the width of your bords? Eight yards.
8162. What was the size of the pillars? Six yards.
8163. Were the pillars kept at this uniform size? They were occasionally cut out, through the men going too wide. It is a difficult task to keep men from cleaving the pillars—widening out.
8164. In your position as deputy, when you observed any encroachment on the pillar in that way, would you endeavour to draw them into the required width? Certainly.
8165. Would you put a chalk mark on the face? Yes, and order them to leave it on.
8166. Did the men thoroughly understand what that chalk mark meant? Certainly.
8167. Did you travel the returns very much? I did.
8168. Did you ever pass through any of the old workings? I did.
8169. Did you notice how the pillars had been left, previous to your being manager there? I did.
8170. What was the thickness of these pillars? In some cases they were 4 yards, and in some cases under 4 yards.
8171. What district would these pillars be in? What we call the top drive district, and part of the C heading.
8172. Where were these workings situated;—were they leading under the harbour or under the land? They were leading out towards the ocean.
8173. Would these workings be under the ocean at all? No.
8174. Not at that particular time? No; not at that particular time.
8175. Have you gone under the ocean in that direction since? No; we did put a drive about 40 yards under the ocean, but we struck troubled ground, and we stopped.
8176. Have you met with a good deal of cinder coal in that colliery? We have.
8177. Have you had considerable difficulty with that cinder coal? Yes.
8178. Do you work under the harbour at all, in any of the other workings? We have not touched the harbour at all.
8179. Have you any coal under the harbour? No.
8180. *President.*] Have you no coal under the harbour at Stockton? No, sir.
8181. *Mr. Curley.*] How far does your leasehold extend toward the harbour on the south side of your colliery? Our leasehold extends to the waters of the Hunter; the owners of the estate claim their lease is from the waters of the Pacific to the waters of the Hunter. The owners of the estate claim that we have the right of all the mineral in this area.
8182. You consider you have the right to mine to the full extent of where they state their lease extends? We consider we have that right.
8183. On the south side of your mine, going towards the harbour, have you mined to the full extent of your lease? In some places we have, and in other places we have not.
8184. Going up towards Maitland-street, the street that you reside in, have you mined up in that direction? Yes.
8185. How far have you gone in that direction? To the boundary in that district.
8186. Does the boundary there extend to the waters of the Hunter as well? The boundary, according to the State lease, is from the waters of the Hunter to the waters of the Pacific; our boundary is supposed to run to high-water mark. We were mining in one place to that boundary when Mr. Mackenzie, the Examiner of Coal-fields, claimed the right of 100 feet reservation, and ordered us to stop working, and we stopped working there.
8187. *President.*] Was that on the Hunter side or on the Pacific side? On the Hunter side.
8188. *Mr. Curley.*] Had you mined under part of that 100 feet reservation? Yes. We considered we had a right to do so; but when the Government officials stopped us from doing so we stopped.
8189. How far does your lease extend up from Maitland-street, going north-west? It extends a considerable distance beyond Maitland-street—beyond the main road. Maitland-street branches into the main road that leads to the Cabbage-tree.
8190. Does the same reservation apply to the foreshore there as applies to Maitland-street? We were working all round the river side from our shafts. This is where Mr. Mackenzie, the Examiner of Coal-fields, interfered with us, and claimed that we had no right to mine under the reservation. We inquired about it. The owners of the estate claimed the coal, and the Government held us responsible for the coal that was in there, and as we could not see our way clear to fight the Government, we went on no further.
8191. Have the owners of the estate taken any action in the matter since? I cannot say that. I believe the owners of the estate say they will hold us responsible for the amount of coal that is in that part—that is, for the royalty for the coal that is there.
8192. *President.*] It is to your interest to get out as much coal as possible? I expect so.
8193. *Mr. Curley.*] Taking a line from your shoots, right round Maitland-street, and away northwards up the Hunter, does your property extend far up that way? It extends about as far as the Public School.
8194. Taking a line by your shoots, there is the whole reservation right round? Yes; there is a 10-acre block that intervenes—the disputed piece.

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8195. Is that between the Stockton Company and the Hetton Company? Yes.
8196. Is that matter settled yet? The ground is lying idle yet; there is no one touching it.
8197. What are the depths of your shafts? The old one is 360 feet deep.
8198. What is the depth of your upcast shaft? It is about the same depth.
8199. What distance are your shafts apart? From about 25 yards to 30 yards; I forget the exact measurement.
8200. How are these shafts secured;—have you tubbing in them? Yes; the soft ground is tubbed down to the hard rock.
8201. With iron casing? Yes.
8202. What is the extent of your tubbing? In the old shaft I think there is 92 feet of tubbing.
8203. Do you know anything with regard to the upcast shaft? I think there is about 112 feet of tubbing in the No. 2 shaft.
8204. Have you regular periods for the inspection of these shafts? Yes.
8205. How often do you inspect them? Every week, at least.
8206. Have you noticed any cracks or flaws, or anything in connection with this tubbing during your periods of inspection? No.
8207. Do they seem to be as sound as ever? Yes.
8208. Have you done much pillar extracting in your mine? There is no extraction of pillars there, only when the men take too much off.
8209. Have you never extracted any pillars at all? No, never.
8210. Do you propose to take any pillars out? Only in this way; if we wish to make a horse road, of course we take out part of the pillars, to make the flat in that particular part.
8211. *Mr. Gregson.*] Have you any intention of working your pillars? No.
8212. *Mr. Curley.*] Did I understand you to say that you had not gone under the Pacific Ocean? No.
8213. Does your lease go under the ocean? We have an ocean leasehold.
8214. Have you worked any part of that leasehold? The new workings are going under the ocean.
8215. *President.*] How far does your lease extend under the ocean? About a mile.
8216. Right out into the ocean? Yes.
8217. Will you work right out there? I hope we will work for a good few miles out there; that is if the coal continues good.
8218. Is the coal continuing good under the ocean? Yes.
8219. *Mr. Curley.*] What point does your ocean leasehold start from? From the boundary of the Scotch Company's taking.
8220. Does it extend far from the Northern Breakwater? Yes, straight across. We have a quarter of a mile running along the ocean outside of that again; we have 2,000 acres under the ocean.
8221. Is that into the bight? Yes, straight across to the bight. We join on to the Hetton Company's taking. The Hetton Company's taking swings round the bight, and we strike straight across the bight.
8222. The Hetton Company's taking extends round the northern breakwater into the bight? Yes.
8223. And you start from that point? Yes.
8224. Is the mine dipping or rising in that direction? Dipping.
8225. *President.*] Have you to pay much to the Government for these leases under the ocean; do you give them so much per acre? No, a royalty of so much per ton; we pay a royalty of so much per ton for our ocean takings. We pay a royalty also to the Quigley Estate, but we bought the mineral right from the Scotch Company.
8226. *Mr. Curley.*] Have you made any soundings to ascertain how the strata is running out into the ocean? We bore every 20 yards upwards.
8227. *President.*] Do you bore under the ocean? We put a bore hole upwards every 20 yards; we bore to see what strata we have above our heads. We bore 30 feet from the top of the coal, to find out what sort of strata we have above our head.
8228. *Mr. Curley.*] I think you have misapprehended my question. Have you taken any surface soundings to see whether there was a dip or otherwise. I mean right into the water itself? The Government has soundings showing the depths of water all across that bight.
8229. Does the strata dip in the ocean the same as it does in your mine; how does it carry? There is no bore, and I do not think there could be a bore put down in the ocean amongst the breakers.
8230. I am talking about soundings? We have a map of the Government soundings, showing the soundings in the different parts of this bight.
8231. Can you tell me whether the strata dips at the surface—the ocean bottom? It dips a little; I think the greatest depth is 17 or 18 feet across the bight.
8232. Is that the dip? I think 17 or 18 feet is the deepest soundings shown there—the deepest part of the ocean bottom across that bight.
8233. *Mr. Gregson.*] Is that 17 or 18 feet or 17 or 18 fathoms? Feet; across the bight.
8234. Are you sure that it is feet and not fathoms? I am sure it is feet—17 or 18 feet.
8235. *Mr. Curley.*] Is that the full extent of your lease—the furthest point into the ocean? I cannot be exactly positive about the furthest point; we have two leases, and the place is dotted with soundings all over.
8236. Are you carrying out the six-yard bords there? Eight-yard pillars and six-yard bords.
8237. Do you find the rock very good in that direction? It is.
8238. Do you make much water in the leading places? Not a great deal of water; it is dipping heavily, and it gives a little trouble getting the water out.
8239. Have you just completed a new shaft there? Yes; we have broken the workings into it, but have not exactly finished it yet.
8240. Are you putting a drive in? Yes, from the old workings to the new pit drive.
8241. Had you much rock at the bottom of that new shaft? A fair quantity.
8242. How much rock did you have? About 48 feet.
8243. Was that at the bottom of the shaft? Yes.
8244. What class of rock was it? The ordinary sandstone and shale.
8245. Was it soft or did it appear pretty substantial? It is a good fair rock, some parts of the cap of it were softish.
8246. Had you a break-down of roof some time ago in that colliery? Yes.
8247. Did you get any quantity of water in at that time? Yes.

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8248. In what part of the mine was this? In what we call Gardiner's heading district.
8249. Was that break-down in a bord or in a heading? In a bord.
8250. Was it in a six-yard bord, or in an eight-yard bord? In a six-yard bord; there are no eight-yard bords in this district.
8251. Was the break in the bord very extensive? No, not very extensive.
8252. *President.*] Can you tell us what the thickness of the cover is under the ocean? Yes; we know the level of our workings at the working face and the water level on the top, and of course then we know what thickness there is at any given point; we know how the level stands with respect to the level of our shafts.
8253. *Mr. Gregson.*] How deep are you below high water-mark? 321 feet.
8254. *President.*] If it is only 18 feet, you must have 300 feet of solid cover? Yes.
8255. *Mr. Curley.*] Is that anything like the breakdown that was in Gardiner's heading [*Witness shown woodcut in Appendix to final report from Mr. Fegan's Select Committee, page 43*]? Yes.
8256. What came down when this rock came away;—did you get any clay? Yes.
8257. Was there much force of water? There was a middling force of water for a while.
8258. What was the stream of water like? Roughly speaking, 10,000 gallons an hour. There was a fall in the roof, and the water came in at about 10,000 gallons an hour.
8259. *President.*] How did you get rid of that water? We pumped it out.
8260. *Mr. Curley.*] Did you erect dams to block the water back? Not to block the water back. I erected dams and put pipes in, to allow the water to run off.
8261. Were the dams very substantial? I think so; most mining experts considered they were.
8262. What were the dimensions of those dams? There were about 40 yards of sand and sand bags, piled as close as they could be packed to the roof with stays to each tier, to keep them in their place, and on the outside of that was a brick and cement dam, one 9 feet and the other 11 feet; we had three dams on the outside of the sand and sand-bags.
8263. *President.*] Where was this fall? In a bord, a worked-out place, and part of the roof came down and the water came away. The pipes are still in, and the water is still running, but fully one third pined off.
8264. Is there any danger working there now after this has happened? I do not think there is any danger. These things always happen in mines, and they are the same as they were before when the difficulty is remedied.
8265. *Mr. Curley.*] What time of the day did this occur—do you recollect the date? 17th February, 1893; it occurred between half-past 9 and 10 o'clock.
8266. Did you call the men out? I went down the pit and saw where the water had given off, and I saw the overman and some of the workmen trying to put a dam across it with bars and props. I called the overman back, and told him that the only way I thought the matter could be dealt with was to stop the pit, and get all the sand and bags we could to dam her back. That could not be done keeping the pit working, so I knocked all hands off, and put all hands on to send the sand down the pit in bags from the top.
8267. Did all the men come out of the mine? A certain portion of them.
8268. When this occurrence took place, and you saw what it was like, you say you gave orders for the men to knock off? Yes, for the material to be brought in to deal with the difficulty. It was impossible to work the pit and attend to that also.
8269. Did you knock the pit off because you apprehended any danger, or simply to deal with the matter of the dam? Simply to deal with the matter of the dam, and to effect the necessary repairs.
8270. Did you think that your pumping machinery was able to cope with that water at the time? Certainly it was.
8271. *President.*] Do you have to keep the pumps always going now? We keep the pumps going at a certain speed, but of course our pumping power is far greater than the amount of water we are pumping at present.
8272. Will the water always come in there? We have pipes in to allow it to come, but the water is reduced considerably.
8273. *Mr. Curley.*] What was your pumping power at that time? We could pump from 40,000 to 50,000 gallons per hour.
8274. How many gallons per hour was the water making? About 10,000 gallons per hour.
8275. Did you report the matter to the inspectors? I did.
8276. You thought it was a matter of sufficient importance to be reported? Certainly.
8277. *President.*] What would you call the mishap that took place there? An ordinary fall of roof.
8278. Is that a thing that often takes place in a mine? It is quite usual.
8279. *Mr. Curley.*] Would you not call an inrush of water like that an unusual occurrence? It is not an unusual occurrence. Perhaps double or treble that quantity of water is not a great lot.
8280. *Mr. Gregson.*] Do you think it was nothing out of the way? Nothing out of the way.
8281. *Mr. Curley.*] Have you seen that kind of thing occur in other mines? Certainly.
8282. From the roof? Yes; when a fall has taken place, and a feeder has come in.
8283. Have you seen anything similar to that fall that took place at your colliery? Yes.
8284. Where have you seen anything similar to that? A far larger feeder took place in the A.A. Company's workings. A far greater quantity of water was given off for a considerable time.
8285. Does the same quantity of water still run in that feeder? It has pined off fully one third.
8286. Do you think this water is coming from the ocean? I do not think so.
8287. Where do you think the water is coming from? It may be travelling along the strata, a considerable distance.
8288. *President.*] Is it salt water? Mineral water.
8289. Is it the regular salt water like what you will get in the ocean? It is not so salt as the ocean water.
8290. *Mr. Curley.*] Did the inspectors come to the colliery? They did.
8291. Did they make a report on the matter? They did.
8292. Have you seen their report? I have.
8293. Was the report to the effect that the men were not to enter the mine until they considered it safe for them to re-enter? Partly that. Mr. Mackenzie, the Examiner of Coal-fields visited the mine, and the inspectors visited the mine daily until I had what I considered the repairs, &c., finished. 8294.

D. M'Auliffe, Esq. 15 Oct., 1895. 8294. *President.*] Did you have the men out or call the attention of the inspectors to the difficulty before you set to work to make the repairs—how did the inspectors know anything about it? I reported the matter to the inspectors. When anything unusual happens in the mine we make it a rule to report the thing to the inspector at once. We think it better to go direct to them rather than that it should come from any outside source which might be misleading.

8295. *Mr. Curley.*] How long was the mine stopped? About a fortnight.

8296. What was the nature of this report? When I had effected the repairs, the inspectors—Mr. Mackenzie, Examiner of Coal-fields, and the inspectors of the district—visited the mine, and I used these words, "Can we make a start now?" Mr. Mackenzie said I could do as I liked, but that he would not sign that the mine was safe.

8297. Whose names were appended to that report? Mr. John Dixon and Mr. Humble's names.

8298. What was the nature of the report? I forget the exact wording of it. [*See Report, Appendix I.*]

8299. Was there any statement in that report saying, that the men were not to enter the mine until the inspectors considered it safe? As far as I remember, the report stated that there were certain portions of the mine that they considered unsafe, and they would not sign the book saying that it was safe. When we went round the mine on this particular day, I considered that we had the dams and the timbering all round nearly finished, and I said to Mr. Mackenzie, "All these men are wanting to get to work; we will get to work to-morrow;" he said, "You can do as you like, but I won't sign;" I said, "Why?" He said, "I do not consider it is safe to work." I said, "Well, Mr. Mackenzie, previous to this you considered the mine safe; there is a certain thing that has happened that has been remedied, and if you will say that it is not remedied to your liking, then I will do all I can to make it so." He told me, he would not answer me upon such a question. He asked me would I say that there would not be another inrush of water, and I said "No." I said, "Will you say, where there is one likely to take place, supposing another inrush takes place, I claim that the same means can be used, as has been used this time," and I asked him if there was a volume of water fifty times as strong, did he consider there would be any danger to life and limb. He said he would not answer the question; he said, "That is the law."

8300. *President.*] What did he say was the law? He meant with reference to dealing with the question of agreeing to let us go on. He said, "You can start if you like," but he said he would not give his permission.

8301. *Mr. Curley.*] Did you not draw his attention to the 25th section of the present Coal Mines Act (*see Appendix B*)? I did not, I did not feel much in the humour for paying attention to clauses of Acts.

8302. Don't you think you could have done so;—you see what the section says? That was not the section we were charged under. If they had charged us under that section we could have gone to arbitration; but they sued us upon a clause that we could not go to arbitration on. They sued us under clause 12, section 5.

(5.) If at any time it is found by the person in charge of a mine, or any part thereof, or by the examiner or inspector that by reason of noxious gases prevailing in such mine, or such part thereof, or of any cause whatever the mine or the said part is dangerous, every workman shall be withdrawn therefrom, and the examiner or inspector shall inspect the same (and if the danger arises from inflammable gas shall make such inspection with a locked safety-lamp), and in every case shall make a true report of the condition of such mine or part thereof, and no workman shall, except in so far as is necessary for inquiry into the cause of danger, or for the removal thereof, or for exploration, be readmitted into the mine or such part thereof as was so found dangerous until the same is stated by the examiner or inspector to be safe. Every such report shall be recorded in a book which shall be kept at the mine for the purpose, and shall be signed by the person reporting.

8303. Do you see that you could have called Mr. Mackenzie's attention to the 25th section of the Act (*see Appendix B*), and that the matter could have been referred to arbitration? Mr. Mackenzie drew my attention to this sub-section 5, of clause 12, on page 4, of the present Act. That was the clause they took action upon. On the other clause we might have gone to arbitration, but under the clause we were sued on we had no redress.

8304. At this particular time, before the matter got that far, could you not have drawn Mr. Mackenzie's attention to the 25th section of the Act and say, that the matter should be referred to arbitration? I think our lawyer in the case pointed this out, but they sued us under sub-section 5 of clause 12.

8305. I am speaking about the time when you wished to resume work? We could not do that, and the next thing we had to do was to break the law. When the inspectors would not sign, our miners came to me and I told them what the inspectors had said. I told them to go back and pick six of their best men, and that I would hold an inspection with those six best men, and the officers of the mine with myself. They appointed the six men, and we went through the whole of the mine, and examined the seat of the trouble, and the remainder of the mine as well. I also gave them all the records we had in reference to bores, and the Government Blue Book, and told them they would find all the information we had in that book, besides, what we would supply them with ourselves, and asked them to go and well consider the matter, and if they thought that after their examination the mine was safe to work in, I would start the pit and break the law. The result was, that we started the pit, and we were sued under the section of the Act I have named. We were fined £20, and £4 for four days penalty at £1 per day. The matter then dropped, and they did not sue us after that.

8306. I want to draw your attention to this 25th section of the present Act again (*see Appendix B*). Could you not have drawn the inspector's attention to this section of the Act. It stipulates that if there was any objection to remedy, or anything of the kind, that you had the option to send a notice of the same in writing to the Minister, and that the matter could be determined by arbitration. In this case you could have said what you have referred to here, viz., "that I have endeavoured to remedy the business to the best of my ability, and if you are not satisfied let the matter go to arbitration;"—could you not have done that? No; they simply sued us for breaking sub-section 5 of the Act without their permission.

8307. Was there anything to prevent you from drawing their attention to this section? I asked for an opinion on that matter, and the answer I received was that I had simply broken the law, and that Mr. Mackenzie was suing me, and I had no redress.

8308. *Mr. Gregson.*] Did the inspector take action under the 25th section of the Act? No; under sub-section 5 of the Act.

8309. Are you sure it was under sub-section 5 of the Act? Yes.

8310. Are you sure that you had no notice under the 25th section of the Act? I am sure I had not.

8311. *President.*] Did you get any notice at all, or did you only get a summons to appear at the Police Court? Yes; but I would not be too positive. I think that all I got was the summons for breaking the law; but I know it was under sub-section 5 of the Act. 8312.

8312. *Mr. Curley.*] Did you not get any information from the inspector or Examiner of Coal-fields about this report in the book? I saw what they had written in the book. D. M'Auliffe,
Esq.
8313. Did you take that as an intimation? Yes; that I would have to take the risk on my own shoulders. 15 Oct., 1895.
8314. *Mr. Gregson.*] What notice did you get? I only remember the summons.
8315. *Mr. Curley.*] Apart from that recorded report in the book, did the Examiner of Coal-fields or the inspectors give you any official intimation calling attention to that report? I think I did receive an official intimation from Mr. Mackenzie.
8316. And you did not draw their attention to section 25 of the Act? No.
8317. I suppose you have read the Act pretty often? I read it occasionally.
8318. *President.*] Had you a lawyer? Yes. I pointed out that if I had been sued under the 25th section of the Act, we would have had a chance of redress.
8319. Who was your lawyer? Mr. Windeyer.
8320. *Mr. Curley.*] Can you send the Commission that official notification that you have spoken about? I will see if I can find it.
8321. Will you send us both the report and the official notification? Yes. [*See Appendix I.*]
8322. Have you noticed any more places in your mine that have broken down in a similar way to this? We have had falls in different parts of the pit, but they have not given water off.
8323. Had you worked the coal near the roof at that time? There are two top bands.
8324. Was there not a small portion of coal near the roof? There is a 2-foot band left on the roof.
8325. Have you had any water given off in any other places since this fall? No.
8326. Are these dams regularly inspected? Yes.
8327. Do you see any signs of them giving way? No.
8328. Do you intend to use this shaft that has recently been sunk as an outlet for the men? I intend to let them go down in the usual way.
8329. What is the object of that shaft being put down? We intended to haul coal from our ocean leases.
8330. Was it not suggested some time ago that that third shaft was to go down as an outlet for the men in consequence of the main road caving in some time ago? I know nothing about that.
8331. Do you inspect the colliery every morning before the men resume work? Yes.
8332. Who carries out these duties? The brattice men usually go round in the morning; the deputies, men appointed for that purpose.
8333. Do you, as a practical man, consider that any danger whatever is to be apprehended in that mine? I can see no danger whatever.
8334. Do you say that there is no danger in the working of the Stockton Colliery? I do not say there is no danger. There is a certain amount of danger in all mines.
8335. Do you consider there is any special danger in the working of the Stockton Colliery? No.
8336. You know the situation of the colliery? I do.
8337. Do you think, knowing the situation of the colliery, that very great care will have to be exercised in the Stockton Colliery? I think that special care needs to be taken in any mine, or at any work.
8338. *President.*] Do you think there will have to be any extra care taken in the Stockton Colliery, as compared with work in other mines? We do that for our own security. We put in more timber than is used in any other mines in the district.
8339. Why do you do that? To do everything in a line with caution.
8340. *Mr. Curley.*] Do you renew the timber in the old places? Yes, thicken them up.
8341. *President.*] Is this done all through the mine? Yes, wherever our workings are.
8342. Whether they are under the land or under the water? Yes.
8343. *Mr. Curley.*] How do you interpret the present Act with regard to the quantity of air to be supplied to the miners;—will you look at section 12, sub-clauses 2 and 3 of the Act (*see Appendix B*); as a matter of practice, what do you construe those sections to mean;—suppose I am an inspector, and a man is working in a bord, and is suffering from want of ventilation? I would prove what amount of air that man had by testing what amount of air was travelling.
8344. *President.*] What amount of air must you have? According to the Act we must have 100 cubic feet of air.
8345. Is that enough air? That is enough under the Act, but there may be conditions where it would not be enough.
8346. Do you say that if you have 100 cubic feet of air, no matter what the state of the air may be, that you are protected by the Act? Yes.
8347. What meaning do you give to the words, "not less as a minimum than";—do you think they might as well be out of the Act altogether? I think so. I think making a hard and fast law is a mistake.
8348. I am not asking you that;—what do the words mean, "not less as a minimum than 100 cubic feet of pure air per minute for each man, boy, and horse shall sweep undiminished along the airway past each working place";—does not that mean 100 cubic feet of air, and as much more as is wanted? I do not think so.
8349. *Mr. Curley.*] Have you seen the Check-weighers Act that has been passed in England? No.
8350. This is the Act (*Witness reads, see Appendix B*). Do you agree with that Act? No.
8351. Why do you not agree with it? Because I think our law at present is preferable to that. I think the men employed at a colliery are better and more suitable to have as weighmen perhaps than men outside.
8352. Does this Act refer to men outside? I think so.
8353. *President.*] Do you know that under the English Act the men have the right to select their check-weighman from whom they please? Yes, the English Act gives them power to appoint any person.
8354. The suggestion is, that the person selected should be an employee of the mine—do you agree with that? I do.
8355. Why? The principal reason I have, is that an employee of the mine is more likely to work without causing friction than the employment of a man outside. I think he will pull on better than the man outside. There is no disguising this fact, that the men may appoint a man who is a noted mischiefmaker, and who will cause no end of trouble. A man on the weighbridge can cause a lot of trouble, and still keep clear of the Act, so that you cannot remove him.
8356. Why do they allow this privilege in England? I do not know.

- D. M'Auliffe, Esq.
15 Oct., 1895.
8357. *Mr. Curley.*] Do you not think that the English Act points out that the mischievous persons have been the managers? It might not intimate that.
8358. Does it not intimate to you that there has been some kind of intimidation used, or such an Act could not have been passed? I do not agree with you in that.
8359. Do you not see that the object of the Act is to prevent a manager from dismissing men for holding a meeting for the appointing of a check-weigher? I do not know that any manager attempts to dismiss a man for appointing a check-weighman.
8360. Do you think they would have passed that Act in England if there had not been some reason for doing so? That is doubtful; there is a cry now for a new mining Bill, but the general body of the men, to my mind, have not that cry.
8361. I suppose the managers do not want a new mining Bill? The managers have no fear of a just Bill.
8362. Are you here to speak on behalf of the men? I am here to speak on behalf of the Bill,—on the points that are not workable for either manager or men, and that will be mischievous.
8363. Do you think that everything that is unreasonable is always on the side of the men? No, I do not say so.
8364. *President.*] Do you think that the check-weigher should be an employee of the mine? I do.
8365. *Mr. Curley.*] In the event of the men at your colliery wishing to hold a meeting for the appointment of a check-weigher, would you in any way interfere with them as a manager? The only answer I can give to that is that when my men did come to me and speak in reference to a weighman, I told them I would only be too pleased for them to select a check-weighman, and that the Act gave them that power.
8366. Suppose your men hold a meeting to-morrow, or any day hence from this, to appoint a check-weighman, would you offer any objection? If they had no check-weigher, and considered an alteration necessary, the check-weigher's term being up, certainly I would not.
8367. Suppose they wanted to hold a meeting to-morrow for the purpose of appointing a check-weigher, would you, as a manager, interfere with them? Certainly not, if the body of the men wanted a meeting. I have done that before, and helped them to appoint a check-weighman; I have given them our boxes for balloting for him.
8368. *President.*] I would like to go back to this question of ventilation;—do you not see that by the Act an adequate amount of ventilation has always to be supplied, and that an adequate amount of ventilation shall mean not less, as a minimum, than 100 cubic feet of pure air for each man, boy, and horse,—that you must have that at all times, and as much more as necessary? Still, if you had the 100 cubic feet of air, you would be acting under the conditions of the law.
8369. If that was not an adequate amount you would not? That is why 100 cubic feet is put there.
8370. Your reading of the Act would give the go-by to the minimum altogether if that was so. It is always to be 100 cubic feet of air, but it is always to be adequate, whatever it is. There may be cases where 500 cubic feet of air is required;—then, do you mean to say that you have satisfied the Act if you have only 100 cubic feet of air? I think so.
8371. What does a minimum mean but that the lowest possible quantity is 100 cubic feet; but you are to have an adequate amount, not less, as a minimum, than 100 cubic feet of pure air. The Act does not say that an adequate amount of air is to be 100 cubic feet, but that you are to have 100 cubic feet of air on all occasions? I have not read the Act in that way.
8372. *Mr. Curley.*] Will you send the Commission the report of the inspectors in connection with that fall of roof at your colliery, and the notice you received from Mr. Mackenzie—the first notice that was put into the book? Yes. [*See Appendix I.*]

[Witness withdrew.]

John Barnes Nicholson, M.L.A., sworn and examined:—

- J. B. Nicholson, Esq., M.L.A.
15 Oct., 1895.
8373. *President.*] What has been your business, Mr. Nicholson? I have been a coal-miner for the most of my lifetime.
8374. *Mr. Curley.*] Are you one of the Members of the Legislative Assembly at the present time? Yes, I am a Member of the Legislative Assembly at the present time.
8375. *President.*] Where have you been coal-mining in this Colony? Principally at Bulli.
8376. *Mr. Curley.*] Did you work long at Bulli? For four years.
8377. How long is that ago? I started there in the beginning of 1883.
8378. Were you working at Bulli close up to the time of the calamity that took place there? I was working there up to the time the men came out on strike.
8379. Did you start again when the colliery resumed work after the strike? No.
8380. Did this calamity take place there soon after the resumption of work? Yes; very shortly afterwards.
8381. How was the ventilation in the Bulli Colliery during the time you worked there? It was very bad.
- 8382-3. In what section of the mine was the ventilation defective? I worked in almost every section of the colliery. We cavilled every three months, and I had a turn in every section of the mine more than once.
8384. In what sections of the mine did you find the greatest defects in the ventilation? In what we call Slacky and Mackay's Grip.
8385. Were the districts known as the Slacky district and the Grip district? Yes.
8386. Were there many men in these districts? A good many.
8387. What number of men were there in these districts? From fifty to sixty men, as near as my memory serves me.
8388. Were there that number of men in each district? Yes, in each district.
8389. What was the nature of the defects in the ventilation? No efficient means were made to carry the air up to the working place.
8390. Were the cut-throughs a great distance apart in some places? Yes; in some places there were no cut-throughs at all.

8391.

J. B.
Nicholson,
Esq., M.L.A.
15 Oct., 1895.

8391. What distance would you be ahead of the air? In some places over 70 yards, without a cut-through being put through at all.
8392. *President.*] Was there any brattice used to take the air into the working place? Nothing at all.
8393. Was there plenty of air sweeping along the airway? As a rule there was. There was a split at the top of Hill End, at the top of the first incline.
8394. How far would the air extend into the bord? It might go 10 or 15 yards up the bords, according to the volume of air travelling.
8395. If there was bad ventilation, was it because you were working so far without a cut-through? Yes.
8396. *Mr. Curley.*] Did you refuse to work in that place, where you were working 70 yards before the air? Yes; I gave it up—took my tools out.
8397. Is the air likely to get there without a cut-through? No; it is not.
8398. Is it likely to get there without brattice? No; it is not.
8399. Had you complained about this to the manager? I complained every morning to the deputy or the manager.
8400. Who was the deputy? In that particular place the deputy was Mr. Fred. Robins.
8401. Would your case represent other cases that you knew of? That was, perhaps, an extreme case; but to show you how loose the system of ventilation was, after I had a few angry words with Mr. White, the overman, he started me to drive a narrow place, in order to put a cut-through to the last bord working. The entrance to that bord was 57 yards away from the heading face. My mate started from Jones Brothers' bord, and I drove over to him, and that cut-through was 19½ yards.
8402. Is the whole of the trouble in connection with the ventilation,—the fact of the air not getting up to the working place? In many cases that is the whole of the trouble. I think the mines could be ventilated if they had the means to carry the air up to the working place.
8403. *President.*] What are the means? Cut-throughs as a rule. In some of the collieries they comply with the existing Act, but in others they do not.
8404. Do you mean to say that they give the go-by to the Act in some cases? Yes; take the place I have mentioned. I have held always that they put a wrong construction on the Act.
8405. What do you say? I hold that the cut-through is not put through until it is holed on the opposite side of the pillar. If you take the literal meaning of the Act it says, "No place shall be driven more than 35 yards before the current of air without a cut-through put through, or bratticed up within 3 yards of the face of such working place." It is never put through till you hole on the other side.
8406. *Mr. Curley.*] Do you mean to say that they read the Act as though it was worded in the Act exclusive of the cut-through? Quite so. I have argued the matter out with practical men, who have given in to it. The last few words appear to me to be quite conclusive.
8407. *President.*] It is generally read that if they have 100 cubic feet of air they have complied with the Act? It is; where they have measured the air in the intake, and then in one or two places in the outlet, you can get the average amount of air to establish a minimum according to the provision in the Act, but if you go to measure where the air is required—at the working-face—you could not get the anemometer to register at all.
8408. If you have the air going along the airway, they say if they have 100 cubic feet of air that is enough sweeping past each working place; but I think that is wrong, because they leave out the words "not less as a minimum than";—I say that it means that an adequate amount of ventilation shall be produced to render the workings fit for working in? I have no doubt that is the meaning, but the wording of the Act means that the air shall simply go along the heading. I believe every miner would be satisfied with 100 cubic feet of air if it measured that quantity at the working-face.
8409. *Mr. Curley.*] If you had that quantity of air in the working-face? Yes.
8410. *President.*] Do you think it would be better if it was provided that the air should be constantly produced in each working face as near to the working face as is reasonably practicable? Some manager might say it was not practicable. I admit that the great thing is to conduct the air into the working face. I have had a varied experience in mines, and I think there is no difficulty in getting the air into the working face. I worked at Vancouver Island, and every place in the mine there was bratticed to within 3 yards of the working face.
8411. Was that a gassy mine? Not particularly so. I never saw any gas in Bulli when I first went there.
8412. Do you say that the air should always be within 3 yards of the working-face? Yes.
8413. Why do they say in the proposed Bill within 15 yards of the working-face where there is no gas? Simply to compromise and to save money.
8414. *Mr. Curley.*] Don't you think the suggestion made by the President with the word "practicable" would be a dangerous provision? I do.
8415. Do you know the provision in the proposed Bill with regard to ventilation? Yes.
8416. It stipulates for a minimum of 150 cubic feet? Yes.
8417. Do you believe in a minimum quantity being stipulated? Yes; I believe in a minimum of 100 cubic feet if the air was taken to the face of the working, or within the distance stipulated for bratticing,—that is within 9 feet of the working-face.
8418. Will you look at section 49, 46, sub-section 3, on page 23 of the Bill;—it states "that each district shall be supplied with a separate current of fresh air, which shall be taken to within 15 yards of each working-face by brattice or otherwise where gas does not exist, and to within 3 yards of the working-face where gas does exist"? The distance I mean is 3 yards, because it is practically what I have been accustomed to in Vancouver Island. The air there was taken to within 3 yards of the face.
8419. What was the height of the seam there? It varied from 3 feet up to 12 feet.
8420. Did they use ½-inch tongued and grooved planed boards there? Yes.
8421. Were the bords worked very narrow? Eight yards, and 8 feet headings, or 8 feet levels.
8422. Would you consider the system of that kind of ventilation very good? It was all that could be asked for.
8423. Were there many men employed in that mine? From 200 to 250 men.
8424. Do you consider that there should be substantial pillars left in a mine? I do.
8425. How did you find the pillars at Bulli when you were working there? Some were very thick, and some were the reverse. Where the faults were the work had to be laid out accordingly.

- J. B. Nicholson, Esq., M.L.A.
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8426. Did you work any pillars out there? No, we never worked any pillars. As a matter of fact, there were no pillars drawn to my knowledge when I worked there.
8427. Was the mine very deep—had it much weight to carry? It was right under the mountain. In the section where I was working in 1886, it was something like 800 or 900 feet below the surface.
8428. Did you ever do any check-inspecting there? Only on one occasion, and that was after the explosion took place.
8429. Did you go right round the mine? I did.
8430. Did you go into the return? Yes.
8431. How did you find the return? I found it fairly good; much better than I expected, taking into consideration the conditions of the colliery all through.
8432. Did you say that you had complained about the ventilation prior to this? Yes, frequently to the overman and to the deputies.
8433. How long before the calamity would it be that you worked in that place 70 yards before the air? I believe it was the quarter previous to the pit knocking off—prior to the suspension of work during the strike.
8434. Would you look upon the representations made at that time in the light of personal complaints, so far as you yourself were concerned? Yes.
8435. Had you written to Inspector Rowan at any time about these matters? No, I never wrote to the inspector. I tried to see him on two different occasions, when he was inspecting the mine, but owing to the fact that he did not come into the heading I did not see him, although I followed him to the flat.
8436. Do you think Inspector Rowan had any knowledge of these places being driven so far in advance of the air? I would not like to say. He was taken into the mine under the guidance of Mr. White, and he went where Mr. White liked to show him; that was the system in the Illawarra district.
8437. Do you say that the system in the Illawarra district was for the inspector to go where the manager took him? I understand that was the system.
8438. Do you not think an inspector should go into almost every part of the mine? My experience is that they do not go into every part of the mine.
8439. Have you seen the inspector's reports upon the state of the Bulli return prior to that calamity? I have seen them but it is so long ago that I have no recollection of what was said.
8440. If the inspector complained of the returns would not that lead you to think that he had inspected them? [*See Reports, Appendix L*]. I scarcely can understand where the return is in the Bulli district.
8441. Do you notice in that report that Inspector Rowan refers to the return? Yes; but he does not state in what portion of the pit.
8442. Would you not regard that as the main return? Possibly that is what he refers to.
8443. Would you understand it that way? Yes.
8444. Would that lead you to the belief that Inspector Rowan had inspected these returns, seeing that he mentions the matter in his report? There was a portion of the return where it was not possible for a man to walk upright, but on the whole I have no grounds for complaint. There was a large volume of air travelling when I took the measurements.
8445. Do you think that a good effective return should be one of the principal features of mining? A good return is undoubtedly essential to ventilation.
8446. Have you ever looked at subsection 5, section 21, on page 8 of the Bill, giving the inspector power to withdraw the men in case of danger? Yes.
8447. Do you think it is desirable that the inspector should have this power? I do.
8448. Do you think it is possible for a controversy to arise between the manager and the inspector as to what is danger? There is a possibility of such a thing arising, but if the Bill gives the inspector absolute power, having the power he will use it.
8449. You think that the inspector should have this power? I think so. I can give you an instance why an inspector should have that power. Some six years ago at Mount Kembla the men complained to me that they had a very dangerous travelling way in the No. 6 heading, and I wrote to Inspector Rowan and asked him to come and make an inspection. I had a reply back from Mrs. Rowan that the inspector was in the western district. I either wrote or wired for him to come at once, and he came down and made the inspection, and the result was that he asked the manager, or told him, to take the men out until he had timbered this heading and rendered it safe for everybody to travel in.
8450. Was this in consequence of a bad roof? Yes.
8451. In consequence of insufficient timber? There was no timber at all in the heading at that time.
8452. What was your system of weighing at Bulli;—had you standard weight? We had no standard weight. They weighed a limited number of skips daily, and we got the average of the weights for the fortnight for the pay.
8453. Was the weighman at the weighbridge all the time? No; he was not there nearly all the time.
8454. Had he other duties to perform? Yes; looking after all the surface-men.
8455. Did you consider that that was a satisfactory matter? No.
8456. Do you think the weighman should be at the pit the whole of the time to weigh? Yes; and that they should weigh every skip that comes out of the mine.
- 8456½. You think that every skip should be weighed? I do.
8457. Did they pay by weight at Vancouver Island, when you were there? Yes.
8458. What was the system of weighing there? They weighed every skip that came out of the mine.
8459. Did they have a self-registering machine? They had one of Fairbank's machines.
8460. Did they weigh both round and small coal together? Every man was supposed to clean his coal, and if he sent out an unusual quantity of slack (say 1 or 2 cwt.) he would lose so much off the skip; that is the system that is followed out very much throughout the United States.
8461. The general system there is to weigh every skip? Yes, and take so much off, if an extra quantity of slack coal is sent out, perhaps from 2 to 5 cwt., according to the size of the skips.
8462. You think that it is not impossible to weigh every skip? No, not at all.
8463. In the absence of that, do you think the men would be satisfied if a fair average number of skips were weighed? It appears that they have been satisfied in this Colony, but it is the only place I have worked at where such a state of things existed. They either worked by the ton or at so much per skip.
8464. *President.*] I would like to ask you something further upon the subject of ventilation;—you say that the air ought to be conveyed to within 3 yards of the working face? I think so. 8465.

8465. Would you require brattice right up to within 3 yards of the face? We had it at the Wellington pit at Vancouver Island. If we had not quite enough room to put in another length of brattice, we were supplied with a piece of oil-cloth to fill up the measurement; then after we had 3 clear yards, the shiftman would put in another length of brattice, and our oil-cloth would lay by till we wanted it again.

8466. How would you express what you think is required, if you were drafting a clause for ventilation? The plainest term would be that the air should sweep round each working face, and that would necessitate either shorter cut-throughs or brattice.

8467. *Mr. Curley.*] Unless you have something making this matter definite, does it not leave very wide latitude in the hands of a manager? The worst feature is that it leads to eternal conflict between the manager and the men, where there is a matter of dispute, unless it is definitely expressed.

8468. *Mr. Gregson.*] How can this happen when the inspector is there? The inspector is very seldom there.

8469. Have you any knowledge of the working of the English Act? I have worked in Scotland, but I have never worked in England.

8470. Did you work under the Act of 1872? I presume it was the Act of 1872.

8471. Had you any occasion to find fault with the frequency of the visits of the inspector there? Not that I am aware of.

8472. Did you look to the inspector to see to the working of the Act? Yes.

8473-4. Why should we not expect the same thing to happen here? We should have the same thing here.

8475. Do you think that there is anything due to the system under which the inspectors work that would make their visits of less value to the miners than you would wish them to be? I would not feel justified in expressing anything harsh, but the manner in which I have seen inspectors pay their visits, and the number of times I have seen them in conflict with the check-inspectors with regard to ventilation, leads me to believe that they have not been honest in their reports. The number of times I have looked for the inspector, to show him some places that I thought needed his attention, leads me to think that there was something in the system adopted by the manager to prevent the inspector getting a knowledge of the facts that existed.

8476. Supposing your suspicions are well-founded, what cure can you suggest? It is hard to suggest a cure. I do not think the manager ought to be warned of the inspector's visit.

8477. Do you think, if the inspector was made responsible to the Minister, things would be better in the future than they are? I do.

8478. Would you approve of that being done? I would.

8479. Would that make all the difference? If the inspector had more responsibility devolving upon him he would pay more attention to the various inspections he makes.

[Witness withdrew.]

Frank Croudace sworn and examined:—

8480. *Mr. Gregson.*] What are you, Mr. Croudace? I am the manager of the Lambton Colliery.

8481. How long have you been managing the Lambton Colliery? For four years.

8482. We have had some evidence with reference to the loss of employment by a Mr. Treharne Evans, and you have been called to-day mainly for the purpose of giving you an opportunity for saying anything you have to say with regard to this matter. Mr. Evans puts it, that upon the pit shutting down he was at the time employed as check-weighman, and that upon the pit reopening he could not get re-employment? Previous to the closing down of the pit, Treharne Evans was employed as check-weighman by the miners, and on restarting the colliery again he did not start along with the other men. He wanted to come back on the bridge, but we objected, because the Act says that the check-weigher shall be an employee of the colliery, and as he was not an employee of the colliery he was, consequently, not open for the position.

8483. Did he ask you to be allowed to go back on the colliery? Yes; and I told him I could not take him back.

8484. Did he distinctly ask you for employment on the coal? Yes, he asked for work of any sort; first on the coal, and then he said anything would do.

8485. What you have said confirms the evidence Mr. Evans has given;—have you any explanation to offer, or anything more to say? He had no right whatever to come back as an employee of the colliery. He, along with some hundred other men, knocked off at the time.

8486. *President.*] Why did they knock off? The colliery closed up, because we were working at a loss. We came to a fresh arrangement with the miners, and opened the mines again, and out of about 300 miners formerly employed, we only re-employed 200 men.

8487. Are there any grounds for saying that you knocked the men off to get rid of some objectionable characters? None whatever.

8488. Had you any objection to Treharne Evans? No.

8489. You did not close the colliery and make that an excuse for not re-employing him again? The colliery was being worked at a loss, and we could not carry on, but the miners made fresh terms, and we re-opened the mine again.

8490. *Mr. Curley.*] Have you a system of standard weight at your colliery? We have.

8491. What is the standard? Sixteen cwt., at the present time.

8492. Have you increased the standard? Yes; from 14 cwt. 2 qrs. to 16 cwt.

8493. What did the average weight of the colliery run when the standard stood at 14 cwt. 2 qrs.? I cannot say without looking the matter up. I have seen the tubs weigh 11 cwt., 12 cwt., 14 cwt. 2 qrs., 15 cwt., and 15½ cwt.

8494. Do you know what the average is now? I have not looked that up. We have some tubs 12 cwt., and some up to 16 cwt., since we have altered the weight we have allowed the miners to fill coal higher. We have allowed them to put more coal above the woodwork.

8495. Do you make a comparison between the weights you send away and the weights you pay the men? I compare the weights every fortnight.

8496.

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- F. Croudace, Esq., 15 Oct., 1895. 8496. How do they come out? As a rule, we paid more to the miners than we received.
 8497. Is not that a good argument for abolishing the standard weight? Not for the men. I have seen it in favour of the men, and also in favour of the company.
 8498. Do you weigh a fair quantity of coal? We weigh as much as we can.
 8499. How long have you been in charge of the Lambton Colliery as manager? About four years; I was assistant manager some time before that.
 8500. Have you made yourself familiar with the Coal Mines Act we are working under now? Fairly familiar.
 8501. How do you interpret the clause about ventilation;—will you read sub-sections 2 and 3 of the present Act (*see Appendix B*)? By those clauses you must not have less than 100 cubic feet of air going round the airways for the men.
 8502. Supposing that you had 100 cubic feet of air for everybody, would you consider you had complied with the terms of the Act? Yes; unless there was gas found, and I had to remove it.
 8503. Would you consider you had complied with the Act where there is no gas? In that case 100 feet would be sufficient.
 8504. *President.*] There is to be 100 cubic feet of air going round for each man, according to the Act? Yes.
 8505. And if this is not enough, you must put as much more as is necessary? Yes.
 8506. *Mr. Curley.*] Would you say you would be complying with the terms of the Act if you gave 100 cubic feet of air? Yes; taking it without gas 100 cubic feet of air is quite sufficient, and with gas 100 cubic feet of air might also be sufficient, but if there was more gas there would need to be more air.
 8507. Have you had to put brattice up in your colliery? We have done so; but we were not compelled to do it.
 8508. What was your object in putting brattice up? Merely as an experiment, to try how it would work.
 8509. Did you find that it gave better results to the men? The men never told me so; but it is only natural that it should be better, because the air is taken closer than it would be otherwise.
 8510. Have the men represented to you that there has been white damp found in any particular district of your colliery? There may be some white damp coming from time to time from the old workings.
 8511. Have the men requested you to do something for this particular district? Yes; and we closed it off, where this foul gas was coming off.
 8512. Did you not put some brattice up where this white damp was given off? I cannot remember any places myself.
 8513. We have had this given in evidence from Mr. David Mason? I cannot call to my mind any place.
 8514. If he stated you had done this for the benefit of the men, would you be inclined to credit his statement as a truthful statement? I would take Mason to be a truthful man.
 8515. Do you go into the workings of your colliery pretty frequently? Sometimes every day.
 8516. Do you take the measurements of the air? Occasionally I do.
 8517. How frequently do you measure the air? I can generally tell what the air is like when going round with the lamp, and sometimes I take the instrument.
 8518. How frequently do you measure the air? It may be some months at times before I measure the air myself.

[Witness withdrew.]

David Watkins, M.L.A., sworn and examined:—

- D. Watkins, Esq., M.L.A., 15 Oct., 1895. 8519. *President.*] What are you, Mr. Watkins? I am a Member of the Legislative Assembly at the present time.
 8520. What were you before you were a Member of the Legislative Assembly? I was a coal-miner.
 8521. Were you a coal-miner in this Colony, or in England, or both? In this Colony only.
 8522. Where have you been coal-mining in this Colony? I spent the whole of my time in the Wallsend Colliery, in the Newcastle district.
 8523. How many years have you been in the Wallsend Colliery? I have been hewing coal for about twelve years, as near as I can recollect.
 8524. Were you connected with the colliery longer than that? Yes; for some two years prior to that I was water bailing, and doing other things. While hewing coal I held the position of Secretary for the Wallsend Lodge.
 8525. *Mr. Curley.*] Have you worked in different parts of the Wallsend Colliery? I have worked in every part of the Wallsend Colliery—that is, every part of the colliery that was working during the years in which I was employed there.
 8526. Will there be very many parts of the colliery opened since you left? The same districts, as far as I know, are still in existence; there may be one or two small districts worked out.
 8527. How long have you been a Member of the Legislative Assembly? Since 1894; about sixteen months.
 8528. Have you ever noticed any defects in connection with the ventilation in any of the places you have worked in? Invariably I have noticed things in connection with the ventilation which did not at all satisfy me as a practical miner. I might say that, as Secretary of the Wallsend Lodge, I have received many complaints from different parts of the mine from the miners from time to time. I have a recollection of once being called upon to apply to the Government for a joint inspection.
 8529. How many years ago is it since you asked for that joint inspection? I think either three or four years ago.
 8530. Was that during the time Mr. Ross was colliery manager? Yes; during Mr. Ross' time.
 8531. What district in the colliery did that inspection have reference to? It applied generally to the whole of the mine. Of course, speaking from memory, there were some districts worse than others, but it was the general condition of the mine.
 8532. The ventilation generally was considered at that time to be unsatisfactory? Yes; that is so.
 8533. Were there any particular districts that were more difficult to ventilate than others? They had the greatest difficulty with the little tunnel—No. 2 tunnel, that was the surface workings—the crop workings. Black damp used to be more prevalent in these workings than in the other portions of the mine.
 8534. Were the complaints about the ventilation in this particular district anything like general? Complaints were very general. It was considered one of the easiest districts to work, but I have known men to say they would rather work in the harder places on account of having better air. 8535.

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8535. They preferred a pure atmosphere and harder work to an impure atmosphere and easy work? Yes; I always looked at it in that way myself. I would sooner work in the harder places with good air than in the easy places with bad air.

8536. Did you find the ventilation in these defective parts very injurious to your health? Yes; on many occasions I have detected symptoms of weakness in the legs after a day's work would be done, and the work would not be nearly so hard as in the deeper portions of the mine.

8537. Would the cure for that have been a vigorous current of ventilation well conducted up the working-face? Yes; I do not know of any other cure for black damp than that. Being heavier than the air, it takes a considerable current of ventilation to remove it.

8538. In that particular district you have referred to, do you think men could work for any length of time, say a quarter, or two quarters, without being seriously affected? I cannot say that a man working there for a quarter would come out without being affected. They generally suffer in these places with a bad cold—a nasty cough.

8539. *President.*] Did the ventilation in those places affect you in that way? Yes; I have noticed it also with my mate. He was affected with pit asthma, and you could always tell directly when he went to work in a place like this. It would come upon him in the shape of a cough.

8540. *Mr. Curley.*] As a rule, does it affect a man more as he advances in years? I take it so.

8541. When you say that you had to call for a joint inspection does that mean, also, that you have had to bring the matter under the notice of the manager of the colliery occasionally? Yes; it meant that we would not call a joint inspection before we had laid the matter before the manager, and of course the old books would bear out the nature of the complaints that had been made to the manager before a step of that description was taken. I am speaking from memory, but our course would naturally be to complain to the manager.

8542. *Mr. Gregson.*] Did you complain to the manager without result? Yes; according to our opinion.

8543. *Mr. Curley.*] Something might have been done by the manager that was, in your opinion, unsatisfactory? Quite so.

8544. Something might have been done that was not quite up to your expectations? Yes; that is what I mean.

8545. Have you always worked in a general way fairly amicably, as a whole, with the manager of the Wallsend Colliery? Yes; he has always treated us in a courteous manner, and listened to our complaints.

8546. Have you given any attention to the proposed new Coal Mines Regulation Bill? Yes; I was in the House when the Bill went through, and I have gone through it a few times.

8547. Would you look at subsection III of section 49, 46, on page 23 of the Bill (*see Appendix A*). Do you notice what is proposed in that sub-section? Yes—the Legislative Council wish to strike that sub-section out.

8548. Do you consider that one of the chief matters of complaint that the miners have is that the air is not brought up to the working-face? Yes; that is the whole trouble. Our check inspectors have told us that they could find a current of air on the heading—probably 30 or 40 yards from where the men were working, but none in the face.

8549. *President.*] What amount of air did they get there? 100 cubic feet invariably.

8550. According to the inspectors was that quantity of air sufficient? Yes.

8551. According to the managers, was it sufficient? Yes; according to the managers it was sufficient. I have had a good deal of experience in this matter, and have had occasion to notice the air in different parts of the mine. In carrying out my duties as secretary of the lodge I used to go round the mine appointing turn-keepers, and I have stood and found the air in the heading, but on account of the smoke in the bord you could not see the lights of the men.

8552. Is it the contention that if 100 cubic feet of air is produced in the headings the Act is complied with? That is the way the Act is read by the inspectors.

8553. The Act says in sub-section III that an adequate amount of ventilation shall mean *not less as a minimum than* 100 cubic feet of pure air per minute for each man, boy, and horse;—do you say that the inspectors give no meaning to the words “not less as a minimum than.” What the Act means is that there must be 100 cubic feet of air always, and as much more as will secure an adequate supply? The point of contention, I take it, is that the air shall sweep, undiminished, along the airway past each working-place.

8554. Have you not to give some meaning to sub-section II, of the Act (*see Appendix B*). 100 cubic feet of air, according to my reading of the Act, is to be the minimum quantity always, but there is to be an adequate amount in all places? If that construction had been put on the Act, the miners' difficulty would be overcome, but the practice has been that if the air swept along the airway past each working-place the Act was complied with.

8555. That is, if the air measured 100 cubic feet in the heading or 35 yards from the miner? Yes; I can quite understand that a boy and horse might get the air, but the miner would not get it if it was 35 yards from him. I have no doubt that was the intention of the Act.

8556. Why should this wrong construction have been put on the Act? I do not know. The difference between the Legislative Council and the Legislative Assembly is that the miner wishes to put it in plain language so that there shall be no doubt about it, but the Council does not seem to be willing to assent to this.

8557. The Council say this: If you put in a minimum quantity the Act may be misunderstood again, but if you say an adequate amount of air the manager will have to supply an adequate amount, no matter what it may be? I have this objection to the word “adequate.” I take it that nearly all the mines in England have explosive gases, and where these explosive gases are found the word “adequate” will work right enough, but if you have a mine invaded by black-damp a non-explosive gas; in that case a manager might say 50 cubic feet of air would be sufficient.

8558. Would not that manager find his men sick and ill, and would not an inspector if he knew his duty put the matter right;—we are all agreed that the air should be there, but the question is, what is the least harmful way to legislate for it? I take it that the English Act provides for bratticing.

8559. I may tell you that the English Act does not provide for bratticing? I am afraid if a minimum quantity of air is not put into the Bill we shall have several of our mines in the same condition as they are at present.

8560. Not sufficiently ventilated? I think it would be a dangerous thing to leave the minimum quantity of air out of the Bill. In the case of a small colliery, where they do not care to go to any great expense,
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and their machinery not being the best, without a minimum quantity being specified they would think 50 feet enough. If the air is brought up to the working face I think 100 cubic feet of air as a minimum would be a fair thing if brought to within 15 yards of the working face where gas does not exist.

8561. *Mr. Curley.*] You assume that with 100 cubic feet of air the bord would be bratticed up to within 15 yards of the working place;—do you care how the air is brought there? No. I prefer brattice to shorter cut-throughs, because so long as the brattice is there the air must go, provided there is the power to drive it.

8562. Are you not more likely to get the air with the shorter cut-through in the event of no brattice being there? Certainly; if there is no brattice and we have the shorter cut-through, but taking the two systems I favour the brattice.

8563. Do you know that under our present Act, the 35 yards is read inclusive of the cut-through; that you have to take both the 35 yards and the cut-through as well? That is too vague; it is possible for a man to be 45 yards in front of the air.

8564. Where you have a thick cut-through? Yes.

8565. What you have stated, Mr. Watkins, with regard to section 49 [46] of the Bill, will practically cover section 50, 47, rule 1, dealing with the ventilation? Yes; it practically covers everything.

8566. Can you understand the Legislative Council's objection to wishing that part of sub-section III, which refers to bratticing within 3 yards of the working face where gas does exist, being left out? I do not know what the Council had in view in dealing with that clause, but I have heard that they are endeavouring to get an amended Mining Act in England.

8567. *President.*] There is an amended Act in England called the Check-weighers Act, and there is another, but it is a Bill? I knew they were amending the English Act in some form, but seeing the mine-owners have to brattice where there is gas, why object to putting this section in the Bill.

8568. Was not this section really in the present Act? Yes.

8569. *Mr. Curley.*] Is not the whole of your contention with regard to the ventilation that the air should be conducted up to the working face? Undoubtedly; and I think it should be specially defined by law what that means.

8570. Do you mean to say that there should be a stipulated minimum quantity in the Bill? Yes.

8571. *President.*] Do you want it provided also that the air shall be taken to within 15 yards of the working face where gas does not exist, and to within 3 yards where gas does exist? Yes; because I take it that we will have to deal with more gas in the future than we have in the past.

8572. *Mr. Curley.*] Were these workings in the Wallsend Colliery that you have spoken about with regard to the defects in the ventilation to the rise, or to the rise and the dip alike? They were at the extreme rise, what we call the crop coal, where we found the black damp, and in the deeper workings they used to find a little gas occasionally. I recollect two men being burnt there, one was a foreman, and the other a miner. It was some days before I actually knew the man was burnt. When I knew of the accident I made inquiries, and found that it had not been reported. The man was burnt very seriously from his neck down.

8573. Do you say that the accident was not reported? It had not been reported until I wrote about it.

8574. Do you think accidents of this character should be reported? Undoubtedly. The wording of the present Act is that accidents are not to be reported unless they are serious, and this accident was not considered serious by the doctor.

8575. *President.*] What section of the Act do you refer to;—the section in the proposed Bill is 31 [29] on page 15 (*see Appendix A*), and provides that if an accident is caused by gas, or the explosion of a boiler, it is to be reported? Yes; that is in the new Bill, but I was referring to the present Act. The 28th section of the present Act says:—

28. Whenever loss of life or serious personal injury to any person employed in or about any mine occurs by reason of any explosion or other accident whatever within such mine or any pit or shaft thereof or any works or machinery connected therewith, the owner or agent shall, within twenty-four hours next after such accident, give notice in writing thereof to the examiner or to the inspector of the district in which such accident shall have occurred, and shall specify in such notice the probable cost thereof. And every owner or agent who neglects to send or cause to be sent such notice within the time aforesaid shall for every such offence be liable to a penalty not exceeding twenty pounds. And the examiner or the inspector shall forthwith, after inspection, report the accident and the cause thereof to the Minister, and in such report shall state whether, in his opinion, such accident was due to or caused by any act or default or negligence of the owner or agent.

8576. Where an injury is caused by explosion notice must be given, but in other cases the accident must be of a serious nature; there are all sorts of small accidents that occur in mines, such as a piece of coal falling on a man's foot;—do you want these minor accidents reported? Yes; it is a serious matter whenever a man finds gas.

8577. In the proposed Bill, no matter what the accident is, notice would have to be given if the accident is caused by an explosion? I mentioned this accident just to show how lax a manager can be. Although the doctor gave it as his opinion that the accident was not serious, the man was burnt red raw, and I think it was sufficiently serious to be reported.

8578. *Mr. Curley.*] Do you know Musgrave that was injured in the Lambton Mine? Yes; I knew him well.

8579. Do you know anything about his injuries? Yes; I have had it explained by him, and I have read it in the newspapers. I know the Association sued the Company on Musgrave's behalf.

8580. Do you think that the word "serious" should remain in this section of the Bill? I would prefer to see the word "serious" eliminated, because it throws the responsibility upon the doctor of the place, and so far as a light accident is concerned, I do not think it is much trouble to report the matter to the inspector, and the inspector might judge for himself as to its seriousness or otherwise. Of course, Musgrave's accident happened from what he thought was a defective manhole.

8581. The accident took place on the engine plane, and it was a matter of controversy as to the origin of it? Yes; no doubt about that.

8582. Was there a deficient manhole on that engine plane? Yes; still, I think it is sufficient to say that these manholes should be of a stipulated size. I held then, and hold now, that the manholes should be a stipulated size in the engine planes.

8583. Do you consider that there should be substantial pillars left at all times in a mine? Yes; my experience at Wallsend was such that it brought me in contact with a good deal of pillar working. I do not think any collieries extract more pillars than the Wallsend Colliery, and I think it better for the Company and everybody concerned to work with the larger pillars.

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8584. Do you think that larger pillars are safer for the men? Undoubtedly.

8585. Do you think that larger pillars are more economical for the management? I think so. It is recognised by all practical managers that if you can manage to get a break the remaining pillars are safer. I think in cases where they do not extract pillars they should have larger pillars. Pillars will only last a certain time, and they are the only things to keep the superincumbent strata up.

8586. Did you see anything special with regard to pillar-working when you were working in the Wallsend Colliery, with regard to the opinion you have expressed? I have seen falls in pillars both in the dip workings, and in the shell workings. I worked in the No. 2 tunnel after the 1890 strike. I have a recollection of being ordered to extract a pillar under circumstances that gave very little protection to the miner, and where, if we had been called upon to run, we would practically have had to run through the danger to escape. The pillars had what we call windowed holes.

8587. *President.*] What size would these pillars have been if they had not worked into each other? Either 4 or 6 yard pillars.

8588. How long would they be? Thirty-five yards; but they were only 4 or 6 yards thick. The Wallsend Company worked their seam for a considerable time on the 4-yard pillar system, but since then they have altered the system to 6 yards and 8 yards.

8589. *Mr. Curley.*] What was, at the time you have referred to, supposed to be the dimension of the pillar was not so in a great many cases? Yes; in that case they lost quite a number of pillars further back, and a few bords as well. They had two falls at that time by which they lost the working places.

8590. The experience you have had leads you to the opinion that larger pillars should be left in a mine? Yes.

8591. *President.*] Do you think that mines will be worked deeper in the future? Yes.

8592. If you prescribed a certain size for pillars, do you not think it might lead to some misconstruction again. Have you seen pillars of insufficient size left within the last two years? I have been nearly two years away from coal-mining. I did work pillars that have been fairly good pillars, and I take it that the deepness of the mine would not affect the size of the pillar. The greatest danger with regard to pillars is what we know as the surface break.

8593. *Mr. Curley.*] Has the manager at any time had to withdraw the men when you were working pillars? I could not cite a case where the general body of men have been withdrawn. The general rule has been, since Mr. Ross' time, to have a deputy standing back in the heading where they have a danger, to see that the timber was kept up behind him. It is necessary very often in extracting these pillars to withdraw the men for a short time. The men might be withdrawn to-night, and go in again to-morrow, according to how the roof is settling. In the case I have referred to, I was particularly disgusted, because no provision was made for the safety of the men. We had to take up our own road to save the Company's plant that was there.

8594. *President.*] In the case you have referred to, must not the manager have been very incompetent? It was the overman or under manager.

8595. Was not the manager responsible? Yes.

8596. Was it the fault of the overman in this case? Yes.

8597. If the manager had been compelled to exercise personal supervision the thing would not have occurred? It would have been almost impracticable for the manager to exercise personal supervision himself. The manager of a large colliery like the Wallsend Colliery does not go below very often.

8598. Then the overman could not have been a competent person? In my opinion he was not. The fact remained that the pillar that was behind us was rent in shreds.

8599. Will you look at sub-section 2 of section 3, on page 2 of the Bill (*see Appendix A*), "Daily supervision of mine by manager or under manager";—if there was daily supervision by a manager or under manager one could hardly think that such a thing could have taken place? I think there is a provision of that kind in the present Act.

8600. *Mr. Curley.*] Does not this bring you back to the same point, viz., that the system of leaving the thin pillar is simply a great mistake;—does it not bring you back to that position? Yes, I think so. Speaking of the management at the Wallsend Colliery generally, the extracting of pillars was done very skillfully, but if the pillars were small a large portion of the coal would be lost.

8601. If the pillars are small, would they not be critical to work for the miners themselves? No doubt. It is a common thing where the bords have fallen to lose your place through the stone sliding in, and you are right amongst the timber then.

8602. Will you look at sub-clause 5, section 21, on page 8 of the Bill, the clause giving the inspector the power to withdraw the men in case of danger (*see Appendix A*)? Yes.

8603. Do you think it is desirable that the inspector should have this power? I think so. I do not see any grounds the Upper House can have for objecting to that clause. I am of opinion that the present Act gives that power now.

8604. *President.*] It gives them power to go to arbitration? Sub-section 5, clause 12, of the present Act, says, "If at any time it is found by the person in charge of a mine, or any part thereof, or by the examiner or inspector, that by reason of noxious gases prevailing in such a mine, or such part thereof, or of any cause whatever, the mine, or the said part, is dangerous, every workman shall be withdrawn therefrom, and the examiner or inspector shall inspect the same (and if the danger arises from inflammable gas shall make such inspection with a locked safety-lamp), and in every case shall make a true report of the condition of such mine, or part thereof, and no workman shall, except in so far as is necessary for inquiry, into the cause of danger, or for the removal thereof, or for exploration, be re-admitted into the mine, or such part thereof, as was so found dangerous until the same is stated by the examiner or inspector to be safe. Every such report shall be recorded in a book, which should be kept at the mine for the purpose, and shall be signed by the person reporting." I take it that under that clause the inspectors have the same power.

8605. *Mr. Curley.*] The provision in the proposed Bill is, then, no new provision? I take it as practically the same clause.

8606. *President.*] If an inspector said to a manager that he thought the mine was dangerous, and that the men ought to be withdrawn, can you understand a manager taking the responsibility upon himself and leaving the men there? It becomes a question of opinion as to whether the lives of the men are to be subject to that man's opinion.

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8607. It has been put that if a manager had some doubt himself, and an inspector came along and did not see, or did not say anything to the manager, that the manager who was doubtful himself might have his doubt removed by the inspector not noticing or saying anything about it;—do you not think a manager would act in such a case on his own opinion? From the experience of the past, which is all we have to guide us, I would not like to trust him.

8608. Would not there be a different order of things if this Bill passes? I take it that the Bill, as amended by the Legislative Council, will be practically worse than the present Act.

8609. *Mr. Curley.*] Can you conceive of a position of this kind—that a controversy might arise between an inspector and a manager as to the men being withdrawn under certain conditions, and the manager to hesitate about the withdrawal of the men, and still the inspector might think the men should be brought out? I can quite understand those conditions. The Stockton case has often been referred to, and while the mine is stopped it might also have fallen in.

8610. *President.*] The difficulty is to give this divided responsibility? Perhaps so.

8611. *Mr. Curley.*] In a case where there was a controversy between the manager and the inspector, seeing the inspector holds the responsible position, do you not think that he ought to have some say in a matter of that description? I think so. My experience of the Government inspectors is that they would not do anything of that description without thinking the matter out—they would not do anything arbitrarily.

8612. *President.*] Do you think that any manager, if an inspector said that he thought the men should be withdrawn, would dare to keep the men in the mine? Of course, that is a matter of conjecture.

8613. It is a matter of human nature? I would rather have this provision in the Bill. The question of losing coal comes in here; I have known men to be working to get as much coal out as possible to create a fall. They knew the place was settling, and they wanted to get out as much coal as they could before the fall took place, or that the weight was pressing on the adjoining portion of the mine; and therefore it would be to his advantage to have that down, and they would take as much coal out as they possibly could to get that strata or the entire roof down. On the other hand, being under contract renders them over anxious to keep working regardless of danger, thinking of the few shillings they have a chance of getting. I think it would be safer to throw the responsibility upon the men appointed by the Government; but, of course, in the general supervision of the mine the manager has to take that responsibility.

8614. *Mr. Curley.*] Do you think that the men should have the right to select their check-weighman from whom they please? Yes; the Legislative Council wish to say that the check-weigher shall be an employee of the colliery. I think the men should have the widest choice possible, because as soon as a man is appointed check-weigher he practically leaves the employment of the colliery, and there is no guarantee that he will get his work back. You will notice in sub-section II of section 43, 40, on page 19 of the Bill (*see Appendix A*), that the Council have struck out the words "tareing of tubs and trams." In a colliery where they might be weighing every tub or tram, or, as we call them, skips, a check-weighman would be practically useless. He would have no chance of tareing the tubs or trams, and his position would practically be rendered void. He could not ascertain the exact weight unless he averaged the tubs in the morning.

8615. What have you to say with regard to rule 40, 38, on page 30 of the Bill, with regard to the check inspectors (*see Appendix A*);—you will see the words inserted in that rule, "not being mining engineers who are practical working miners?" I moved those words, "not being mining engineers," should be struck out. They provide there that they shall not be practical; even though a man might be a practical engineer he could not be a check-inspector. I think those words should be struck out, because these inspectors have powers somewhere else in the Bill to inspect the ropes and other things.

8616. *President.*] The difficulty was that any persons might appoint two of their number, or any two persons, to inspect the mine, and it was to prevent outside engineers or perhaps foreign intrusion into the mine who might give information to others? I am afraid that would be a debatable point. It is distinctly said they shall appoint two of their number.

8617. If the people having this knowledge appoint two of their number they must not take outside engineers, because they might get two people who might be employed by some opposition company? But they have to make a report.

8618. If there are two persons in a mine who are mining engineers they can be appointed? I think they should have the power to appoint anybody outside, because their actions are guarded by the provisions of the Bill in such a way that they can do nothing arbitrarily. The miners might think it economical to appoint two persons to inspect the whole of the district, but under this provision I take it they would be debarred from doing so.

8619. The Bill says that they could not appoint a mining engineer outside the mine? There might be a colliery where they had a miner with a knowledge of engineering, but it would debar them from appointing that man. I think those words in the section are dangerous.

8620. Your opinion is that the words, "not being mining engineers," govern the whole thing? I think so. In another part of the Bill they are empowered to inspect the shafts, ropes, pulleys, &c., and it is useless giving the miners power to do this, unless they have power to appoint men who have a knowledge of these things.

8621. Do you think it has been found to work so;—the English Act contains these words, but in the English Act they are new? Yes; I think it would be nonsensical to assume that the miners would get one of the other managers to be one of their check-inspectors. Where the two men have to depend on the proprietors of that colliery, it restricts them in a certain sense. I have found that those men in writing their reports have not done that justice that I think ought to have been done. If this benefit is to be conceded to the men, as it ought to be, I think they should have full choice.

8622. Is there anything else that you would like to refer to in the Bill? Yes; I would like to refer to rule 34, on page 30, with regard to the examination of boilers (*see Appendix A*). I think that is a very necessary rule. It is three months ago since the miners at Teralba complained to me that the pump of one of their boilers had tumbled out, and three weeks ago I wrote to the Department asking that a boiler in the Merrylands Collieries Estate might be inspected.

8623. Is there anything else you would like to refer to? Yes. Rule 19, on page 28 of the Bill, "trolley over pit mouth" (*see Appendix A*). I think that rule is absolutely necessary in all cases.

[Witness withdrew.]

WEDNESDAY,

WEDNESDAY, 16 OCTOBER, 1895.

[The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.]

Present:—

FRANCIS EDWARD ROGERS, Esq., Q.C., PRESIDENT.

JAMES CURLEY, Esq. | JESSE GREGSON, Esq.

Mr. John Dixon, Senior Inspector of Collieries, sworn and examined:—

8624. *Mr. Curley.*] What are you, Mr. Dixon? I am senior Inspector of Collieries in the Colony.
8625. How long have you held the position of inspector? I have been an inspector for thirteen years and four months.
8626. Prior to your becoming an inspector, what occupation did you follow? I was a miner.
8627. Have you been connected with all phases of mining? Yes.
8628. During your experience, what kinds of mining have you been connected with? Gold, shale, and coal.
8629. At what age did you become acquainted with mining? I was between 10 and 11 years of age.
8630. Where did you first gain your mining experience? In the County of Durham, in England.
8631. What was the name of the mine you worked at in Durham? At a place called Haswell.
8632. Were you employed at Haswell very long? About four years as a boy.
8633. Did you come out to this Colony after that? Yes; at about the age of 15.
8634. What collieries have you been connected with out here since you came from England? The first place I worked at was at a sinking pit, at Hoxham, in the northern district. That was as a boy.
8635. Who were you working with then? My father. He had charge of the place.
8636. Was your father a practical man? Yes.
8637. Did you have the contract for the sinking of the shaft? My father had the contract, and we were boring in the sinking pit.
8638. Have you done much boring in your time? Yes; a considerable amount.
8639. Where? In the northern district, and at Mittagong and at Hartley Vale.
8640. Have you been boring in any particular localities in the northern district? Yes; all over the northern district.
8641. Can you name the localities? Yes; at Stockton. We discovered the coal at Stockton by boring. Then we bored for the Waratah Company, down by Tighe's Hill, and for Mr. Merewether, where South Waratah is now, and at Flaggy Creek.
8642. Have you had much experience in sinking shafts? Yes.
8643. I suppose you have gone through some very critical ground during your experience in mining? Yes, especially in gold-mining—very severe ground.
8644. Where did you begin coal-mining? I began what we call cutting coal first in the A. A. Company's Colliery.
8645. How long ago was that? That was in the beginning of 1862.
8646. Were you employed at the A. A. Company's Colliery very long? Yes; for a good while.
8647. Were you employed in any other colliery in the northern district? Yes; I worked in Old Lambton Colliery in the latter end of the year 1863, but I did not work there for any length of time.
8648. What other collieries have you worked in? I worked at Mittagong, in an anthracite mine, and in opening out new places. I worked as a miner there, and I took charge of the place after my father. Before he died I was managing the place under Mr. Levick, who was the head manager.
8649. Then, practically, the whole of your lifetime you have been connected with mining pursuits? Yes; I have been in every grade of coal-mining from a trap-door up.
8650. During the term of your inspectorship I suppose your attention has been called to different matters in connection with the various mines? Yes.
8651. In the course of your inspectorship you have no doubt had complaints made to you? Yes.
8652. Have you found those complaints to be well founded? A few of them.
8653. What has been the nature of the complaints? Sometimes they have been in connection with ventilation, and various other things besides. The last complaint I had was from Greta in connection with the catches at the pit top. The man was not there when the men came up, but I got that rectified very soon.
8654. Are these complaints mostly made to you in some kind of an official way? Yes; I have had anonymous letters, but mostly the complaints have been made officially.
8655. When you get anonymous letters, do you pay any attention to them? I do; but it is much against my grain.
8656. *President.*] Why do you say that? Because I do not care to go into a pit, where perhaps somebody is laughing at me behind my back.
8657. Do you not think it would be a bad thing to overlook any complaint that might be made to you anonymously? I have always looked upon such communications just as if they had been signed.
8658. *Mr. Curley.*] Do you know that the Secretary of State at Home has requested the inspectors there to take notice of anonymous communications? Yes; I have known that for some length of time.
8659. Do you know instances in which it would be very difficult for men to complain in any other way? Yes.
8660. How often do you make your inspections of the different collieries? If there are no accidents I get round now pretty well in about seven weeks.
- 8661-5. What collieries do you visit in your capacity as inspector? The principal collieries I visit are the two mines belonging to the A.A. Company, the Newcastle Company's mines, and the Burwood Colliery, the Burwood Extended, South Waratah, New Lambton, Ebben Vale, and Durham. I have also three mines I go to in Gunnedah, one in Curlewis, one in Muswellbrook, and all the small places about the Waratah Commonage and New Lambton. I sometimes travel with the other inspectors, taking a portion of the work with Mr. Humble in Bullock Island, Hetton, and Stockton.
8666. Do you measure the air when you make these inspections in the different districts you go to? Yes.
8667. Do you measure the air both in the intake and in the return? Yes.
8668. I suppose you measure the air on the headings—the main air-ways? Yes; on the main air-ways, at the commencement of a district, and two or three places going through the mine, and then at the end.

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8669.

- Mr. J. Dixon. 8669. Do you ever go into any of the men's working-places? Yes; in some of the collieries I travel over every working-place.
- 16 Oct., 1895. 8670. Do you generally go into the rise workings of a colliery? Yes.
8671. And see how the men are off there for ventilation? Yes.
8672. How do you understand the provisions of the present Act with regard to ventilation; when does a colliery come within the requirements of the Act of 1876;—will you look at the sub-clauses in the Act before you on the table (*see Appendix B*)? I understand that an adequate amount of ventilation shall be constantly produced in every mine to carry away noxious gases, to such an extent that the working-places of the shafts, levels, stables, and workings of the mine, and the travelling roads to and from such working-places, shall be in a fit state for working and passing therein, and that adequate amount of ventilation is to be within 35 yards of the working face—the face of the bord or the face of the headings, or the horse road, or whatever it may be. That is the interpretation according to this Act. An adequate quantity of ventilation shall mean not less as a minimum than 100 cubic feet of pure air per minute for each man, boy, and horse, and if I find cases where this 100 cubic feet of air is not enough I do not hesitate to say that it is not an adequate quantity, and I get more air put in. That is the way I read the Act. The 100 cubic feet of air is only put in as a safeguard, and people must not come below that quantity. I was one who helped to frame this Bill, and I think I know a little about it. I was one of a deputation that came to Sydney about it, and I made a speech about it at an aggregate meeting.
8673. What was the intention of the application of that Bill? To better the condition of the miners. There is nothing in the 1872 Act of England to say how far the men shall work before the current of air, and we thought we had gained a point over the English Act when we put this in. Our intention, in the first instance, was to have the distance 30 yards ahead of the air, but the masters wanted it to be 40 yards, and we split the difference, and that makes it the 35 yards.
8674. *President.*] Do you know the present English Act—the Act of 1887? Yes.
8675. *Mr. Curley.*] With regard to the section of the present Act you have referred to, section 2, does it not say something there about an adequate amount of ventilation? Yes; that an adequate amount of ventilation shall be constantly produced.
8676. Does it not also mention something about the working-place? Yes; that it shall sweep undiminished along the air-way past each working-place.
8677. *President.*] What construction do you put on those words? That is that the air passes along the heading; it only goes into the working-place by diffusion.
8678. What construction do you put on subsection 2 of the present Act (*see Appendix B*);—does that not mean that there is air to be kept in the working-place, and that the minimum quantity mentioned in subsection 3 is always to be there? Subsection 3 simply qualifies subsection 2.
8679. It seems a pity that it was qualified, because a great many people say that if there is 100 cubic feet of air passing along the air-ways the Act is complied with? They make a mistake, and there are other managers who do not believe that the Act is complied with if they have this minimum quantity. Of course, there may be men who will take shelter behind this 100 cubic feet.
8680. Do you think that there should be a minimum quantity of air specified in any Act? I do. I think it is a safeguard, and I have always believed in it.
8681. According to my reading of the Act, you give the right construction to these subsections, although there may be others who think that the Act goes further than you go; you do not fail to give a meaning to the words "not less as a minimum than," but these people read the minimum quantity as the maximum quantity? I have heard people talk like that, but it is quite wrong, according to my reading of the Act.
8682. *Mr. Curley.*] Do you know that intelligent managers have read the Act in this way? Yes; but in some respects I dispute with them, when they go on that point. I had a case in the A. A. Company's No. 2 pit, where they were working pillars. The workings were going to the rise, and, although there were only sixteen men employed, it was very hot. Although there were only about sixteen men in there, I thought the ventilation was not sufficient, and Mr. Paul Turnbull, the overman, was of the same mind as myself. There were 10,000 cubic feet of air going in, and he was struggling to put in another 4,000 feet.
8683. In the writing of the reports you make from time to time in connection with the ventilation, do you invariably state that you find a certain quantity of air going into the mine? Yes.
8684. And that you find the Act complied with? Yes; that is the wording in the usual yearly reports.
8685. Has that reference to the measurement of the air upon the heading? That must be taken in the aggregate. When we give the total quantity of air we must give the total number of men, boys, and horses, and if you take the aggregate amount of air you must take the number of men, boys, and horses. It would not do to give simply the number of men in the splits, because every man is using that air. The yearly report is not given in the way I would like to write it.
8686. How would you like to write it? Something like the English inspectors write their reports. I would like to give the accidents and a synopsis generally of the pit. I would like to show that we have had our eyes open in going round, and give something to show for our work.
8687. With regard to that aggregate quantity that you speak of, do you take the measurement as near to the shaft bottom as you can get it? Yes, the intake.
8688. Then do you take the return passing out to the furnace? Yes.
8689. And then you give the aggregate results, according to what you find? Yes.
8690. Then do you calculate the number of people that are in the mine? Yes; from the onsetters.
8691. Is that basis taken upon this 100 cubic feet of air? No; it is lost sight of there. We do not go and say there is so much for each man, boy, and horse. We do in the different districts. Say we had so many men in a split, we see that none of these splits are overcrowded; that is, that none of the splits have over seventy men. We see that there is so much air in the district, and that gives so much for each man, boy, and horse. In the yearly report it is simply to say what amount of air is produced in the mine for each man, boy, and horse.
8692. Do the other inspectors put the same construction on the present Act as yourself? Yes.
8693. *President.*] Does Mr. Rowan, in the Southern district, put the same construction on the Act? I believe he puts the same construction on the Act as I do.
8694. *Mr. Curley.*] If he gave a different construction to the construction you have put up on the Act, would you think he was of a different opinion to yourself? I would think he was. I know that Mr.

- Humble and I are both of the same mind, and that Mr. Bates is of the same opinion. I may say that it is a very rare thing for us to get a district where there is simply 100 cubic feet of air travelling. I have districts where I can get up to 450 cubic feet for each man, boy, and horse in the splits. Mr. J. Dixon.
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8695. In your inspections have you found any grave complaints with regard to want of air? No, not as to the total quantity supplied; but what I should like to see is, the air taken into each man's bord, or into the working-places. It should be put into the same extent into the working bords. I do not mean to say that it should be produced up into the face, but that it should be put in to sweep the noxious gases out.
8696. Do you think that it would be a matter of very serious cost to brattice within a limited distance of the face? No.
8697. You do not think that it would be a matter of very serious cost to brattice within a limited distance of the face? No; that is to say, to keep the brattice to within 15 yards of the working face. My estimate of the cost of doing this would be 1½d. per ton, and that would include the cost of the brattice, the putting of it up, and everything else.
8698. Is not your estimate rather over than under the mark? No; when Mr. Humble comes to give evidence, you will find he has all the calculations in connection with this matter, and there is no getting away from it. You will find that it can be done at a cost of not more than 1½d. per ton. [*See Appendix O.*]
8699. Has your calculation been made upon the basis of the actual tonnage that you know has come out of the mines? It is taken upon the cubic contents of a bord, say 4 feet high and 8 yards wide and 35 yards long, between the headings, and 5 feet high, 6 feet high, and up to 9 feet high, and allowing 25 per cent. for the dirt, it runs out at about 1½d. per ton. It runs out in nearly every instance to a tick. There is a lot of small coal filled afterwards that is a source of profit to the masters, and which will reduce this calculation.
8700. Have you calculated what is thrown back? Twenty-five per cent. has been allowed for the dirt and small coal. In some of the seams there is a great breakage, but the masters have been given the benefit of the doubt.
8701. What would you say to a statement that puts the cost down to 3d. per ton, or even more in some instances? I would consider it outrageous.
8702. Do you not think that a ½d. per ton would cover the cost of bratticing? No; 1½d. per ton.
8703. What kind of brattice was your estimate based on? Canvas cloth.
8704. What life-time did you allow for this canvas cloth? You can only give an approximation in this particular, because if you get into a damp place the canvas cloth will not bear its own weight sometimes; you can put your fingers through it in a month. Where I have seen calculations giving it at a very low rate, the calculations have been made upon it lasting through three cut-throughs.
8705. Have you estimated any life-time for the brattice? No; I simply thought that the last 15 yards might be utilised again, and, in dry places, that the same brattice could be utilised for two bords, but in a damp place for only one bord.
8706. Do you think that any other kind of brattice would be cheaper? Do you refer to wood brattice?
8707. Yes; ½-inch tongued and grooved boards;—would the water rot these boards as quickly as the other brattice? I have seen it used, and I prefer the wood, because there is a nasty smell that comes from the brattice cloth.
8708. Could you estimate the life of wood brattice? No.
8709. Would it be more expensive? Yes; it would have to be tongued and grooved boards.
8710. Would it not last all the longer? Mr. MacCabe has them in 6-foot lengths.
8711. Do you know that wood brattice is largely used in England? Yes; wood brattice was used in England when I was a boy.
8712. Do you think that canvas cloth would last anything like eighteen months, or a couple of years? I do not.
8713. If a man had been putting it up for that length of time who had had experience with it, had made a statement to that effect, would you be inclined to believe him? He might have seen brattice last that length of time, but I have seen brattice that would not last more than three months. I have seen new brattice put up to-day, and in three weeks after it was only fit to come down again. Of course, there are different kinds and degrees of brattice cloth.
8714. Would that be where there was a great deal of friction with the skips? There is other brattice that would stand the skips. There is a sort of bagging brattice, something like an old chaff bag, and if hung a certain way the weight of it will break it. That is an inferior brattice.
8715. Do you say that you believe in a minimum quantity of air being stipulated in an Act? I do.
8716. What minimum quantity of air do you think should be specified? Let me put it in my own way. I know places where, if the bords are bratticed, you cannot get what certain people ask for, that is 150 cubic feet of air through the district, because to brattice the bords would increase the friction.
8717. I am asking you for your own opinion? I consider that a minimum of 100 cubic feet should be stipulated as a safeguard; that is, as enough in conjunction with the word adequate.
8718. Do you think that if a minimum of 100 cubic feet is specified, and if something is done to conduct the air to the working face, that that would meet the requirements at the present time? I do; if the air was switched into the bords, I think we would hear no more about it, because that is where the air is to go.
8719. Do you believe in the distance specified in the Bill with regard to cut-throughs in rule 1 (*see Appendix A*)? If the bords are bratticed people could put cut-throughs where they liked. If it is specified that the air shall be kept to within 15 yards of the working face, that would make 20 yards of brattice in a 35-yard place.
8720. In a general way throughout the mine, do you pay attention to other matters beyond the ventilation? Yes; my eyes are on the lookout from the moment I go into a mine till I come out, and my chief thought is to keep people safe.
8721. Do you inspect the shafts in the collieries you visit? Yes; I do not say I go on a cradle and inspect them, because that is done every week by special men.
8722. You do not see that done? No.
8723. Is that inspection reported to you? Yes; it is put in the report books at the colliery.
8724. Do you look at the shafts when you go down in the cage? Yes.
8725. Can you make a fairly accurate inspection? Yes; by running slowly down.

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8726. How are most of the shafts you visit timbered? Some of them have very little timber in at all; where the strata is soft, they are bricked.
8727. Is that the case with every mine in the district? Yes; they are either bricked, or have iron cylinders.
8728. Are the Greta shafts bricked? There is nothing to brick in Greta; it is one of the hardest shafts in the Colony—hard conglomerate. As a rule I have insisted on having the surface strata bricked up, and that has been very often in my time.
8729. Do you know the Waratah shaft? Yes.
8730. What was the support in that shaft? Wood at the top.
8731. Was it the decay of this wood that led to the collapse of that shaft? I fancy it was from the side, where there was a leakage of surface water. It was a peculiar shaft altogether, but of course it was sunk before my time.
8732. Do you pay any attention to the pillars round about these shafts, to see if they are any size round the shafts? I do look at shaft pillars, and as a rule all that have been made of late years are pretty substantial.
8733. No matter when they have been made, do you know what they are? Yes; I know what they are.
8734. Have you any idea what the dimensions of the pillars are? I cannot give the dimension of them on the spur of the moment, but some of them are not a bit better than they ought to be.
8735. Are they as good as they ought to be? In the Newcastle Company's old pit there is not much shaft pillars, but there are splendid shaft pillars in the new pit.
8736. Where these shaft pillars are of too limited dimensions, could not there be packing done? There is packing.
8737. At what colliery is this packing? There is not a bit of fear now.
8738. Has this been done since the crush took place there? It was done at the time of the crush; they had to do it on the north side to save the shaft, and she is there now as safe as a church.
8739. Was that a very extensive crush? Yes; about 120 yards on one side of the shaft, as close as a box.
8740. What do you attribute that crush to? To the turning away of wide boards too near the shaft pillars some years ago.
8741. Would that have anything to do with the present management? No; it had to do with the management before Mr. Ross' time. It was in Mr. Ross' time, and only for some 8-yard pillars that he left, I would not like to tell you what might have happened there. I give him credit for leaving these 8-yard pillars.
8742. What was the size of the pillars? Four yards.
8743. Did the fall come over the pillars? Yes; it floored them in all directions.
8744. Is this a question that you think more attention will have to be paid to in the future? Attention has been paid to it in the Northern district for some time past. We have nothing less than an 8-yard pillar except in Wickham and Bullock Island, or Hetton. In other collieries the pillars are 8 yards and upwards.
8745. How far do you go back when you say for some time past? Several years—some of them since the Hamilton Pit disaster.
8746. Are you sure they are all 8-yard pillars in the Northern district? I am certain they are, except at Wickham and Bullock Island and Hetton. I know they are at the places that I go to.
8747. Are they not 6 yards at Seaham? I do not go to Seaham.
8748. Do you think it is a mistake to work with too small pillars? Yes; I do, if work is carried on with a view to extracting pillars.
8749. Do you think that it is a mistake to work with too small pillars whether work is carried on with a view to extracting them or not? That is a big question. I know of pillars 4 yards and less that have been standing for thirty years, and no grind on them yet.
8750. Do you know that there are other places where extensive falls have come over the pillars? Yes; it is only the question of getting a start to get what we call a loose end. I am a firm believer in large pillars, especially where they have to be extracted.
8751. Have you ever drawn the manager's attention to small pillars? Yes.
8752. At what collieries have you done this? I think I have drawn Mr. Ross' attention to keeping larger pillars.
8753. Did you draw his attention to this before the fall? No; after the fall. I have never notified anyone about the pillars. It is not within the scope of my duty here. If I saw that any danger was likely to occur I might do so.
8754. Have you not a very wide latitude under the 25th section of the present Act (*see Appendix B*)? Yes; for things that are not provided in the Act, but that always lands us in arbitration. The 25th section says, "If in any respect any inspector finds any mine, or any part thereof, or any matter, thing, or practice in or connected with any such mine, to be dangerous or defective, so as, in his opinion, to threaten or tend to the bodily injury of any person, such inspector may give notice in writing thereof to the owner or agent of the mine, and shall state in such notice the particulars in which he considers such mine or any part thereof, or any matter, thing, or practice to be dangerous or defective, and require the same to be remedied, and unless the same be forthwith remedied the inspector shall also report the same to the Minister. If the owner or agent of the mine objects to remedy the matter complained of in the notice, he may, within seven days after the receipt of such notice, send his objection in writing, stating the grounds thereof to the Minister, and thereupon the matter shall be determined by arbitration in manner provided by this Act in relation to the special rules, and the date of the receipt of such objection shall be deemed to be the date of the reference, &c."
8755. Suppose it did land you in arbitration? If I saw where it was necessary I would not hesitate to use that section. I have used it on more than one occasion to get something remedied.
- 8756-7. Would you not in many cases, from your practical knowledge of coal-mining, apprehend danger from a certain system of working that you saw pursued in the mine? If I saw 4-yard pillars, and knew that there was to be no pillar-coal extraction, I would not apprehend danger.
8758. If you knew that pillars were going to be extracted, and saw that very limited pillars were being left, what would you do in that case? In that case I should not use this 25th section of the Act, not if they were old workings.

8759. In the new system of working collieries, is not every mine worked with a view to extracting pillars? Not always; pillar extraction is of recent date in the Northern district except in Wallsend. I do not suppose there has been a pillar taken out in Brown's Collieries, or at Duckenfield, or at Seaham and West Wallsend. Mr. J. Dixon.
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8760. Are not the Seaham and West Wallsend Collieries new collieries? Yes.
8761. Then I am to take it that you have never drawn attention to the matter of pillars? Not by giving notice.
8762. You have not given any official intimation on the matter of pillars? I cannot say that I have.
8763. Do you not think this is a matter that comes within your province as an inspector? The 25th section of the Act says, "If any inspector find any mine or any part thereof, or any matter, thing, or practice in or connected with such mine to be dangerous or defective, so as, in his opinion, to threaten or tend to the bodily injury of any person, such an inspector may give notice in writing to the owner or agent of the mine." I might serve notice on a person and the pillars might stand for generations afterwards. The question is whether a thing is tending to bodily harm.
8764. The Act only provides that an inspector may give notice. Is it not only a notice? Yes; but it might cause trouble afterwards if the matter was taken to arbitration. If it went to arbitration and the pillars were standing intact, there would be nothing to go upon. You could not ask a man to make a 5-yard pillar out of a 4-yard pillar.
8765. If you considered that the mining practice that was being pursued was not conducted on principles that you would consider safe, would not you, as an inspector, feel bound to take action in such a case? If mining operations were not conducted on safe principles I would never rest until I got them on safe principles. That is my way of doing business. In South Waratah they are leaving a large barrier between the old workings and the new workings, and I am quite pleased with what they are doing.
8766. Do you know there was a crush at South Waratah, coming towards the return? I have a right to know something about that. I was there a good many times over that thing. I saw that crush coming on six weeks before it came, and drew the overman's attention to it, and he would not believe it; but she came and shut the road off, and the overman would not credit it. I told him to keep a look out when the crush was on. The crush never came to the surface.
8767. Are you satisfied with the system of working that has been followed in the past with regard to leaving these limited pillars? I am.
8768. Do you think that the way pillars have been extracted is hazardous to the men? Speaking as an inspector, I do not like to see pillar extracting where the pillars are much under 5 yards.
8769. Would you like to work yourself where the pillars are very thin? I would not like to say that. I have seen thin pillars that were quite as comfortable as other pillars, and I have seen other pillars not so. It largely depends on the roof. If you have a roof that you can break off at any time, there is no danger.
8770. Is not this a serious matter for the workmen? I do not know of a place where there is pillar working where there are not plenty of retreats for the men. I know of a place that is just finished where there was pillar-working for years. I used to go there, and they had the smallest pillars I have seen, and the men working them never had a scratch on them.
8771. You have given an instance of a crush on the main road in the Newcastle Company's Colliery—an extensive crush? Yes.
8772. Do you know of any other collieries besides the Newcastle Company's mine where any falls have come over the pillars? Yes.
8773. Can you say where? In the Hamilton Pit; and I know the fall came over the pillars in South Waratah at the time of that crush.
- 8773½. Have you ever known a fall come over the pillars at Lambton? Over pillars?
8774. Yes, over pillars? I am quite sure about Lambton.
8775. Have you ever known anything of this kind to happen at Wallsend? No; not at Wallsend.
8776. Nor Minmi? They do not extract pillars at Minmi.
8777. Have you ever known any section of the work at Minmi come over pillars? I believe they had a big fall at Minmi before I took office.
8778. Do you know anything about a fall that took place at the Co-operative Colliery? I do;—to a great extent it came down over the pillars. It is about the worst thing I know.
8779. That fall was coming over the pillars? Yes.
8780. Did you make a report about that Hamilton Pit matter? Yes.
8781. Was your report handed in at the inquest on that disaster? I had not made my report then.
8782. Have you that report with you now? No; I wrote two reports on that matter.
8783. Can you give us the substance of your reports? In my reports I gave the history of the place and how the accident happened. I was down the pit within a few minutes after she caved in, and gave the history of the thing from start to finish, together with a lot of evidence that was taken at the inquest. There were about eleven sheets of foolscap altogether in one of my reports (*see Report, Appendix S*).
8784. Did you come to the same conclusion with the jury upon this matter? Yes; about the pillars; that she came over the pillars on the cross-cut.
8785. Was the cross-cut the main road for the men to come out by? Yes.
8786. Do you know that a number of lives were lost through that disaster? Yes.
8787. And that a number of men had a very narrow escape? Yes, they had; I was there when they came through.
8788. Did you report in your annual report any of the accidents that happened to the men beyond the men that actually lost their lives? No.
8789. Did you not hear a tale from these men about the way they were affected when coming out? It would be a sorry experience. I tried to find that track, but never could.
8790. Was it not a considerable shock to these men? Without a doubt it was.
8791. Would you consider that it was a personal injury? No; a man might get a shock that might injure him for life, but if it had been a broken limb or leg it would have been a different thing to report.
8792. Did not some of these men say that they were knocked down? Yes; and plenty of us have been knocked down.
8793. Do you know that as far as the man Ford was concerned that he pursued his claim for injuries in the Law Courts? I do.
8794. And that legally his claim was sustained? Yes. 8795.

Mr. J. Dixon. 8795. Do you not think that some reference should have been made to these men in the reports? I do not, or else I should have made reference to them. I did refer to their coming out, but I did not refer to any injuries because I did not know that they had received any injuries.

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8796. I refer to your tabulated statement? Yes.

8797. Were you at the inquiry? I was.

8798. Mr. Gregson.] What inquiry do you refer to? At the inquest on the bodies of Herbert Pettit and Hodson.

8799. Mr. Curley.] Will you look at this letter, dated 22nd June, 1889;—it is a notification that was sent by the manager of the A.A. Company to the Examiner of Coal-fields in connection with the Hamilton Pit disaster;—will you read what it says:—

Jno. M'Kenzie, Esq., Examiner of Coal-fields,—
Sir,

A.A. Company, Hamilton, 22 June, 1889.

Mr. Turnbull desires me to inform you that a heavy fall of roof has occurred in Hamilton Pit cross-cut. There are about fourteen men entombed, and no likelihood of getting them out at present.

I have, &c.,

HY. COX,

Clerk.

Mr. Inspector Dixon for the usual report, in compliance with sections 28 and 29 of Coal Mines Regulation Act (1876), as soon as the circumstances in connection with this sad accident will admit of its being made.—J.M., 24/6/89. Mr. Dixon, Inspector of Collieries, B.C., 24/6/89. Returned with report.—J.D., 6/8/89.

As the result of this communication, did you make a report on this matter? Yes; I made two reports on the matter.

8800. Will you look at the finding of the jury on the Hamilton Pit disaster? [*Witness reads, see Appendix S.*]

8801. Will you now look at the rider? [*Witness reads, see Appendix S.*]

8802. Had the men any other possible escape from this accident other than the main cross-cut road? No; that was the only way of escape.

8803. Was the main cross-cut road entirely blocked? Yes; for a long distance.

8804. For what distance was the road blocked? I forget just at the present, but it was a good part of 60 or 80 yards; I should think to Murphy's Heading end.

8805. Were most of the bodies recovered? They were all recovered.

8806. Do you recollect the bodies that were found in Murphy's heading? I do.

8807. Were those bodies crushed by any roof? Three of them were not, but I believe Hodson got his death blow coming out.

8808. Did he get his death blow from the roof? Either from the roof or from the side. He was all open on his side, and he laid down on his back and died.

8809. President.] Was it a regular hole on his side? Yes, as if a piece of something had struck him and opened his side.

8810. Mr. Curley.] Was there a lot of coal thrown off the pillars into the heading? It squeezed in. It was Murphy's heading that did the mischief. It was a bad bottom that set that place away and caused the mischief. The roof was weighting at the back, and through the pillars sinking the whole thing was set away. The pillars were unbroken, but the bottom gave way, just as a narrow wheel will sink in the mud, not like a wide wheel. I was wondering what did the mischief, until I got into Murphy's heading, and I saw places where roof and floor met. That was what did the whole mischief.

8811. President.] What would have obviated that? Larger pillars. A large pillar will not sink as quickly as a small one.

8812. Mr. Curley.] Do you think a larger pillar would have obviated that catastrophe? A large pillar will not sink in the same way as a small pillar.

8813. Was that roadway laid on any refuse, or anything like that? I know it was not. I know the heading as well as I know my own house.

8814. Did the fall come a good bit outside Murphy's heading? It was simply as if the whole thing was in motion. The roof at one time was going in a big body right from the goaf, but it got arrested, and the roof in the open space broke down. The big body got arrested from going to the goaf and the roof and cross-cut—that is, the shaly stuff got away down.

8815. Did you hear most of the evidence that was given at that inquiry? Yes.

8816. Do you know that numbers of the men stated that the place was on the move in different headings? Yes; on the Saturday morning.

8817. Was that on the morning of the fall? Yes.

8818. Did some of the men leave the mine when this occurred? Yes; and I am surprised they did not all leave.

8819. Are you not surprised they were not called out? I am surprised that practical men did not come out.

8820. Are you surprised that they were not called out? I believe they should have been called out.

8821. President.] Who should have called them out? The overman.

8822. Mr. Curley.] Was there an extensive fall in the Stockton Colliery some time ago, where the roof came over the pillars? Yes. When I say "yes," I cannot speak positively about it, because I was not in the place. I do not go to Stockton, because my brother is overman at that colliery.

8823. Was there a fall there in the year 1889? Yes.

8824. Who was the manager there then? Mr. Thomas.

8825. Did you go to the colliery then? Yes.

8826. Do you know of any big fall that occurred on the roadway at that time? Yes.

8827. What did you attribute that fall to? To the shale between the two seams; but the fall never went to the surface. It is a nasty brittle shale, that will break down through anything.

8828. Did the fall come over any pillars? No. Of course it was on the main road, and it took the back return to some extent; but I cannot say it came over any pillars. It seemed simply to keep to the roadway.

8829. How far did the fall extend? I cannot say now, but it was a pretty good distance.

8830. Have you seen some very thin pillars in the Stockton Colliery? Yes; I gave that in my evidence before the Royal Commission on Collieries, adjacent to Ferndale, which held its sittings at Newcastle.

8831. Did you draw the manager's attention to these small pillars? Yes; and got him to chock some of the bords to support the roof, because I thought the pillars were not good enough. It is a very friable coal at Stockton.

8832.

Mr. J. Dixon.

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8832. Do you know the Stockton ocean leasehold? Yes.
8833. Is the roof of the same character going in that direction? It seems to be a rather better roof than the roof on the mainland as far as I can see of the strata. It seems harder rock there.
8834. Is that dipping going to the ocean? Yes.
8835. How much is it dipping? I think there is about 240 feet of cover from the bottom of the water to the top of the coal.
8836. Will that all be rock? No.
8837. How much rock do you think there will be? Forty feet or more by the borings.
8838. Do you think that special care will have to be exercised with regard to that colliery? There are 8-yard pillars and 6-yard bords, and there is not a better timbered pit in the Colony. Men are kept specially for that purpose. It is splendid timber; I have not seen better timber anywhere. They keep special timber men to keep the old places well timbered.
8839. Do you know whether there is any clause in the Stockton lease that prevents them from extracting pillars? Yes.
8840. You know that? Yes; the lease prohibits the extraction of pillars. They would get a taste of the Pacific there if they took pillars out.
8841. Do you know whether any of their workings have come under the harbour? I do not think there are any workings under the harbour. I do not keep the plans, but I do not think they are under the harbour.
8842. Have you seen any surface subsidences at Stockton? I saw a crack or two on the road there one day.
8843. Have you made any report upon these subsidences? Yes; Mr. Humble and I made a joint report on these I believe. There was a report that it had cracked the Catholic church. There is no doubt the church was cracked, but I could not say what did it.
8844. Did you see any of the kerbstones in the streets? Yes; they were just as if the rats had been under them.
8845. Did you see any supports come away from under the houses? I saw some of the front gates that would not open or shut very well.
8846. Did you see any of the steps to those houses cracked? Yes; two or three of the steps.
8847. Would you judge from that that there had been a subsidence there? Yes; that there was something wrong somewhere, but from the height of a seam like the Stockton seam I would have looked for greater results on the surface.
8848. Do you know if there were any pillars taken out at the Stockton Colliery? I am satisfied there has never been a pillar extracted at that colliery.
8849. Would you think that any fall had gone over the pillars? Yes; I saw it do it on the other side of the pit, in Mr. Thomas' time.
8850. In what section of the pit was that? In the No. 17 Ganning bord.
8851. Was that on the side next to the Pacific? About the middle of the peninsula; nearer the Pacific.
8852. Was it on the side facing the Pacific? Yes, in the top seam. I was there all night one night when that creep was on, listening for indications.
8853. Did it come over several pillars? Yes; it was a peculiar coal; some of the pillars were literally a small coal heap. We know that you cannot melt coal, but you could almost melt that.
8854. Was the coal very brittle? Yes; it was a lovely bit of coal; it was like tar when you put it on the fire. That and the A.A. Company's sea pit is the grandest bit of coal in Australia.
8855. Were you sent for to go to Stockton some few years ago? I was.
8856. Can you tell us what it was you were sent for? The roof had come away, and a lot of water had come in.
8857. Was it much of a break-down in the roof? I think about 12 or 14 feet, as far as we could see, and about 18 feet across, shaped something like a bell mouth.
8858. Did you go over there? Yes.
8859. And what did you do? Mr. Humble, Mr. M'Auliffe, and I went down the pit, together with the night-shift boss, and a dismal time it was for the four of us.
8860. What did you see when you got there? We found the water pouring down, and the sand running in all directions. The sand was almost knee deep in some of the bords then.
8861. Was there very much water at that time? Yes; there would be a large amount of water, but you could not estimate the quantity then, because it was shedding all over. It seemed to be coming like a flood, and you could not estimate the quantity till the pipes were put in.
8862. Was the water very salt? As salt as the sea.
8863. Would you judge from that that it was ocean water? No; that it was water that was held in suspension in that peninsula. I have an idea that there was a set through, and that the water worked through that sand, because you got fresh water on the top.
8864. As you got down, did you get this salt water? Yes.
8865. Do you know what attempts were made at the time to cope with this difficulty in the mine? I do.
8866. Did the manager put in several dams? Yes; after he stopped the inrush of the sand. I reckon that manager did the cleverest thing that has been done in the coal trade. I do not think there has ever been a cleverer thing done in the country, and I said to Mr. M'Auliffe, "You are doing right."
8867. Did he put these dams on the outside of the sand bags? Yes.
8868. When all this was completed, did you make a report about the matter? Yes; Mr. Humble and I made two or three reports.
8869. At that particular time did you not make one particular report? Yes.
8870. Did you stipulate in your report that the men were not to re-enter the mine? No; we put that in a book that is kept at the office.
8871. Did you stipulate that the men were not to re-enter the mine until such time as you declared the mine to be safe;—was that the substance of the report? Yes.
8872. When you made that report, had you any idea whatever of closing the mine up altogether? No, not that I know of.
8873. What was the object of the report? It was to hinder the men from going back until the mine was considered to be safe.

- Mr. J. Dixon. 8874. What had you in your minds at the time ;—did you wish to have anything carried out? We had in our minds the rectifying of this evil, but the thing that was foremost in our minds was that the bottom of the downcast and furnace shaft was 100 feet below the level of the workings. The main shafts were the only outlets for the men, and 22 chains along the main road there was a place 5 feet lower than the shaft bottom that could be blocked with water, and that was what we kept in our minds all the time. Until the third shaft was sunk we could not certify to the pit being safe.
- 16 Oct., 1895. 8875. Were you afraid of the water cutting off any means of escape for the men? Yes, that was the way we looked at it; because when that fall took place there was nothing to say that another fall might not take place.
8876. Do you think the fall had been an extensive one? It was a local fall, and it is a local fall with water that we have to be most afraid of.
8877. *Mr. Gregson.*] What was the size of the bord? It was a 6-yard bord, that came away close to the pillar side. It had a cut-through close to where it came away. I do not fear a place where we have a large body of clay, but it is a local fall that I care most about, because such a fall might get hold of a feeder of water and do a lot of damage.
8878. Have you seen any reason to alter your opinion about the matter since? We declared the pit safe on Monday last, because the third shaft is now down. That shaft is 70 feet above the level of the other shaft that we had a doubt about, and in case of emergency there is an outlet for the men; they need not run to the other shafts at all. There is a capital road right away to it.
8879. In the leading places in connection with this colliery are bores kept in advance of the workings? Yes; in the leading headings.
8880. To what distance are these bores kept? From 8 to 10 feet.
8881. Do you visit that colliery very often? Only with Mr. Humble. I see his reports, because they come through my hands. Mr. Humble can tell you all about this colliery, because he goes there regularly.
8882. *Mr. Curley.*] Do you say that the C Pit is working out towards the ocean? No.
8883. They do not go into the ocean? They have not gone yet, but there is one cross-cut pretty near. The only place working under the ocean at present is Stockton.
8884. Have you taken any soundings? Yes; the soundings have been taken by the Government all over that bight.
8885. Do you know if any information has been obtained with regard to the surface deposits down to the rock? No; it would be an impossibility to get them.
8886. Is there anything impossible in these days? That is impossible. I know what it is to bore in quicksand, and I think, when they bore up over, and see 30 or 40 feet of cover, they have a very good margin with the timber they are using.
8887. *Mr. Gregson.*] Are they working any bords under the ocean yet? Yes.
8888. *Mr. Curley.*] Do you think the 6-yard bord system can be carried out there? Yes; and an 8-yard pillar. I think a 6-yard bord can stand as well as a 4-yard bord, especially where that shale is.
8889. Do you know if the mine is making much water? Yes; but nothing to equal the power they have to cope with it.
8890. Is it making water to the dip? Yes; you can reckon Stockton virgin country, and she is bound to make a lot of water.
8891. Do you think the 6-yard bord is safe enough there? Yes; as far as can be seen at present.
8892. Will you look at sections 18-16 and 19-17, on page 17 of the proposed Bill (*see Appendix A*) ;—do you notice the amendment that has been made in sub-section III of section 19-17 with regard to the certificates of inspectors? Yes; I notice it has been marked off.
8893. It has been marked off by the Legislative Council? Yes; but the Legislative Council has not insisted on its amendment. That section will be carried now if the Bill goes back as it was in its original form.
8894. Without the words the Legislative Council have introduced into it;—as it originally left the Legislative Assembly? Yes; on the motion of Mr. Alexander Brown that sub-section was carried by the House.
8895. Do you think that that sub-section should stand as it was originally drafted by the Legislative Assembly? I do.
8896. *President.*] Have the Legislative Council agreed to that subsection as originally drafted? Yes; the Council does not insist on its amendments in section 19-17 of the Bill.
8897. *Mr. Gregson.*] You said that you had seen for yourself the explanation of the occurrence in Murphy's heading? Yes.
8898. What was the nature of what you saw? The throwing up of the bottom that gave the roof scope.
8899. Are you aware that borings had been made to prove the bottom stone? Yes; after the disaster.
8900. Did these borings show that the bottom stone was unreliable? Yes; that there was a soft layer of rock underneath the first hard crust.
8901. Is that a usual thing in the Northern district? It is a very unusual thing in the bottom of the No. 6 seam.
8902. Have you known it to be elsewhere in any part of the district? I have known the bottom to pucker once, but I do not know of a soft bottom anywhere else in the district.
8903. Had you any reason to suppose that there was any danger of the bottom giving way? No.
8904. Do you think that the management should have had any reason to suspect it? No.
8905. At the time after the jury in the two inquests came to their conclusion, and their verdicts were given, were these facts known? No; they were not known until after the inquest.
8906. Evidence to that effect could not have been given at the time, and was not laid before the jury? No.
8907. What is the lesson you have gathered from all that has taken place. Do you think the accident could have been provided against by legislation? Larger pillars would have prevented the accident. They would not have been so liable to sink. She would have broken back in the goaf.
8908. In compelling people to leave larger pillars, would not there be a considerable loss of coal? My experience is that more coal will be got with larger pillars.
8909. If you work the pillars? Yes.
8910. In places where it is not intended to work the pillars, if legislation is insisted upon, do you say that

- that it would not cost the loss of a lot of coal to the country at large? It would; but the lesson to be learnt is that they are leaving larger pillars now.
8911. Even where they are leaving the pillars and do not intend to work them out? That Hamilton pit roof is the most peculiar roof I ever saw. It is the hardest roof I ever saw.
8912. Would you think it necessary as shown by this disaster that legislation should be given upon this subject now? As a matter of fact, I do not think we should legislate for the size of pillars. I think it ought to be left to the discretion of the manager, except under tidal waters, and then the Government can do what is required in their leases.
8913. *Mr. Curley.*] You think that provision can be made by the Government for stopping the pillars from being taken out? Yes.
8914. Do you think the size of the pillars should be stipulated in these leases? Yes.
8915. *President.*] Why do you think so? Because under tidal waters every precaution must be used. We want to have a pillar that will bear the strata for twenty-five or thirty years, and the Government has the power to say, when granting leases, "Your pillars must be of such and such size." The size of the pillars can be left out of the Bill, and the Government, in their leases, can deal with the size of pillars under tidal waters.
8916. *Mr. Curley.*] What are you going to specify if you do not do it in definite language. Are you going to leave it a matter of speculation under tidal waters? It is provided for in definite language in the Government leases.
8917. In any case, with regard to the Hamilton Pit disaster, whether the bottom came up or the top came down, or whether it was both combined, do you consider that the accident was caused through the weakness of the pillars? Yes; and the strong roof.
8918. *Mr. Gregson.*] And the bottom? It was the tremendous weight of roof that caused that bottom to pucker.
8919. An ordinary floor would not have pucked? I do not think so.
8920. *Mr. Curley.*] What part of Murphy's heading did you say showed indications of this;—how far was it from the cross-cut? I cannot tell the distance. It was beyond where we found Hodson. Hodson came out of a narrow place, and it was about there that the thing could be seen quite plain.
8921. *Mr. Gregson.*] Were borings put down to test the bottom? Yes.
8922. *Mr. Curley.*] How far was that from the main cross-cut? It was pretty well 100 yards where Hodson was found, but it was fallen or disturbed all the way to the cross-cut. The place was not more than half the height down there. There was a settling down, or rising up. It was a creep, not a crush. A creep is where the bottom and top creep together.
8923. Do you know that this crush went to the surface? I do.
8924. Would not that be an indication that it was a crush? It was an indication that she crept and then the whole body settled.
8925. Do you know the height of that heading, near the cross-cut, before the fall took place? When she was working it was a good horse-height—perhaps 6 feet.
8926. What was the height of that heading after the fall? Just high enough for me to crawl on my belly.
8927. Was that near the cross-cut? Yes; a good distance down. I was down there three times before the men got in there with their timber, and nearly killed myself.
8928. Do you mean to say that at Murphy's heading end, abutting to the cross-cut, after the men went in to clear the heading there was no more room than for you to crawl on your belly? I was there before they cleared the heading, and tried to get through three times, and nearly killed myself.
8929. Was Hodson's body found on some coal on a ledge? Yes. I got to one end of the coal, and Hodson's body was on the other side of the coal, and through the place working over our heads we dare not remove anything.
8930. Do you think Hodson had attempted to work his way out through the coal on the top? Yes; we suppose so, for about 20 yards. I worked my way in through the small hole along with others.
8931. You said something with regard to the old pit—the mine now working;—do you notice a similar roof there? Yes; in No. 3 district.
8932. Is pillar extraction going on there now? Yes.
8933. What is the size of the pillars there? Some 4 yards, some 5 yards, and others 6 yards.
8934. Is every precaution being taken in the working of this to guard against a similar fatality? My word, there is. I never saw more timber on hand than there is in that pit, and I am down there very often. It takes me two or three days to go through the pit.
8935. Can you give us a sketch of the Borehole pit No. 2, giving an outline of the pillar working road being carried on? [*Witness draws sketch.*] All the pillars are nearly out in the old No. 5. Through the fault they are working down on the lower heading with two or three pillars. A certain portion of the ground is all standing. They are working on the third and fourth heading three pillars.
8936. What distance will you be from the main road to the pillar working? About seven pillars in No. 3 and the galley.
8937. What are the sizes of the pillars? From 4 to 6-yard pillars; but on the horse road they are all good.
8938. Are the pillars not in the same irregular condition that they have been for years past; that is, that they are not uniform? They are not uniform; they might be 4 yards and under 3 yards in some instances. The size is on the pillar end, but I cannot say what width they are in the centre.
8939. Are you working under a good deal of uncertainty? There is a good deal of uncertainty in all pillar working; but when men do their best what can be said. The officers of the pit are there, and if that roof shows any signs of coming on they would hunt every man out of the pit. They have strict orders to withdraw the men if the roof shows any signs of coming on.
8940. Are these the manager's instructions? Yes; every man is tutored in the roads, leading out of the pit. In the old galley they got nearly every pillar out, and every man was well tutored about the way out.
8941. Is the timbering good? Yes; it is splendid timbering.
8942. Are chocks set? Yes.
- 8942½. *Mr. Gregson.*] Is the bottom stone proved? Yes.
8943. What is the bottom stone? Good—the ordinary grey post.
8944. Is the galley road the same? Yes.
8945. Is the galley road the same in the bottom? Yes.

- Mr. J. Dixon. 8946. Is the road you have spoken about as being so hard now the No. 3 road that led to Murphy's Heading? Yes; Hodson's Heading was a branch off the main road.
- 16 Oct., 1895. 8947. Was it any great distance from Murphy's Heading? I should say about a couple of hundred yards, because Murphy's Heading was about the fifth up the cross-cut.
8948. *Mr. Curley.*] Have you looked at the section in the proposed Bill dealing with the powers of inspectors. Will you look at section 21, sub-section 5, on page 8 of the Bill (*see Appendix A*); you will see that that sub-section gives the inspector power to withdraw the men in case of danger? Yes.
8949. What is your opinion upon that sub-section;—do you think that power should be vested in the inspector? My opinion is that the manager or the overman ought to have power to withdraw the men.
8950. *President.*] You do not think the inspector should have that power? Not the inspector; I do not believe it is a power that should be in everybody's hand, and in the case of the inspector he only visits the pit now and then.
8951. *Mr. Curley.*] I suppose the inspector gets pretty familiar with the colliery in making his visitations;—has he not a very good knowledge of the pit? In a matter of the roof weighting, that roof has certain stages to go through before it will break, and a roof may be working to-day very badly and may cease working at night or the day after. An inspector may go into the pit on the following day and find everything quiet, and on the third day there may be a collapse. In such a case the manager might turn and get behind the inspector's back, and say, "The inspector was here in the pit yesterday, and said nothing about this." It is my opinion that the manager should have this power.
8952. Suppose a case in which an inspector saw danger, and told the manager that he thought the men should be withdrawn, do you think after the inspector telling him this the manager would take upon himself to keep the men in? Never; that is my experience.
8953. *President.*] You must not consider the managers of the large mines only;—do you think the managers of any of the smaller mines, who might be bothered with pressure of trade, would dare to keep the men in when the inspector thought that they should be withdrawn? No, I do not. I know every one of the managers in the Colony, both north and south, and all the mines. I inspected the southern and western mines before Mr. Rowan was appointed inspector, and know every manager and every overman, and I say now that I do not know a manager who, if I told him that I thought the men should be withdrawn, would refuse to do so.
8954. You have no interest, I suppose, with the managers in this matter? I have not; I am simply giving my own opinion.
8955. Your interest is the safety of the men employed? Yes; I am prepared to go night and day if I can keep them safe.
8956. Can you mention one exception where managers have not complied with your instructions? I said if we saw danger. Suppose there was actual danger, and we, as inspectors, said to a manager, "You had better withdraw the men," I cannot conceive of an instance in which our request would not be complied with. I was in the A.A. Company's mine three weeks ago, when three men were drawing a jud, and I said, "I would have those men out of there before that jud comes down," and the deputy went and took the men out there and then, without any bother. I thought it right to do so, because while the place was working behind them they could not get out.
8957. *Mr. Curley.*] If you had not been there, probably this might not have been done? It might not have been done, and nothing might have happened, but I know that in the old country they withdraw men where juds come down, and I thought it right to do so; but I am prohibited from anticipating danger, according to the opinion given by the Attorney-General (*see Appendix Z*).
8958. Assuming that you went into a colliery as an inspector, and that you noticed something in connection with the mine that was likely to bring about some loss of life, and that you brought this under the notice of the manager, as an intimation that practically the men should be withdrawn; but that under the Act you had not the power to withdraw them, the whole power being in the hands of the manager; that there was a difference of opinion, and the manager said he did not think there was any fear, and did not agree with you in apprehending danger;—what should be done in a case of that kind? The manager would be amenable in such a case.
8959. If life was lost, that would not bring life back? I know it would not.
8960. In a case like that, do you not think that an inspector's opinion should prevail over the opinion of the manager? If I went into a place and saw men in absolute danger, I would request them to come out.
8961. Independent of the manager? Yes.
8962. Suppose the Act did not give you that power? I am afraid in that case my own humane feeling would override the Act.
8963. Do you still think that the power which this sub-section seeks to give should be left in the hands of the manager? I think the man who withdraws the men should have the power to send them back.
8964. Would this not hamper you as an inspector? No; it does not hamper the English inspectors. If I inspected a colliery, and saw men working in danger, I would request the officer in charge to withdraw the men, and if he did not withdraw them I would withdraw them myself.
8965. Would you withdraw them if the power to do so was not provided in the Act? Yes.
8966. How often do you make your inspections? Every six or seven weeks at the present time.
8967. Did you not say in that inquiry upon the Hamilton Pit disaster that the inspectors did not visit the mines often enough? Yes; but we were short-handed then. We have an additional inspector since that time.
8968. How many collieries have you on your list now? About seventy collieries. It takes four days to do the Wallsend Colliery, and it takes me three good days to do the Newcastle Company's mines, that is to go through every district, and two days to do the old pit. I go into every pillar-working in the place.
8969. Do you find in making your official visits to the different collieries that the managers afford you every facility for making your inspections? Yes.
8970. Do they know when you are coming? No; not further than that I may be seen.
8971. Have you gone to any of these collieries when the manager has not been about? Yes.
8972. Your visits of inspection are not known to the colliery managers? No; they are surprise visits. I go when I think proper.
8973. In making your inspections, do you pay much attention to the engine roads? Yes.
8974. Do you pay attention also to the refuge places? Yes; to see that they are kept clear.

8975. Do you examine to see whether these refuge places are a proper distance apart? Yes; in most of Mr. J. Dixon. the pits I have measured them personally.

8976. *Mr. Gregson.*] Do you approve of cutting into the roof in cases where they are not high enough? 16 Oct., 1895. No.

8977. Do you believe in cutting into the floor? Yes; sooner than into the roof.

8978. Do you think the refuge holes should be made upright? They should be made so that a person can walk in without striking his head.

8979. In a case where the seam is not high enough you would sink into the floor? Yes; rather than the roof.

8980. Would not that cause danger sometimes? No; it could be made on the slope. I would never think of cutting up into the roof in a seam like the Seaham seam, where gas is given off. I would have them sloped from the rib, and I believe in the man-holes being 3 feet wide.

8981. *President.*] Will you look at rule 15, on page 28 of the Bill (*see Appendix A*). You will see that the Legislative Assembly say these man-holes should be "6 feet high, 3 feet wide, and 4 feet deep," and the Legislative Council amend that and say "of sufficient length, and at least 3 feet in width?" Yes; but that is where the horse is drawing the skips, not on the engine roads. The rule dealing with this matter is rule 14. It is an innovation to make man-holes on a horse road.

8982. On the horse roads would you have it as the Legislative Assembly has put it? I do not think it would be any hardship to do what the Assembly wants.

8983. Have you any objection to what the Assembly proposes as the size for these man-holes—6 feet high, 3 feet wide, and 4 feet deep? I have no objection to that whatever. I notice that rule 19, "trolley over pit mouth," is scratched out by the Legislative Council. It is my opinion that that rule should remain in the Bill.

8984. *Mr. Curley.*] Is there anything else in the Bill you would like to refer to? Yes; to section 46, [43] sub-section B (*see Appendix A*), relating to the distance between the two shafts. The Legislative Assembly put the distance between the shafts at 50 yards, and the Legislative Council has amended this to 15 yards. I am in favour of the 50 yards. I think 15 yards is too close.

8985. The Assembly has agreed to compromise this, and put the distance as 30 yards? I go in for 50 yards. I know that the distance apart of some shafts is none too much, and 50 yards gives room for shaft pillars. There is also a greater factor of safety there. You can get your shaft pillars in 50 yards, but you cannot get them in 15 yards. Fifteen yards is too close; with 50 yards you get substantial pillars.

8986. *Mr. Gregson.*] Is it not equally possible to get good shaft pillars with a minimum distance, as with a greater distance? No; there is the mouldering of the pillars to be taken into consideration, and if there is anything in the shape of a crush those shaft pillars go. This was the case with the shaft pillars in the Newcastle Company's mine. When the crush came on there, both shafts were saved with great difficulty. If one shaft had gone, it is my opinion that it would have taken the other shaft with it.

8987. What distance are the shafts apart there? Twenty yards apart; and if one shaft goes the other must go. We have the shafts in some of the collieries as much as 15 chains apart.

8988. *Mr. Curley.*] Do you know the surface deposits in some of the collieries? Yes.

8989. Have you been in the Vale of Clwydd colliery? Yes.

8990. Have you noticed the shaft pillar there on one side of the shaft? Yes.

8991. Have you noticed any extensive vacant ground? Yes, one side of that shaft is completely riddled with workings.

8992. Do you notice anything else in the Bill that you would like to draw attention to? I would like to refer to Rule 21, [20] on page 28 of the Bill (*see Appendix A*). The words there—"every shaft in course of sinking shall be kept clear of all noxious gases, by a fan or some other appliance"—have been eliminated by the Legislative Council. I believe in that provision being kept in the Bill.

8993. Why do you believe in that provision? If the shaft is not kept clear of noxious gases, and men have to work there in numbers, in powder smoke, or dynamite, it is not a desirable thing, especially in hot weather, and I believe that every shaft should be kept clear of gases in the course of sinking, for the comfort of the men.

8994. *Mr. Gregson.*] Will you look at Rule 12, sub-section D, on page 26 of the Bill, "nor shall coal, or coal dust, be used for tamping." We have had some evidence given with regard to that sub-section. What is your opinion on that matter? I believe in the amendment.

8995. *Mr. Curley.*] The Legislative Assembly proposes to introduce the word "dry," which will make the amendment read "nor shall dry coal, or coal-dust be used for tamping." What do you think of that suggestion? There are very few people who will tamp with dry coal.

8996. *Mr. Gregson.*] Do you approve of the rule as printed? Yes, I do. That would apply in a mine that is very dusty, where there is no fire-damp given off, if it be true what they tell us of the action of coal dust.

8997. What have you to say to sub-section E. You will see that the words, "Provided that no person shall return to a place where such charge has missed fire until a period of eight hours has elapsed from the lighting of the fuse attached to such charge," have been struck out? I believe it ought to be eight hours at the very least. No men are allowed to return within the eight hours in the northern district.

8998. Would it be any limitation to the period if it was limited to places where fuso only was used;—may we not have electric arrangements for firing shots? You will not get a missed shot with electricity.

8999. Would you recommend the insertion of the words, "where fuse is used." Do miners use squibs out here? I believe in the squibs, in preference to the fuse; I think it is safer.

9000. Do you think it is only where fuse is used that these words are required? I think it is better to leave it the way it is.

9001. You prefer to let it be as it is? Yes; it is a hardship for men to lose a day's work, but that is better than their lives or their eyes.

9002. *President.*] If the rule provided that in cases where a fuse is used, no person should return to a place where a charge has missed fire, until a period of eight hours has elapsed from the lighting of the fuse attached to the charge; do you think that would meet the case? Yes; that will do.

9003. Referring to sub-section D, in many places, I suppose, they have nothing but coal-dust;—would it meet your difficulty if it reads, "nor shall dry coal or coal-dust be used for tamping"? I know men carry baked clay rather than tamp with coal-dust, and most people, when using small coal, wet it.

Mr. J. Dixon. 9004. Do you think it is better not to allow the use of coal-dust at all? I think so. I think that is where we get the blown-out shots from. A shot that blows out and does not do its work, will tail out 4 or 5 feet in a flame, and a fire may take place and somebody get singed.

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9005. The miners say, "If we damp it, why should we not use it";—do you think there is any difficulty in putting this in, "nor shall dry coal or coal-dust be used for tamping";—you would not allow them to use dry coal? No; I believe in the wet coal.

9006. You would put in, "nor shall dry coal or coal-dust be used for tamping"? Yes; it would be an easy matter to run a skip of tamping into a flat.

9007. Mr. Gregson.] That is only to apply to where safety-lamps are used? Yes.

9008. Nor in any mine where safety-lamps are used shall dry coal or coal-dust be used for tamping;—do you agree with that? Yes; I am against shooting at all where gas is.

9009. Mr. Curley. Have you seen what Fairley says about coal-dust? Yes; I have nearly all the mining books that are published.

9009½. He makes this statement,—

Ventilation Made Easy.—W. Fairley, F.G.S. Page 76. 70. Is coal-dust explosive? Several mining authorities have given it as their most decided opinion that it is so; but on the other hand a large number of practical mining engineers do not believe that it is in itself explosive, without some small mixture of fire damp. Recognising the importance of the question as touching the safety of coal mining, the Government have appointed a Royal Commission, who are now engaged in enquiring into the question.

Page 86. The Royal Commission appointed to enquire into the question of coal-dust and colliery explosions have already taken evidence from several practical and scientific men on the subject, some of whom have expressed their doubts as to the explosibility of coal-dust—without the presence of, at any rate, a small proportion of inflammable gas. The writer cannot call to mind any colliery explosion having taken place from coal-dust during his forty years' experience in coal-mining operations in different districts. The Commission, in their final report (p. 48), say:—"The following facts relating to the part played by dust in coal-mine explosions may, however, now be regarded as conclusively established. (1.) The occurrence of a blown-out shot in working places where very highly inflammable coal-dust exists in great abundance may, even in the total absence of fire-damp, possibly give rise to violent explosions, or may, at any rate, be followed by the propagation of flame through very considerable areas, and even by the communication of flame to distant parts of the workings where explosive mixtures, or dust deposits in association with non-explosive gas mixtures, exist. (2.) The occurrence of a blown-out shot in localities where only small proportions of fire-damp exist in the air, in the presence of even comparatively slightly inflammable or actually non-inflammable but very fine, dry, and porous dusts, may give rise to explosions, the flame from which may reach to distant localities where either gas accumulations or deposits of inflammable coal-dust may be inflamed, and may extend the disastrous results to other regions."

I am not quite of that opinion. I believe there has not been a pure and simple coal-dust explosion. I believe coal-dust has been a stalking-horse more than once.

9010. Do you think that sub-section D, of Rule 12, should read "nor shall dry coal, or coal-dust be used for tamping"? Yes, I would agree to that.

9011. Is that your final decision? Yes; that dry coal shall not be used for tamping.

9012. Would you provide for the watering of those mines where it is very dusty? Yes, where there is fire-damp; I believe the mine should be watered. I would sooner travel in mud than in dust.

9013. Do you think a mine should be ventilated by a fan where fire-damp is given off? Yes, I believe in a fan.

9014. Have you given any attention to the question of the eight hours? Yes, but I would sooner not talk about the eight hours.

9015. With regard to special rules, do you think that there should be some aim towards uniformity in this respect? I believe the special rules should be uniform throughout the Colony, and that the signals should be the same at every colliery.

9016. Mr. Gregson.] How is that to be arrived at;—who is to settle what these special rules shall be? I think some of us could settle that with the help of one or two managers. Special rules are pretty well uniform in England.

9017. Is that a matter of authority or a matter of convenience? I think it is a matter that would cause everyone to know everything about a place. At the present time we have one thing at one place and another thing at another place. The special rules at present do not meet requirements. I think a lot of detail could be put in special rules that would cover every place.

9018. Mr. Curley.] Is there not this advantage—that when a manager or the men make themselves acquainted with these special rules, if there is anything like uniformity, the men will know these are the prevailing special rules in all collieries? Yes; the men at the present time may know one set of rules at one colliery, and go to another colliery where there is a different set of special rules.

9019. Mr. Gregson.] You think that section 59, on page 34, of the Bill should be allowed to stand (*see Appendix A*)? That is not uniformity, because section 59 says, "a set or sets."

9020. Mr. Curley.] Would that not partly meet the case, because a set or sets would almost cover the whole matter? A colliery might have no gas, but there would be rules to meet that, and there are rules that might never be needed in one colliery that might be necessary in another.

9021. Mr. Gregson.] Suppose that you provide for a Committee to settle what the special rules shall be, that within a certain time after the passing of the Act the special rules throughout the Colony shall be uniform, and that this Committee shall consist of so many managers and inspectors and so many men to say what the special rules shall be? Yes.

9022. Mr. Curley.] Would not the Executive Council consult the inspectors upon these rules? Yes; we would report upon them.

9023. President.] Is it possible for one set of rules to suit all mines? Yes; I think there ought to be uniformity in special rules.

9024. Mr. Curley.] With regard to special rules, do you know of an accident that occurred at New Lambton some time ago? Yes.

9025. Do you know of a man coming up the shaft with a timber trolley, and a miner going down on the opposite cage? Yes.

9026. Was that in conformity with the special rules of that colliery? No; the man was taken to court and fined, because it was a breach of the special rules. I reported at the time that it was a breach of the rules.

9027. Do you think a cage should stop at the flat landing like that? No, and I notified the manager that it should be done no more. I fell in with the rider of the jury.

9028. Was there a rider in that case? The verdict was accidental death, and the rider was to this effect, that the descending cage should go right to the bottom before being stopped.

9029. Have you inspected the Burwood Extended shaft lately? Yes.

9030.

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9030. Have you ever noticed anything requiring your attention there? No.
9031. Have you noticed nothing recently there? No.
9032. Did you notice anything some time ago? A certain party drew my attention to something in connection with the shaft. I examined it, and two men working at the pit examined it and said it was all right, and I looked myself, and could find nothing wrong with it.
9033. Have you seen anything wrong there at any time requiring attention? No.
9034. Do you know the circumstances in connection with the bucket that fell down the shaft at West Wallsend? Yes; the rope broke; the wire became oxidised, and the bucket went down and killed a man. After that accident I had the ropes re-socketed every two months.
9035. Do you know anything about that colliery that was flooded near Ferndale at Tighe's Hill? Yes.
9036. How did it become flooded? By Tighe's Creek. There were four men who had the colliery on tribute, and there was a fall in a bord just on the edge of the creek. They filled it up with some sort of rubbish instead of barricading it off and making a dam, and the result was that the next spring tide made an opening, and one of the men who did the business is lying there yet. I reckon it was their own fault for doing a thing like that.
9037. Did they get any water in the bord when the cave-in first took place? When the cave-in took place the tide was out, and the spring tide came in and set this stuff away. I knew nothing about it till the man was drowned.
9038. Did you inspect that colliery? Yes; but never went into these old workings which were finished.
9039. I notice, in reading these reports, that a number of accidents take place in these sinking pits, occasioned by stones or something else falling down the shaft? Yes; stones from the sides of the shaft, but not from any other foreign matter.
9040. Would you not call a hamner something else? There is a history about those things.
9041. Do you think a sinking shaft should be in charge of somebody? I think a sinking shaft should be lined following the men—timbered or something else.
9042. Do you know anything about Finlay's accident from fire-damp at Wallsend? No.
9043. You did not visit him? No.
9044. Who inspects the Wallsend Colliery? A large part of the colliery is inspected by Mr. Bates, and Mr. Humble takes the other part.
9045. Do you go to Minmi? No; nor West Wallsend.
9046. Have you any recollection of those gas explosions that took place at Thornleigh? I cannot say what exploded; I think it was something off the fire;—it might have been carbonic oxide. We never found any fire-damp in that place at all.
9047. Do you look upon the existence of gas in a mine as an indication that very close attention will have to be paid to the working of it? Yes; I do not like gas. Some people seem to think very little of it, but I think it is a silent enemy.
9048. Did you institute some legal proceedings against the Wallsend Company some time ago? Yes; in Mr. Neilson's time.
9049. What was the nature of these proceedings? For allowing gas to go into the workings with an intake current of air on to the naked lights.
9050. Was your view of the matter upheld by the Court? Yes, after a severe fight between two of the leading barristers of the country.
9051. *Mr. Gregson.*] There has been a lot of trouble about the undermining of roads, Mr. Dixon? Yes, there has been a lot of trouble.
9052. Will you look at sub-section 3 of section 30 [28], on page 14 of the Bill (*see Appendix A*);—you will see that, besides a plan of the workings, there is to be provided, if required, a surface plan on the same scale showing all streets, roads, buildings, creeks, rivers, bays, swamps, navigable waters, and limits of any tidal waters within the boundary:—what occurs to me is the difficulty of enabling municipalities to get a sight of this surface plan; do you think that it should fall within the duties of the inspector to afford the information? No.
9053. Not if it were provided for in the Bill? Of course, if it was provided for we would have to do it; but that plan could be kept in the colliery office or in the record office at Newcastle, and the municipalities or anyone belonging to them, if they wished to see the plan, could have a look at it.
9054. Would not that be as bad as having to go to the pit office to see the plan;—cannot you suggest any better way out of the difficulty—would it not be better for the municipality to be able to obtain the authority of the Minister for the inspector to report on the condition of the roads;—there is no doubt it is a difficulty in the way of the municipalities, and the question is whether it is worth while to put on the inspectors the duty of telling the municipalities what is going on? I am of opinion that there should be a surface plan.
9055. My difficulty is the best way to give the municipalities the information? Let the municipalities apply to the inspector, and let the inspector give a short tracing showing what they require, that is if the Minister gave his consent.
9056. I would not be in favour of the municipalities seeing the pit plan? I should give them a tracing showing what they require upon their making application to the Minister.
9057. *Mr. Curley.*] Do you not think the surface plan mentioned in this sub-section should provide what is indicated, viz., streets, roads, buildings, creeks, rivers, bays, swamps, &c.? I do; I am in favour of that.
9058. Would you have a surface plan to show these things? Yes; I think the whole thing could be put on one plan. The plan at the Metropolitan Colliery shows the whole of the surface, buildings, railways, levels, and township. It is a pretty plan and shows everything.
9059. Do you think there is any difficulty in carrying that out at other collieries? I think the surface and underground workings can be shown very nicely on the one plan.
9060. *President.*] Referring again to the matter of ventilation—what do you think of a clause like this:

An adequate amount of ventilation shall be constantly produced in every mine, to be in every case at least 100 cubic feet of pure air per minute, and as much more as the inspector may direct, for each man, boy, and horse employed therein, a sufficient quantity whereof, according to the judgment of the inspector, shall be taken to within 15 yards of the working faces in non-gaseous mines, and to within 3 yards of the working faces in gaseous mines, to dilute and render harmless noxious gases, &c., &c.

I think it is very good.

9061.

- Mr. J. Dixon. 9061. Is it putting too much on the colliery? I think it goes into the commercial business.
- 16 Oct., 1895. 9062. Did you not say that brattice would not cost more than 1½d. per ton? Yes.
9063. *Mr. Gregson.*] If that were done would you dispense with splits, cut-throughs, and all other matters of detail, and leave it to the manager? As long as an adequate quantity of air is kept 15 yards from the men, I think you can dispense with these things.
9064. *President.*] Do you think that 100 cubic feet of air as a minimum is enough? Yes, as some basis to argue from.
9065. Do you think that a clause drafted somewhat in the way I have suggested would meet the case? Yes, I think it is well worded.
9066. Do you say that you approve of the provisions in the Bill for pillars in the case of mines that are working under the ocean. Will you look at rule 42, on page 31 of the Bill (*see Appendix A*);—do you think that that rule should be left in the Bill? Yes, I think the whole of that rule should be left in the Bill.
9067. Do you think there is any necessity for rule 43 (*see Appendix A*)? I do not think there is any necessity for that rule now, because we cannot make old mines into new mines.
9068. Will you now look at rule 44 (*see Appendix A*);—do you think there is any need for that rule in the Bill? Yes, I think that rule is right, but there is one thing that I object to. I think the words “and from the face of every bord a borehole shall be kept going not less than 12 feet in advance, &c.,” should be left out.
9069. Then rule 44 would stand thus, “In the case of working coal under tidal waters or rivers from one road of every pair of ‘winning off’ or leading, headings or levels (which shall not, except for sidings, exceed 8 feet in width), and in the case of working under the ocean or tidal waters every ‘winning off’ or leading heading or levels shall be driven at least 100 yards in advance of the working bords, and shall not exceed 8 feet in width except for sidings”? Yes, I think that would do.
9070. *Mr. Ourley.*] Where would you keep your borings? In the headings; there is no necessity to bore in every bord.
9071. Would you have a bore in the horse-roads? Yes.
9072. *President.*] Do you think there is any need for rule 45 (*see Appendix A*)? I think that is quite right about tidal waters. I think that we should know the deposit on the land adjacent to tidal waters. If we know where the top of the rock is that is enough.
9073. Do you think that rule 46 (*see Appendix A*) is necessary in the Bill? I do not think it is necessary.
9074. What have you to say to rule 51 (*see Appendix A*)? I think that is a necessary rule, because there are some small places that would need exemptions.
9075. *Mr. Gregson.*] Do you know that you will not find any of these provisions in the English Act? I know that.
9076. Then why do you think it is necessary in this country? Because we are greatly in advance of England in many things connected with collieries. In England the seams are deeper. I know a place that is worked under the ocean under the long-wall system where they take everything out; but in this country we could not do it with the cover we have.
9077. Why load the managers with all these provisions when there are no such provisions in the English Act;—boring, for one thing, and rule 51, which you say you think is necessary? I do not think that rule 51 is going to affect anybody.
9078. It is the policy of the English Act to require the manager to do certain things;—the manager is supposed to be competent to work the mine, and these matters should be left to him? As far as tidal waters are concerned the Government should state in their leases what the size of the pillars should be.
9079. That is another matter;—what do you want with more than rule 42;—I think that rule 42 should be provided because it is the recommendation of a Royal Commission? I think every rule is tinged with the recommendation of that Royal Commission.
9080. Is it your opinion that all these rules should stand? It is my opinion that where there are winning places going under tidal waters there should be a bore kept going.
9081. *Mr. Ourley.*] No matter what it is called? Yes; if it is a narrow bord or anything else that is a leading place.
9082. Do you not think that rule 51 (*see Appendix A*) is a little objectionable? The light I take it in is that going into unproven ground the Minister would not exempt anybody.
9083. Is it your opinion that rule 51 should stand? I think it should stand.
9084. *President.*] Do you want the latter part of section 52 [48] (*see Appendix A*)? That is not to interfere with anything that has already been done.
9085. Do you only want it under ocean and tidal waters? It can be left to the manager not under tidal waters.
9086. Do you think that rule 41 on page 31 (*see Appendix A*) is a proper rule to be in the Bill, “Person not to be employed in coal-getting without experience”? That is a rule I cannot understand. I cannot understand how a man is going to be a coal-getter until he is a coal-getter.
9087. It means an inexperienced man; the word “alone” is a bad word. What it is intended is that a man is not to work except he has an experienced miner with him? I cannot say I approve of the rule in the way it is. I have known scores of old gold-miners that are now the best of our coal-miners, and if a rule like this is put in a Bill these men would not have been able to get work. It would debar the employment of a good honest man who knows all about mining and timbering everything but coal.
9088. Do you think that this rule should not be in the Bill? Experienced men might object to work with anyone who is inexperienced. I once saw ninety-six Italians hewing coal and I never saw better timbering in my life. They were free labourers and I cannot see how the matter of inexperience would hold good there.
9089. *Mr. Ourley.*] Take a mine like the Helensburgh Mine;—would you allow any man to go into the face there? No, certainly not. In a fiery mine nobody but an experienced man should work, because every man’s life is depending on somebody else in a fiery mine.
9090. *President.*] The Council’s objection to rules 41, 42, 43, 44, 45, and 46 is that legislation of this character would simply destroy the coal-mining industry of the Colony, and particularly that of the Newcastle district;—do you think that provisions of this character would ruin the mines of the Newcastle district? No, nor any other district. I am not in love with it, but I will say nothing against it.

9091. Do you think that rule 41 should remain in the Bill? I would sooner see the lads that are brought up in the pits get these positions than strangers. Mr. J. Dixon.
9092. Then you think that that rule should be left in the Bill? I think it should be left in the Bill. It is in the boys' favour, because they have been there for two years. 16 Oct., 1895.
9093. On the question of weighing, do you know anything about the average number of skips that are weighed? I do.
9094. Do you know anything about the weighing in the southern district? No.
9095. Will you look at section 41 [38] on page 18 of the Bill—"payment to persons employed in mines by weight" (see Appendix A)? I believe the Council's amendment here ought to be left out—I refer to the words "large coal or shale."
9096. And that the men should be paid for everything they get? Yes; I think the section should be left as the Assembly sent it up. There are times when men are coming to a fault where they will get very soft coal, and perhaps in one shift two men would not make more than two skips of coal, and if the words "large coal" were left in the Bill it would block these men getting paid for anything but the large coal they send up. Now they fill all away together "shandygaff," and if these words were left in the section it would be detrimental to the men in soft coal. The words "large coal" should not be left in the section. The men are paid for large coal at the bottom of the screen, but any manager who liked to say "I am only going to pay you for large coal" might bind a man down to what he gets, viz., large coal only. In some of the districts the whole thing will be filled all away together some of these days.
9097. Mr. Gregson.] That would have to be provided for to meet the case of the Wallarah Collieries? Yes.
9098. Cases have arisen in England where the men have to be paid for everything they send out, and to avoid that trouble the Council have endeavoured, with some defects, to provide for the system as it is carried on in the North. They have endeavoured to put into words the present system in the North, and your objection to filling round and small can be met by underlining the necessary words? That is only one of my objections.
9099. Mr. Curley.] Do you know managers who would have no hesitation in interpreting the clause in that way? Yes, if men were filling soft coal. I remember the time when we were paid for all we were filling in the Newcastle district at 24 cwt. to the ton.
9100. President.] Was that to make allowance for the small coal? Yes.
9101. You want the words "large coal or shale" left out of this section? Yes.
9102. Do you know anything about any complaints about the average? No.
9103. Have there been complaints in the North about the average number of skips that are weighed? No; I know nothing about that.
9104. You are not in a position to give us any information upon that subject? No.

[Witness withdrew.]

William Humble, Inspector of Collieries, sworn and examined:—

9105. Mr. Curley.] What are you, Mr. Humble? I am an Inspector of Collieries for the Northern District. Mr.
W. Humble.
9106. When were you appointed an inspector of collieries? In February, 1890. 16 Oct., 1895.
9107. Before you were an inspector where did you gain your experience in connection with mining? My experience reaches over twenty-five years.
9108. Where were you employed? Chiefly in the county of Durham, England. I was seven months at the Wickham and Bullock Island Colliery, in the Northern District of this Colony, and the rest of the time I have been an inspector of collieries.
9109. What positions have you occupied in connection with the mines in England? I have occupied every official position from a deputy upwards.
9110. Have you occupied the position of manager? Yes.
9111. Do you hold a certificate? Yes; I hold a first-class certificate under the Imperial Act of 1872.
9112. Were these mines you were connected with in the North of England large mines? They were mines drawing from 500 to 700 tons of coal per day.
9113. What was the system of working pursued in these mines? In my time the bord and pillar system. There had been some long-wall, but that system was not working at the time I held any official position.
9114. What was the depth of the mines you worked in? One of the two mines that I was connected with was 1,000 feet deep, and the other a little over 450 feet,—perhaps 480 feet deep.
9115. What was the width of your bords in the mine that was 480 feet deep? Five yards.
9116. What was the size of the pillars? At one time the size of the pillars varied from 12 yards to 20 yards, but when I left the pillars were 16 yards in width.
9117. What was the length of your bord? Thirty yards.
9118. Did you use any brattice in this mine? Yes.
9119. How much brattice did you use? In the Harvey seam we bratticed every bord to within a few feet of the face, in special cases, but it was generally to within 3 or 4 yards of the face.
9120. Did you use any brattice in the other mine you have mentioned? Yes; brattice was used, but it was kept nearer the face than in the first case. It was a very fiery mine, and the brattice had to be kept up to within 2 or 3 feet of the face.
9121. How did you ventilate those mines;—were they divided off into districts? We ventilated each district by itself.
9122. After each district was ventilated, did the air go into the return? Yes.
9123. The two currents did not commingle before they got into the return? No.
9124. Do you believe in that system of ventilation? Yes.
9125. Do you believe in that system for the gaseous as well as the non-gaseous mines? Yes, for any mine.

9126.

Mr. W. Humble. 9126. Have you gone into the question of bratticing with regard to the present proposed Mining Bill? I have given it some attention, and from my experience in the northern district I think the cost of bratticing, together with the cost of fixing the brattice, would increase the cost of getting the coal by 1½d. per ton in that district.

16 Oct., 1895.

9127. How do you arrive at a calculation of that kind;—what kind of bratticing do you provide for? Canvas cloth. My estimate has been based upon the output of large coal only, and of course there is a quantity of small coal that is made every day, which is of value now; and if that was taken into consideration and made apply to the total cost, it would make my calculation less than 1½d. per ton.

9128. By how much do you think it would reduce your calculation? It would make it less than 1d. per ton.

9129. Does small coal carry a market value at the present time? It is in great demand in some of the collieries in the Northern District.

9130. *President.*] What is this small coal used for? Chiefly for bunker coal in steamers, on account of it being cheaper than the large coal.

9131. *Mr. Curley.*] Are you aware that when the value of the coal stands at a higher ratio, that the small coal, as a rule, rises in proportion? I understand so.

9132. Have you made a comparison as to the cost between canvas cloth brattice and ½-inch wood brattice? No; but I am inclined to think that the canvas cloth brattice would be cheaper and easier worked than ½-inch boards. I believe that wood brattice is liable to be broken when it is taken down. From an experience extending over several years, I know that wood brattice is much more liable to be broken than the canvas cloth.

9133. *President.*] What size is this wood brattice? It is ½-inch deal, 6 feet long, and 10 inches wide, three pieces being fastened together to form one leaf. It simply means putting in a wood partition. Where every bord is bratticed it is not necessary to use plaster.

9134. *Mr. Curley.*] Do you know that at the Helensburgh Colliery, at the present time, there is a good deal of refuse and small coal used? I have never been at the Helensburgh mine, therefore I cannot speak on that subject.

9135. If the manager of that colliery has made a statement to the effect that a good deal of refuse was used in the 12-yard bords that they have at that colliery, and that the air was taken up one side and taken down the other, do you not think that where that could be done that your calculation would be materially affected as to cost? Yes; I have no doubt it would decrease the cost if that could be done.

9136-7. If the manager of that colliery had stated that it was done, would you be inclined to accept his statement? Yes; I could not disbelieve what he said.

9138-9. Have you given any particular time for this canvas brattice to last? No; no particular time, but in the estimate I have made (*see Appendix O*), I say that the cost will depend on the regularity of working. The brattice will be fixed a few yards at a time as the working-face advances, and even under the most adverse conditions, such as wet, moist, and vitiated atmospheres, which tend to destroy the canvas, the last few yards of it used in one bord will always be available for use in another bord, and under favourable conditions all the brattice used in one bord will serve a second bord, without extra cost, except that of fixing. I might state that I have been informed that in one of the mines in the Northern District they have brattice which has been in use for almost three years; but the conditions at that mine are favourable to the long life of the brattice.

9140. What are the conditions of that mine? The mine is very dry, there is no wet or moist atmosphere, and it is a comparatively clean mine.

9141. Are there not numbers of other mines that are dry as well? I know of several mines that are dry, but they are not so dry as this mine I have instanced.

9142. What mines do you inspect? Wickham and Bullock Island, Stockton, Hutton, Seaham, West Wallsend, Minmi, Dudley, Wallarah, part of the Wallsend Colliery, the Co-operative Colliery, and several of the smaller mines in the East Maitland district. I think I have twenty-two or twenty-four mines altogether that I take.

9143. Do you regard the cost of bratticing as being anything like a very serious matter, taking the collieries all round? No, indeed I do not. Although my estimate makes the cost 1½d. per ton, if the cost was borne by the total output of the colliery it would be much less. Take a mine, for instance, where half the output is from pillars. These pillars will require no brattice, but they are yielding half the output, and if the output carries the cost of the brattice, then my estimate will be considerably reduced. The extraction of pillars needs no brattice, because the air current can be coursed and kept up to within a reasonable distance of the working-place by stoppings, in a similar way to the method adopted where top coal is wrought.

9144. Is that because these pillars are coming back, and that you have to take the brattice down as you come back? As a matter of fact there is no brattice; when pillars are taken out, they can be taken out without the aid of brattice.

9145. Will you look at section [49] 46 of the Bill, subsection (III), on page 23 (*see Appendix A*);—what have you to say with regard to carrying the air to the working-face in connection with that section? I do not think that brattice would be necessary under this clause in the matter of taking out pillars. The pillars, before they are taken out, are connected with the headings, and it is an easy matter to circulate a current of air and keep that current of air close to the working-place without the aid of canvas; that, of course, is to within 3 or 4 yards.

9146. Do you say that your calculation does not cover that? My calculation of 1½d. per ton excludes those favourable conditions. If the pillars are to bear a certain proportion of the cost of bratticing, then my estimate must come down. I have based my estimate on round coal only taken out of the bords. If we have a case where a mine has its workings extended to the boundary, and there is no other work except the extraction of pillars, that mine could be wrought without any bratticing whatever by coursing the air up one bord and down another. The brattice is necessary in the first working only—driving into virgin ground.

9147. What do you think of those estimates that put the cost of bratticing down at 3d. and 4d. per ton? I do not believe those estimates are correct.

9148. Is your calculation based upon any height of seam? I take six different heights. In the first case I take the number of cubic yards of coal in a bord 4 feet high, and I find that the total number of tons of large coal would be a certain quantity, and the total cost of brattice a certain amount. The

cost

cost for bratticing that bord to within 15 yards of the face, with $\frac{1}{2}$ d. per ton allowed for fixing, would amount to $1\frac{1}{2}$ d. per ton, and for a bord 5 feet high the cost would be the same, and for a bord 6 feet high the cost comes out to the same figure. I made my calculations also for bords 7, 8, and 9 feet high, and the average cost of bratticing in those six cases amounts to 1.47d. per ton.

9149. That is an average of a fraction over 6 feet? Yes; about $6\frac{1}{2}$ feet.

9150. If a manager had given an estimate of the height of his seam all round as 5 feet, and said that the cost for bratticing that seam would be 3d. per ton, would you think that his calculation was anything like accurate? No; I would say that his calculations were based on unusual conditions, or that they were an exaggeration.

9151. With regard to the provision in the proposed Bill for ventilation, section [50] 47, rule 1, on page 23 (see Appendix A), do you think that the air should be carried up into the working-face so far as that section is concerned? My opinion is that the working-places should be generally ventilated.

9152. *President.*] Is the working-place and the working-face the same thing? Yes; the working-face and the working-place are synonymous terms.

9153. *Mr. Curley.*] What is your opinion about stipulating a minimum quantity of air in the Bill? I believe that the stipulating of a minimum quantity of air is a great protection to the inspector, but I would much rather see the Bill provide for an adequate amount of ventilation and stop there. I would much sooner say nothing about a minimum quantity of air, or the distance that a man should work before the current of air, or anything else that is in the Act of 1876.

9154. How do you read subsections (II) and (III) of section 12 of the Act of 1876 (see Appendix B)? Subsection 2 says that an adequate amount of ventilation shall be constantly produced in every mine to dilute and render harmless noxious gases to such an extent that the workings shall be in a fit state for working and passing therein; and subsection (III) says that that adequate amount of ventilation shall mean not less than 100 cubic feet of pure air per minute, for each man, boy, and horse. It means that every place in the mine that is at work must be adequately ventilated.

9155. *President.*] With how much air? With no particular quantity of air, but with an adequate amount, which may mean 1,000 feet. Subsection (III) says that there shall not be less than 100 cubic feet of air as a minimum.

9156. What do you say about the minimum? That there must be always 100 cubic feet of air, and as much more as may be necessary.

9157. Where? Under the present Act it must not be more than 35 yards from the working-place.

9158. *Mr. Gregson.*] You would get over the difficulty by having an adequate quantity of air in the workings, and stop at that? Yes.

9159. *Mr. Curley.*] What do you make of that 35 yards, and the 100 cubic feet of air? If I, as an inspector, went into a mine and found that there was 100 cubic feet of air for each man, boy, and horse, flowing round any particular district, I should consider that quantity sufficient; but if I also found that that district was troubled with fire-damp, by virtue of this subsection (II) of the Act, I could call upon the manager to supply more than 100 cubic feet of air.

9160. Leaving fire-damp out of the question? Leaving out fire-damp, if I, as an inspector, found that a manager was supplying 100 cubic feet of air for each man, boy, and horse, in a district free from gas, I would have no case against him. If I carried such a case into court we would lose it.

9161. *President.*] Do you say that 100 cubic feet of air would be held by the court to be enough? Yes.

9162. You do not want more than 100 cubic feet of air to support life; but supposing there is black-damp? Then it would need more than 100 cubic feet of air.

9163. What would you do then? I should call upon the manager to provide adequate ventilation. I went to one mine and found that one particular district was supplied with more than the minimum quantity of air provided by the Act, but I also found explosive gas, and I called upon the manager to provide adequate ventilation. In another case I found the minimum amount of air according to the Act was provided, but the temperature was so high that I considered the district to be inadequately ventilated, and I called upon the manager to increase the current of air, and he did so. In neither of these cases did I look upon the 100 cubic feet of air as adequate ventilation.

9164. *Mr. Curley.*] How do you read the Act, putting this black-damp out of the road altogether? If I went into a mine where neither black-damp nor fire-damp were found, I would consider that if there were 100 cubic feet of air for each man, boy, and horse, it was sufficient.

9165. The Act provides that air shall sweep undiminished along the air-way past each working-place;—what does that mean? Past the entrance to each working-place.

9166. *Mr. Gregson.*] Do you go into the working-places when making your visits as an inspector? Yes.

9167. Do you ever find places where you believe there is an inadequate quantity of air in the working-place? Yes; in some cases I find the working-face to be warm, but that is chiefly due to the large amount of powder that has been used.

9168. Suppose you find such a case, what do you do;—do you call upon the manager to rectify the defect? Not unless the working-face is more than 35 yards before the air.

9169. Do not the managers think that the Act is complied with if they have 100 cubic feet of air? Yes; I believe that. I do not remember one case that has been taken into court.

9170. Do you think that if subsections (III) and (IV) of the present Act were struck out, and subsection (II) only was left in, that you could ensure to every working miner in this country a sufficient quantity of air? Yes.

9171. Do you think that subsection (II) of the present Act would give you sufficient power? Yes; we are tied by subsections (III) and (IV).

9172. In any Act that was passed by the Legislature, would you be content with that provision? Yes.

9173. Without anything being said about splits or anything else? Yes; I think the adequate amount of ventilation is sufficient. Every part of the mine would be ventilated if subsection (II) or a similar section was law.

9174. Some miners object that the manager would have the interpretation of what an adequate quantity was? I think the inspector would have a voice in the matter as well.

9175. You think that the manager would have to agree with the inspector, and go to arbitration, or go to court and defend a charge? Yes.

9176. You think that the present subsection of the present Act that provides for an adequate amount of ventilation would be quite sufficient? Yes; I have no great objection to the minimum, but I would sooner see it adequate only.

Mr.
W. Humble.
16 Oct., 1895.

- Mr. W. Humble.
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9177. The miners ask for a certain amount of air to be specified in the Bill;—they want a minimum quantity? If a manager is disinclined to provide an adequate amount of air, it is my opinion that he will be disinclined to provide a minimum quantity.
9178. Do you think there is a danger in putting a minimum quantity in the Bill? No, not a danger; but if we are to have fiery mines, this minimum would be useless.
9179. Do you think that any minimum would be a disadvantage rather than otherwise? While I have no desire to have a minimum, I can scarcely say it would be a disadvantage.
9180. Is there much cause for complaint in the matter of ventilation at present? Some mines that I inspect are excellently ventilated, and in other mines there is room for improvement. There are one or two of the mines where the working-places are driven to the rise, and the air does not diffuse into the face in those places, as it does in a place that is going level or dipping.
9181. *Mr. Curley.*] Do you not know that a place has to go 35 yards before the air, and that there is a cut-through to be put over in addition to that? Yes.
9182. Can you understand that the air will scarcely diffuse that distance? Yes, it will to some extent; but not to such an extent as to remove the steam and smoke from the miner.
9183. *President.*] Or the exhalations from his body? Yes.

MONDAY, 21 OCTOBER, 1895.

[*The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.*]

Present:—

FRANCIS EDWARD ROGERS, Esq., Q.C. (PRESIDENT).

JAMES CURLEY, Esq.

JESSE GREGSON, Esq.

William Humble, Inspector of Collieries, re-examined:—

Mr. W. Humble.
21 Oct., 1895.

Witness.] With the permission of the President and members of the Commission, I would like to supplement, or, perhaps, put more concisely, my evidence given on Wednesday last in connection with the matter of ventilation, section 12, sub-sections II, III, and IV of the Act of 1876:—

1. In my opinion sub-section II is the only provision necessary for good ventilation, and would be much better without the two succeeding sub-sections, which qualify, and, to some extent, render ineffective, this comprehensive sub-section.

2. I have no great objection to the retention of a minimum quantity of air, providing it is made clear that such must not be a bar to the enforcement of adequate ventilation.

3. In some cases sub-section II has been applied when the volume of air flowing exceeded the minimum quantity, but the conditions were such that had the management objected to increase the quantity, there were reasonable prospects of enforcing our demands.

4. If the working-places, roadways, &c., are adequately ventilated, or, if brattice is used, there is no necessity for that part of sub-section IV, which states that "no place shall be driven more than 35 yards before the current of air, &c."

9184. *President.*] Will this meet your views,—“An adequate amount of ventilation to be not in any case less than 100 cubic feet of pure air per minute, for each man, boy and horse, shall be constantly produced in every mine, and as much more as the inspector may direct, a sufficient quantity whereof, according to the judgment of the inspector, shall be taken to within 15 yards of the working-faces in non-gaseous mines, and to within 3 yards of the working-faces in gaseous mines, to dilute and render harmless noxious gases to such an extent that the working-places of the shafts, levels, stables, and workings of the mine, and the travelling roads to and from those working-places shall be in a fit state for working and passing therein? That meets my views exactly; I think it is necessary.

9185. *Mr. Gregson.*] With reference to that answer:—assuming, Mr. Humble, that a place is 9 feet high, and the ordinary width of bords 8 yards, how will you measure the air for the two men in that bord; will your mill turn with 200 feet of air? No; I do not think the anemometer will register that quantity.

9186. How do you propose to measure the air? I propose to measure it at the entrance to the split; to see that an adequate amount of air was entering the district, and that there was no unnecessary leakage. We could assume from that that every man was getting his proportion, knowing that there was an amount of air equal to that quantity entering the district. I do not suppose we will be able to measure the air at the entrance to each bord.

9187. Will not that be against the minimum being stipulated? I think the main object to be kept in view is adequate ventilation.

9188. Suppose that you as an inspector say that the quantity of air travelling is not adequate, and the manager—assuming that you get hold of a man that wants to have his own way—says it is adequate. You have a regulation quantity of air, viz., 200 feet for the two men, and you are told that the minimum quantity is there? Our reply would be that we did not think the minimum quantity was an adequate amount, and that he must put in more air.

9189. You do not care whether the minimum quantity is there or not? That would be my answer to the objection.

9190. Then what would be the advantage of having a minimum quantity stipulated? In some cases managers would claim that 100 cubic feet of air, or whatever the minimum quantity was, was more than was necessary, and content themselves with putting in 80 cubic feet of air. There are some mines where men are working close to the air shaft, where they might claim that 80 cubic feet of air was sufficient; but, if a minimum quantity was stipulated, they would know they must not go below that minimum.

9191. Do you say that you would measure the air at the intake of the split? Yes.

9192. How would you conduct the air to the working places in that split? I should be inclined to take the whole current round, or as much as could be taken round, after leakages had been provided for. I would have that leakage as small as possible to carry the current round each bord.

9193. Assuming that sixty men were in a split, would you pass the whole of that current (6,000 cubic feet) to the men? I should carry that air into the working face as far as possible. This is not a theoretical idea, because I have worked as an official for several years, where the quantity was carried into every bord by brattice.

9194. Do you not think it would be better to scale off a sufficient quantity of air for each bord? In some cases the scalings admit of so much leakage. 9195.

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9195. Would it not be all in one district? Yes; there might be a very small quantity of that volume of air in one part, and an excess in the other. Directly you commence to scale the split, you are liable to lose a lot of air in any one particular district.

9196. *President.*] Say 6,000 cubic feet of air was going in, whatever the appliances may be that you might use, would it turn that 6,000 cubic feet of air in? Yes; after providing for the leakage that occurs in every bord. The thing to turn the air in is a canvas door, and there is always a certain amount of leakage at those doors. I should carry the current of air into every bord, with the exception of the air that was scaling through those doors.

9197. If 6,000 cubic feet of air was taken in to the men, would that be too much draught in these places? No: in a wide bord, where the coal is very thick, if 200 cubic feet of air was taken into that bord, there would scarcely be any velocity. The velocity would be so small that it would not remove the powder smoke and exhalations as it ought to do.

9198. Have you heard of the system of sconcing the air into the bord? I take that to mean diverting the current from the heading into the bord for a short distance. I know one mine that is aired in that way, and they get a decent current of air to the face of each bord. It is because the velocity of the air is high, and this sconce takes up a certain amount of air out of the heading into the bord. Perhaps that is only one-sixth of the total quantity of air.

9199. Would it not be a good thing to sconce the air? Yes, very good; but not sufficient in some cases.

9200. I do not contemplate that 6,000 feet of air is to go into every bord where two men are working? In some cases it is necessary, although I do not think it would be advisable to put it into every bord.

9201. *Mr. Gregson.*] You are to say that there is an adequate amount of air in every place, not only in the first bord, but in the last bord of the district? If I found that a particular bord was not getting an adequate amount of ventilation, I think I should have the power to call upon them to put in more than (say) one-sixth of the current.

9202. To do what is necessary? Yes; the necessary thing to do would be to place one of those canvas doors to prevent the loss of the current of air, and make it travel up behind the bratticing into the working place.

9203. Would you not be robbing Peter to pay Paul? No.

9204. *President.*] The section I have drawn and submitted to you would not suit your views. I have suggested that 100 cubic feet of air, and as much more as may be necessary, should be caused to flow along the airways, and into each working-place? I take that to mean, that the current must be caused to flow.

9205. *Mr. Gregson.*] Do you not think that by far the simplest plan would be to leave it to the inspector to say whether there was an adequate quantity of air, and if it was not adequate, for the manager to make it adequate? Yes; but I take it, under the clause the President has drawn, he would still have that power.

9206. *President.*] What Mr. Gregson wishes to point out, is that the minimum quantity of air would be too much if you are going to turn 6,000 cubic feet of air to two men, that in that case, these men will have a great deal more air than they want? I have not seen a body of men get more air than they want. It is a common occurrence for two men to have more than 6,000 feet of air when they are turning a particular bord away. The air in that case must necessarily pass over those two men.

9207. *Mr. Curley.*] Does not that occur in every mine? Yes; in some parts of a mine every day.

9208. *President.*] Would it meet your views to say an adequate amount of ventilation, and leave out the minimum altogether? Yes; that would meet my views. I do not regard a minimum quantity as being necessary in any new law. I think if they can ventilate their mines in Great Britain without a minimum quantity, that we can do it in this Colony.

9209. The miners, want a minimum quantity provided, because they are frightened that the managers will not give them enough air;—they think a manager might be parsimonious about the amount of air? Yes, sometimes negligent.

9210. Do you think that a minimum quantity of air, ought or ought not to be stipulated in an Act of Parliament? I think it would be advisable to keep the minimum quantity in.

9211. You do not think that the minimum being stipulated would do any harm? I do not think so.

9212. Mr. Gregson has raised a difficulty about the 6,000 cubic feet of air going into the first bord;—my idea of the minimum was that not less than 100 cubic feet of air per man should go up to within 15 yards of the working place? I think if you had inserted the word "undiminished" the whole current could not in practice be made to go into each bord.

9213. You do not want to give more than 200 cubic feet of air to two men working in a bord;—if there are sixty men working in a district, and there is 6,000 cubic feet of air being supplied to these men, I do not want this 6,000 feet of air to go into every bord where two men are working? Suppose you left out any mention about the air-current being turned into every bord. If you stipulated for adequate ventilation, that would mean that every part of the mine should be adequately ventilated.

9214. We are suggesting fresh legislation with the knowledge of the Act that still exists, and it may be a long while before the minds of the managers are disabused of the idea that it is not enough for the air to be flowing past the entrance of the working place;—I want to see the air brought into the working place to whatever may be considered a reasonable distance, and we have been told that 15 yards is a reasonable distance;—I do not want the men to have 6,000 feet of air, if 6,000 feet is not necessary. I have said that the current of air is to flow along the airways and into each working-place, but I do not want the whole 6,000 cubic feet of air flowing into each working-place? If we were to find in each bord the quantity of air for two men, I think that the section could be complied with.

9215. That is, if you found 100 cubic feet of air, that would be enough? Yes, for each man.

9216. How can you measure this 100 cubic feet of air? It is easily measured in thin seams, where the area is small; and there can be a fair approximation without the anemometer.

9217. By confining the air? I should not do that. I claim to be able to measure the air by the deflection of the flame of the lamp, where the anemometer would not work at all.

9218. You think your senses would do to say this is a fair place for a man to work in? Yes.

9219. It seems to me that an inspector should be able to tell by his own senses whether there was an adequate quantity of ventilation or not? We, as inspectors, are in the mines sometimes when there is no shot-firing, and sometimes in the mine when there is shot-firing. There might be an adequate amount

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of ventilation while we were there, when there was no shot-firing, but if we went back when the powder-smoke was there, we might consider there was not an adequate amount of ventilation.

9220. *Mr. Curley.*] You would not get the powder-smoke out if there was not velocity enough in the current to get it out? No.

9221. *Mr. Gregson.*] The powder-smoke would have to be taken out? Yes.

9222. *Mr. Curley.*] Referring to that matter of turning the whole of the current into the first place on a split, is it absolutely necessary for a manager to do that? No; if he is called upon to adequately ventilate the face it is not necessary that he should put that quantity of air into every bord.

9223. Would he be within the meaning of the clause the President has suggested [*see Question No. 9184*] provided a certain quantity of air was going into that place? Yes.

9224. He would make his canvas door to admit any portion of the current? Yes; it is simply a question of arranging the canvas door at the entrance. He would be able to carry one-half, or any portion of the current.

9225. *Mr. Gregson.*] With reference to the shafts;—do you make periodical examinations of the shafts in the collieries you visit? I make no examination on the cradle. I take the opportunity of seeing the shaft sides as much as possible when passing up and down in the cage.

9226. Do you travel slowly in these shafts? Yes, always so, from the bottom to the surface in the sinking shaft, for the purpose of examination.

9227. Is the Waratah Mine amongst the mines you look after? No.

9228. Amongst the mines you have under your charge, are there any wooden walls in the upper part of the shafts? I do not remember one. I think they are all either brick or stone.

9229. What steps do you take with regard to seeing to the security of the ropes? I generally ascertain whether the ropes have been examined by a competent man, and, in addition to that, I give as much attention to them myself as I can without impeding the working of the mine.

9230. Is the work of the inspection of these ropes by a competent man recorded in a book kept at the colliery for the purpose? I think not. This is done in one particular mine, but the Act does not provide that it shall be done. It is done as a matter of choice by the manager.

9231. Do you only inquire when the last examination was made? Yes; or in the case I have mentioned, where it is recorded in a book, of course I look in the book.

9232. Are you acquainted with the English Coal Mines Act? Yes.

9233. Do you think there is anything additional needed in that Act with regard to the safety of the men? No, I do not remember anything; I do not think so.

9234. Do you think if that Act was properly administered, that every precaution has been taken that could be taken? I think so. My opinion of that Act is that it would work very well here. If there is a great objection to it by the miners, my proposal would be that the English Act should be taken here, and given a trial (say) for two or three years, and then let it come up for revision.

9235. *President.*] That could not be? I think the first two Coal Mines Acts in Great Britain were made for five years each, and ultimately they became permanent measures.

9236. *Mr. Gregson.*] Do you know of any circumstance that would render the Coal Mines Act of Great Britain inapplicable to this Colony? No, not one.

9237. Either in the Northern, Southern, or Western districts of the Colony? I can only speak of the Northern mines.

9238. Have you no knowledge of the other districts? No knowledge. I have never visited one of the mines in the other districts.

9239. *Mr. Curley.*] Have you a stipulated district—a sectional district that you visit? There are three inspectors for the Northern district, and whilst we have no hard and fast lines drawn, we have our own mines that we can work on for weeks, without clashing with each other. Sometimes I may go to some of Mr. Dixon's mines, and sometimes he may go to some of my mines, according to arrangement.

9240. Do you all stand in the same relative position as inspectors? We have all equal responsibilities, as far as I know.

9241. With regard to the examination of those ropes;—do you ever inquire into the lifetime of the ropes—as to the time they have been in use? Yes, sometimes. I know the ropes pretty well in the largest mines, through giving them general attention, and sometimes the manager and I have a talk about the substitution of new ropes.

9242. Do you do the same thing with the boilers;—do you inquire into the lifetime of the boilers? I do not think I have done so, as a whole, but I may have done so in the case of some particular boiler.

9243. Do you inquire as to whether the boilers were new or second-hand when they were put in? I have made inquiries, and found that the boilers were new when they were put in, and also that some were second-hand. I know of several second-hand boilers that are working now. I witnessed the testing of one three or four weeks ago.

9244. Returning again to the examination of the shafts—if it be the case that in any instance there is timber to support the shafts, will not this timber decay in time? Yes.

9245. I understood you to say that, as far as you have inspected the shafts, you are not aware that there is any woodwork in those you have inspected? I am not aware that there is any woodwork in the larger shafts. In some of the smaller shafts, they are lined with wood from top to bottom.

9246. Do you know the Wickham and Bullock Island and the Stockton and Hetton Collieries? Yes.

9247. Do you inspect the shafts at these collieries? Yes; I have given them general supervision. I have inspected the Stockton shaft very minutely. I went there for the purpose.

9248. Did you ever notice anything particular in that shaft? No, only a piece of coal resting on the bunting. I noticed the cast-iron tubbing-plates were scaling off in the inside.

9249. Do you think they will give out in time? Yes; but at that time I considered they were quite strong enough. They had very little head of water to keep back.

9250. Do you know that some of these plates are cracked in some of the mines? There are some cracked in the Hetton shaft.

9251. Do you know that there are some of these plates cracked in the Wickham and Bullock Island shafts? I have never seen them.

9252. Do you know there was a report made by Mr. Turnbull and myself? Yes; I read it last week. [*See Appendix Q.*]

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9253. Do you give any attention to the question of pillars in a colliery? Yes; generally speaking, I have a talk with the manager if I consider that his pillars are being left too small, or if they are showing any signs of weakness, and I think in one or two instances I have been the means of getting them to increase the size of pillars.

9254. Do you think that an inspector should pay attention to the size of pillars? Yes, as well as anything else in the mine.

9255. I think you told us at the beginning of your examination that in the mines you worked at in England they left rather unusually large pillars? Yes; I think that the general size of pillars was about 30 yards by 16 yards.

9256. Was that the size of the pillars in the mine you mentioned as being from 400 to 500 feet deep? Yes; fully 600 feet deep. The shaft was 480 feet, and I think the workings were covered by about 600 feet of strata.

9257. A colliery, I suppose, will not feel the weight of the strata to any serious extent, until it gets fairly well opened out? No; in very deep mines the pillars show the weight before the roadways are driven very far. I speak of mines 1,500 or 2,000 feet deep.

9258. Would you not call 1,000 feet a very fair distance? Yes.

9259. What would be the pressure? One pound to the square inch for every foot of depth. I think it is that, but I am not certain.

9260. Have you noticed that some of the pillars out here have been left exceptionally thin? Yes; some of them have been left very thin.

9261. Too thin? Far too thin.

9262. Did you inspect the Seaham Colliery when it was working? Yes; I have inspected the Seaham Colliery for three or four years.

9263. What was the size of the pillars that were being left at that colliery? Nothing less than 6 yards, and some of them were 8 yards.

9264. Are not some of the workings of that mine going under a mountain? Yes, almost all of them.

9265. Will they not have a tremendous weight to carry? I suppose they will. Some of the workings will be covered by well on to 1,000 feet in some parts of the mountain.

9266. Do you think that a 6-yard pillar is limited to carry that amount of weight? Yes; I think they will find a 6-yard pillar is too small, inasmuch as they will not be able to take the pillars out successfully. They may support the strata until they commence to extract those pillars, but then they will find them to be too small.

9267. The supposition is, then, that every colliery is worked with a view of extracting pillars later on? Yes.

9268. Will it not be rather late in the day to think of the pillars after the mine has been working for some years? I think the manager will find out he is making a mistake; too late. I do not mean to say that pillars of that size will be dangerous to the men employed, but that the management will find that the pillars are too small to be successfully taken out. They need not necessarily be of undue danger to the men.

9269. If that method of working is pursued, and this heavy weight is there, might it not come over a lot of pillars? It must be borne in mind that those pillars are not more than $4\frac{1}{2}$ feet high. The seam is thin, and the coal is hard, and I believe that the pillars there would give abundance of warning, and support that roof for a long time, and give warning all the time if the roof was attempting to break down. It is different to a thick seam. Those small pillars resist a great deal of weight, and invariably give a great amount of warning.

9270. You mean to say that the small pillars will resist a greater weight in a seam of that character than they would if it was a thicker seam? That is what I mean exactly.

9271. You know that miners look for refuge in the workings of these pillars, that they look to the heading, and expect that to be above suspicion:—do you not think it should be above suspicion? Yes; I think so. So much depends upon the roof. If you had a very hard rock overlying that, that would not break until there was a large area of coal extracted, then it might break dangerously; but taking other roofs that are softer with every few yards of coal that are taken out, and the timber withdrawn, that roof comes down. Some of the roofs will break down after three or four props have been drawn, and almost choke the place from where they have taken the coal.

9272. Do you not think that an 8 or a 10 yard pillar at a colliery like Seaham would be nearer the mark? It would certainly be much better. I think the question of size of pillars is slowly righting itself. I think we will find very few of those small pillars in the deep seams.

9273. *President.*] Do you think that this question of pillars needs legislation? I do not think so. There is a section in the present Act—section 25—(see Appendix B) giving an inspector power, if he finds pillars too small, to take action and make them leave larger pillars. Apart from that, I do not think we ought to have other power.

9274. You think this matter of pillars is righting itself by the attention given to it by the managers? Yes.

9275. Probably the inspectors are giving some attention themselves? Yes.

9276. *Mr. Curley.*] If that power has been in the hands of inspectors for years, do you think it has been exercised? I do not remember any case that has been taken under that section of the Act.

9277. Do you remember any communication made by the inspectors? I think some years ago there were representations made to the Stockton Company, but that was before I entered the Service.

9278. Was not that in consequence of the report of a Royal Commission? Yes; and in consequence of a crush they had in the Stockton Mine.

9279. Was the first crush subsequent to the Royal Commission sitting? I think it was.

9280. If an inspector has that power now under the section of the Act you have named, he must have had it all this time? Yes, he must have. I think the reading of the section is plain enough. Section 25 of the present Act reads:—

25. If in any respect (which is not provided against by any express provision of this Act or by any special rule) any inspector find any mine, or any part thereof, or any matter, thing, or practice in or connected with any such mine to be dangerous or defective so as, in his opinion, to threaten or tend to the bodily injury of any person, such inspector may give notice in writing thereof to the owner or agent of the mine, and shall state in such notice the particulars in which he considers such mine, or any part thereof, or any matter, thing, or practice to be dangerous or defective, and require the same to be remedied, and unless the same be forthwith remedied the inspector shall also report the same to the Minister.

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If the owner or agent of the mine objects to remedy the matter complained of in the notice, he may, within seven days after the receipt of such notice, send his objection in writing, stating the grounds thereof to the Minister, and thereupon the matter shall be determined by arbitration in manner provided by this Act in relation to the special rules, and the date of the receipt of such objection shall be deemed to be the date of the reference. If the owner or agent fail to comply either with the requisition of the notice given by the inspector when no objection is sent within the time aforesaid, or with award made on arbitration within twenty days after the receipt of such notice, or the making of the award (as the case may be), he shall be guilty of an offence against this Act, and the notice and award shall respectively be deemed to be written notice of such offence. Provided that the Court, if satisfied that the owner or agent has taken active measures for complying with the notice or award, but has not with reasonable diligence been able to complete the works, may adjourn any proceedings taken before them for punishing such offence, and if the works are completed within a reasonable time no penalty shall be inflicted. No person shall be precluded by any agreement from doing such acts as may be necessary to comply with the provisions of this section or be liable under any contract to any penalty or forfeiture for doing such acts.

9281. I think Mr. Dixon during his examination made reference to a communication from the Attorney-General at that time to the effect that the inspectors were not to apprehend danger (*see Appendix Z*);—do you know anything about that opinion? I think I have seen the Attorney-General's opinion on that matter. I think it was Mr. Attorney-General Barton who gave that opinion.

9282. Do you know what it had reference to? I think it had reference to the Stockton Colliery. It was to the effect that we were not to apprehend remote danger; that we were not to take action on something that might not mature for twelve months; that the danger must be imminent.

9283. With regard to the pillar question;—if the danger must be imminent, no matter how irregular the colliery may be worked at the present time, would you think under that document that you had no right to take action in a matter of this kind? If in our opinion the pillars were too small, and we were to take action under the 25th section of the present Act I have just read, the case would go to arbitration.

9284. Would not that of itself be a very good business? I think so.

9285. Would it not at least draw attention to the question? Yes.

9286. And give some prominence to it? Yes, it would.

9287. Have you been the inspector that has visited the Stockton Colliery for some length of time? Yes; I suppose for four years.

9288. Do you know if any pillars have been worked out at that colliery? No pillars have been worked out at that colliery to my knowledge.

9289. Do you know that there has been a surface subsidence there? Yes.

9290. What would you attribute that surface subsidence to? That the pillars were too small to resist the weight.

9291. Would that refer to the time before you visited the colliery as an inspector? Yes, with one exception. The pillars that afterwards collapsed were all formed before I knew the colliery.

9292. What is that exception? The No. 45 top-drive district was opened out since I became an inspector, and it collapsed some two years ago.

9293. Were the pillars in that district left very thin? No; they were practically 6 yards in width, but there were other circumstances that I think induced the fall.

9294. What were those circumstances? The inclination was very high for the Stockton Colliery. It was some 5 or 6 inches to the yard, and the coal in that district was very soft and tender. It was the upper section of the No. 6 Borehole Seam and was extra tender, and that tenderness, together with the pillars resting on the side of the hill, taxed their strength.

9295. Do you think that in a place like that the pillars should have been left proportionately larger? Yes.

9296-7. Would the surface strata be over 200 feet? It would be 275 feet or nearly 300 feet there. I ranges from 275 to 300 feet.

9298. Had you occasion to make a report in connection with the Stockton Colliery some time ago? Yes.

9299. Have you altered your opinion since that report with regard to that mine? Yes; since the No. 3 shaft was connected with the workings.

9300. Have you a copy of the latest report on that matter? I have.

9301. As we have had this matter several times before us, I want the report that deals with it particularly? There are two reports, one dated the 23rd September, 1895, and the other dated 28th September, 1895. [*Reports read*]:—

Stockton Colliery, 23 September, 1895.

We hereby certify having seen and travelled the connection made on the 20th instant between the workings and the No. 3 new shaft.

The bottom of this shaft being about 70 feet above the bottom of both main and upcast shafts affords the persons employed in the mine "a means of exit in case of a panic caused by a large flow of water into the mine."

We are, therefore, of the opinion that at the present time the mine is safe, and, in accordance with the provisions of section 12, subsection (v), of the Coal Mines Regulation Act, 1876, hereby state the same.

JOHN DIXON,
WILLIAM HUMBLE,
Inspectors of Collieries.

Connection of Stockton Colliery Workings with the No. 3 New Shaft.

Sir,

Coal-fields Office, Newcastle, 28 September, 1895.

Learning that the above new shaft had been connected with the workings of the colliery on Friday last, the 20th instant, we visited the colliery on Monday morning, the 23rd instant, and have the honor to report as follows:—

2. Accompanied by Messrs. M'Auliffe, and Dixon, the manager, and overman, we travelled this connecting road, and ascended the new shaft, which is provided with a sinker's bucket running in guides. Although a portion of the connecting drive has yet to be enlarged and permanently timbered, there is a good road through it. The bottom of this shaft is approximately 70 feet above the bottom of main and upcast shafts, and it, therefore, affords "a means of exit in case of a panic caused by a large flow of water into the mine," and removes what we have long looked upon as a menace to the safety of the men employed in the workings situated far above (some upwards of 100 feet) the level of the two shafts then in use.

3. In our opinion, the mine is now in a condition that permits us to certify that it is safe, and we have, therefore, reported the same in a book at the colliery office, a copy of such report being herewith annexed.

We have, &c.,
JOHN DIXON,
WILLIAM HUMBLE,
Inspectors of Collieries.

John Mackenzie, Esq., Examiner of Coalfields, Sydney.

9302. *President.*] I would like to draw your attention to rule 42, on page 31 of the proposed Bill (*see Appendix A*); you will see that the suggestion is that the bords should only be one-half the width of the pillars;—is it necessary that where the bords are 6 yards the pillars should be 12 yards wide? No; I do not think so. In the mines we have, and in the mines that we are likely to work under tidal waters, it is not necessary. It is leaving too much coal.

9303.

9303. Would this provision not mean the loss of employment to a lot of men? Yes.

9304. Might not such a provision shut down a colliery altogether? Yes; at present prices the mines with one exception, are not working at a profit.

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9305. Is there any more necessity for pillars being a specified size under tidal waters than under ground? The great fear is that the place might be suddenly flooded. I think any provision as regards working under tidal waters should be left, as it is now, to be embodied in the Crown leases.

9306. Would you legislate for it at all? I think not.

9307. I notice there is a recommendation with regard to working under tidal waters in the report of the Commissioners on Collieries adjacent to Ferndale. They say:—

The Commission are of opinion that the thickness of pillars should be materially increased beyond that generally considered necessary in the district. The strength of these pillars may be increased by a judicious arrangement of cut-throughs and roads, so as to have as few roads intersecting or branching from a main road at one place as possible. Zig-zagging pillars, with respect to cut-throughs, may be advisable. The width of bords in the district is 8 yards. In the case of collieries working under the above conditions, this width would, in the opinion of the Commission, court disaster. The width of bords should be materially reduced, and the greatest care taken to secure the roof with timber. In these general opinions the Commission are supported by almost every witness who submitted himself for examination. While many of these gentlemen condescended upon specific widths of bords and thickness of pillars, the Commission prefer, in the absence of particular and detailed information, to enunciate general opinion only, and to report that, while these should be graduated or fixed by a knowledge of all the circumstances, yet it might be advisable to state that in the case of ocean leaseholds a minimum thickness of (say) 8 yards for pillars, or maximum width of 6 yards for bords, might be insisted upon, leaving the management free to exercise their discretion in altering these (by increasing the maximum thickness or decreasing the minimum width) so as to increase the general safety.

? I believe in that for the present depth that we are working our coal-mines, but if we had workings at a less depth it might be advisable to decrease the size of the bords.

9308. The Commissioners suggest legislation in their report? Yes.

9309. They suggest a minimum thickness and maximum width for bords;—do you think that this should be legislated for? No; I do not think it is necessary to put it into the Bill. The Crown has the coal, and the Crown provides for the size of pillars and the width of bords, and also for borings.

9310. You would leave it a matter like this, and trust to the competency of the inspectors? Yes. In one particular case I drew attention to the size of pillars in one of the tidal-water collieries.

9311. *Mr. Curley.*] What colliery do you refer to? Stockton.

9312. What was the size of the pillars you had to draw attention to? I found several pillars smaller than 6 yards. The width of these pillars were 4 or 4½ yards.

9313. Was that the width of pillars under the ocean? No; but practically under tidal waters.

9314. *President.*] If this 8-yard minimum for pillars, and the bords to be half the size of pillars, became law, would it have the effect of closing up any of our mines? I do not know about closing the mines, but it would prevent two or three of the mines from making any profit under present prices. Stockton would get one-third less coal out of each bord, and may have to pay more for getting it.

9315. What is the size of the pillars they have there now? Under the ocean, 6-yard bords and 8-yard pillars; and under the land, 6-yard bords and 6-yard pillars.

9316. Do you think those sizes are sufficient at the present depth under the water? Yes.

9317. *Mr. Curley.*] You said that some of the surface at Stockton had subsided with 6-yard pillars where there was a high inclination? Yes; but there is not that high inclination now.

9318. How do you know what it will be under the ocean? No one can tell.

9319. If the inclination goes downwards instead of upwards, would they continue to work with 8-yard pillars? That area of ground is interfered with very materially by cinder coal and very strong igneous rock. It has passed through the seam altogether, and makes those pillars stronger than they would be without it. They are stronger than if they were formed with tender coal.

9320. You are assuming that this is going to continue when practically it might not exist; this cinder coal might run clean out of the seam? In my opinion, if the cinder coal did run out, then the 8-yard pillars would be sufficiently strong in any part of the Stockton lease.

9321. You think so? I think so.

9322. Do you inspect the Wickham and Bullock Island Colliery? Yes.

9323. And also the Hetton Colliery? And also the Hetton Colliery.

9324. Have you been asked any questions with regard to the Linwood Colliery? No.

9325. Do you know the situation of the Linwood Colliery? I know the situation of the Linwood shafts, but I have never been down there.

9326. Were you working at the Wickham and Bullock Island Colliery at the time the Linwood Colliery wound up? I think so; I am sure I was.

9327. Have you heard tell of a creep at that colliery? Yes.

9328. Do you know there is a dam there at the present time? There are two dams; I helped to build them.

9329. Is there much water in the Linwood Colliery at the present time? I think not.

9330. Is it flooded? I think not. I know, when the Ferndale Colliery ceased working, the Linwood Colliery was not flooded.

9331. Was the Linwood Colliery worked from the shaft situated on the west side of Throsby's Creek? Yes.

9332. Is there any water in the Linwood shaft? I do not know whether there is any water in the Linwood shaft, but I do not think it is very high if there is any water there at all.

9333. Would it not be worth your while to know something about it, seeing that the two places are close to one another? When we know that the dams are sufficient to resist the maximum pressure of water, there can be no danger of it coming through the dams.

9334. *Mr. Gregson.*] Are the workings at Wickham and Bullock Island not approaching Linwood at any other places? Not now. The workings nearest to Linwood were stopped while I was deputy.

9335. *Mr. Curley.*] Have you a knowledge of the Ferndale Colliery when it was flooded some years ago? I know nothing of that.

9336. Have you a knowledge of the plan? I may have seen the plan once.

9337. Do you not think it would be worth your while to become acquainted with it? The ground is never likely to be opened.

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9338. Does the Wickham and Bullock Island lease run up that way? No; the boundary of the lease is the edge of Throsby's Creek right up the Smelting Works Road.
9339. Does it approach the Ferndale works at all? No.
9340. Are you sure of that? I am certain of that.
9341. Why? I can see from the Wickham and Bullock Island plan that almost all the workings are now driven to the boundary of their lease, and the boundary is the western side of Throsby's Creek.
9342. How do you know anything about the situation, if you know nothing about the Ferndale plan? I said I had seen the plan once, and from what I have read I know the workings of the Ferndale Colliery were not driven anywhere near to that point.
9343. You think so—that is, as far as you can go? I saw the plan of Ferndale once, and have a pretty good idea.
9344. Is the plan in your office? I presume it is; I think I saw it in charge of Mr. Powell, the late manager.
9345. Have you ever seen the plan since? No.
9346. Have you noticed any collapses of roof coming north in the Wickham and Bullock Island workings? I have seen innumerable falls in the bords.
9347. Do they go far up? Fifteen or 18 feet was the greatest distance.
9348. Have you heard tell of sand or gravel coming down in connection with these falls? No; not in the Wickham and Bullock Island Mine.
9349. Do you know the quantity of rock at the bottom of their upcast shaft? I think they have over 100 feet of rock at the bottom of their upcast shaft. I believe the shaft is about 260 feet deep, and they have upwards of 100 feet of good hard rock.
9350. Will you look at the report of the Commissioners on the condition of the collieries adjacent to Ferndale, page 179;—you will notice a letter there dated 12th August, 1886, and signed by Mr. William Turnbull and myself,—

To the Chairman and Members, Royal Commission,—
Gentlemen,

We, the undersigned, chosen by you to examine the Bullock Island Colliery shaft, beg to state that we did so on the 11th instant. We measured the seam at the bottom of this shaft, and found it to be (including coal and bands) 18 ft. 9 in. in thickness, and the rock immediately above this seam, which Mr. Monikin said was 25 feet thick, we found to be 27 ft. 6 in. The manager informed us that the cast-iron cylinders were set into this rock, but he could not say how far. We examined each of the cylinders in this shaft, and found that the thirty-first cylinder from the surface was split longitudinally, crossing all the joints, and extending all round the shaft in this particular cylinder. This break was wedged up some of the way, and made water-tight with wedges $\frac{5}{8}$ of an inch in thickness at the head. We also found that the thirty-fifth cylinder was split in a longitudinal direction, and extended about two-thirds of the way round the shaft, and crossing the joints of the segments. This break was also wedged up with wedges $\frac{5}{8}$ of an inch in thickness at the head, and made almost water-tight. These broken cylinders are situated in the clay stratum, there being about 29 feet of clay above the first broken cylinder, and about 41 feet about the second broken cylinder.

We have, &c.,

WILLIAM TURNBULL,
JAMES CURLEY,
Members of Royal Commission.

Does that say anything about 100 feet? You said the upcast shaft.

9351. I mean the downcast shaft. Do you know the depth of the downcast shaft? I understand it is about 217 feet, but I do not know the quantity of rock.
9352. Do you think that will get thin or thicker, as it goes north? I think it gets thinner as it goes north.
9353. Will not that be a matter that should be given some attention as the workings go further? I believe we are giving it attention at the present time. We reckon that the weakest part of the Wickham and Bullock Island Colliery is that going north.
9354. How is the Hetton Colliery situated? Its weakest part is going north.
9355. Under the harbour? Yes.
9356. Will that require special attention? Yes.
9357. Do you think it will be safe to take the top coal down there? Yes; there is so much dirt made in that seam, that after you take all the valuable coal you find there is not such a large space to fill up in each bord. The roof falls, and does not break very high before the bord is completely choked up.
9358. Do you think that the 6-yard pillar in both of these collieries is ample to meet the circumstances? Yes; I think so, in both of the collieries.
9359. *President.*] Have they 6-yard pillars and 6-yard bords at both of these collieries? Yes.
9360. Do you think that is enough in these collieries, and also in Stockton? The Stockton working ocean lease has 8-yard pillars. If this is modified at any time I think the bords may have to be reduced from 6 yards to 4 yards. They know that a modification may be necessary.
9361. Is there any fear of the roof coming down between the pillars? Yes; that is the fear. Of course, the wider the bords, the greater is the fear of the roof breaking.
9362. *Mr. Curley.*] Do you have a conversation occasionally with some of these managers? Yes, often.
9363. If any unusual occurrence takes place, do you ask them to apprise you of what is going on? Yes; and I think they generally do.
9364. Are there any of the Greta collieries that come under your jurisdiction? I have been at East Greta twice, but that was because Mr. Bates was not well.
9365. Did you pay any attention to the pillars when you were there? I think the pillars were about 8 yards. They were extracting some of the pillars when I was there.
9366. How far was that away from the shaft? They have no shaft; it is a pair of adits with a dip slope.
9367. Do they go in at the outcrop? Yes.
9368. Do you know if that was anywhere near where the dam was constructed? I think it is a little to one side of the dam. I think it was quite far enough from the dam.
9369. Do you know anything about the shaft pillars at that colliery? No; they have no shaft, and therefore they have no shaft-pillars. They may have a small ventilation shaft, a few feet in depth.
9370. Do you know if they have a shaft or not? I have not seen it. The main entrance is the adit.
9371. Do you know the strength of the pillars between these two roads? No; I do not.
9372. Is that seam on a very high inclination? About 42 degrees.
9373. *Mr. Gregson.*] About one in one? Pretty nearly one in one.
9374. *President.*] Returning again to the matter of ventilation;—do you think it would do any harm if the 6,000 cubic feet of air went into each bord? No.

9375. Would it be too much draught? It would be a pretty good draught, but it need not be carried so near to the face if a large body of air has to go in.

9376. My idea is, that if two men are working in a bord that each of these men should have 100 cubic feet of air;—have you anything further you would like to say on this matter? You are of opinion that the difficulty is not covered by adequate ventilation. I know better how a mine should be ventilated than I know how to provide a section to deal with it. Would you permit me to refer to one matter, that is the periods of inspection under this Bill. As it came from the Legislative Council there is no time mentioned for making inspections, and I think that is quite right. I think I am speaking for Mr. Dixon, Mr. Bates, and myself, in saying that no time should be specified with regard to making inspections.

9377. You wish to make your inspections as often as you like? Yes; to take the large mines as often as we like, and leave the smaller mines till we have time to do them.

9378. It is not the smaller mines that require your intervention? I know there has been no change in some of the smaller mines whatever. There has been no need to interfere at all with them.

9379. How many men do you think it necessary to have in a mine to require a certificated manager;—the Legislative Assembly says ten persons, and the Legislative Council amend this number to thirty, and the Legislative Assembly upon reconsideration compromise the matter and say twenty persons—what do you say? I should say that it is necessary to have a certificated manager when there are upwards of twenty men.

9380. You would not say ten persons? No; but perhaps it would be as well to have some control over a mine with twenty men. The New Zealand Coal Mines Act provides for a permit which is to be renewed annually. This permit is issued on the report of the inspector, and they have, therefore, some control over that man, because he must be on his best behaviour or he would not get his permit renewed.

9381. *Mr. Curley.*] Do you know that Mr. Dixon gave it as his opinion at the Hamilton Pit inquiry, that the inspections should be more frequent? Did he mean that the inspections of the Government Inspectors should be more frequent?

9382. Yes, that was his meaning? Well, I hardly think that that is his opinion now.

9383. With reference to that sunker's bucket coming up the Stockton shaft;—do you not think a cage would be preferable? They intend putting in a cage.

[Witness withdrew.]

Wilson Rennie sworn and examined:—

9384. *Mr. Curley.*] What are you, Mr. Rennie? I am a colliery manager.

9385. What colliery do you manage at the present time? The Greta Colliery.

9386. Have you been manager at any other colliery? Yes; at the Burwood Extended, and Wickham and Bullock Island Collieries.

9387. Were you a manager previous to your going into the Northern district? Yes; in the old country.

9388. Where in the old country? In Scotland.

9389. How long have you been manager at the Greta Colliery? I will have been manager of that colliery twelve months on the 5th of next November.

9390. Before being manager of the Greta Colliery, you say you were manager at the Burwood Extended Colliery? Yes.

9391. Were you at the Burwood Extended Colliery, when the shafts were put down? Yes; from the surface to the Borehole seam in the main shaft, and the air or upcast shaft was sunk from the Victoria tunnel seam to the Borehole seam a depth of 240 feet.

9392. Do you know if they had any exceptional trouble with any of the shafts? None whatever.

9393. Was it sound rock all the way through? It was not sound rock; the strata varied.

9394. What did you pass through? We had loamy clay on the top intermixed with ironstone bands; that is on the surface.

9395. What did you have below the surface? Post and shale; post at intervals, grey and white and conglomerate.

9396. Are these shafts timbered, or how were they secured? The soft strata is secured with 9-inch brickwork.

9397. How are they secured lower down? Where the conglomerate and hard post is, they are not secured.

9398. Is it hard strata all the way down? Pretty well all the way down after you pass through the second seam. I may say there is 130 feet of brickwork from the surface down.

9399. Have you had occasion to do any repairs to any of the shafts to prevent any stone going down? We had to clear one part.

9400. What distance are these shafts apart? I think they are between 40 and 50 yards apart as near as I can remember.

9401. Have you any knowledge of the shaft pillars that were left there? Yes.

9402. What were they? Three chains square—66 yards.

9403. Coming to Greta. What is your system of working there? Pillar and stall, or stoop and room as we call it in Scotland.

9404. Is the seam very much at an angle at the Greta Colliery? It dips about 1 in 5.

9405. How is your ventilation at that colliery? Very good; we have no complaints.

9406. Have you any trouble in getting the ventilation to the rise workings? No.

9407. Have you no trouble whatever? No.

9408. Do you know anything about a creep that took place at Greta lately? Yes; on the north side of the shaft in the main dip. All the main road was affected by the creep.

9409. Did that creep go anywhere near the shaft? No.

9410. How far is it away from the shaft? Six or 8 chains down the dip before it was affected; that is literally speaking, about 8 chains from the bottom.

9411. Did this creep occur while you were there? No; it was before I went there. I have opened all that up. There was 5 feet of coal there, and it is a solid working on that side of the pit.

9412. How do you read the present Act in connection with ventilation. When do you understand that the provisions in section 12, sub-sections 2 and 3 are complied with (*see Appendix B*)? I think the word adequate is quite sufficient in all cases. I do not think it is necessary to stipulate any quantity.

9413. I am asking you how you construe the meaning of the present Act? It stipulates 100 cubic feet of air as a minimum, but that may be quite sufficient in some cases, and too little in other cases. I think if the minimum

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minimum quantity was abandoned, the word "adequate" is sufficient. There is no prudent manager who would ask a man to work where a place was not properly ventilated.

9414. Assuming you had 100 cubic feet of air in every working place in the Greta Colliery, would you consider that that 100 cubic feet of air was sufficient? Yes, certainly; even if an accident occurred, and I had worked the ventilation up to the quantity provided by the Act, I would consider I was all right. I would in any case see that the ventilation was there.

9415. You think that the Act would be complied with if you had only 100 cubic feet of air? Certainly.

9416. Does not the Act say something about that being a minimum quantity? Yes.

9417. Does the Act prevent you from providing more air? No. If I had an accident, and 100 cubic feet of air were there, I would say I had complied with the Act, and that they could not get at me.

9418. What accident do you mean? Suppose an explosion took place. If a mine gives off gas it must be ventilated accordingly. This Act would prevent the law from punishing me if I had the stipulated quantity of air provided in the Act.

9419. Are you sure of that? Yes, as I interpret the Act.

9420. Does not the present Act go beyond the opinion you express? No, I do not think so.

9421. Will you read sub-sections 2, 3, and 4 of section 12 of the present Act again (*see Appendix B*);—you will see in sub-section 4 that no place is to be driven more than 35 yards before the current of air without a cut-through put through, or bratticed up within 3 yards of the face of such working place? That brattice means in headings;—it does not say into bords. It states that the air shall pass 35 yards, and means that driving a pair of headings, if the cut-through is not put through and gas is given off, you must have the brattice 3 yards from the face. The Act says without a cut-through put through or bratticed up within 3 yards of the face of such working place.

9422. Did you not say that if an accident took place from an explosion that you were quite secure as a manager under the minimum quantity of 100 cubic feet? They could not get at me if I had that quantity there. If an accident happened accidentally they could not get at me if I had the stipulated quantity of air, but there is no prudent manager who would ask a man to go into a mine that is insufficiently ventilated. I think the word "adequate" is quite sufficient. It means that you must have sufficient ventilation to ventilate that mine.

9423. If gas was given off, and an explosion occurred, do you think that quantity would have been adequate? That is supposititious. If there is gas in a mine it does not issue without the deputy having a knowledge of it and reporting it to the manager.

9424. Is there any fire-damp given off at the Greta Colliery? I have seen no fire-damp at that colliery.

9425. Has any fire-damp ever been reported to you? No; they have never seen any to my knowledge.

9426. Do you inspect the working places at that colliery every morning? Yes; there is a deputy for that purpose. It is always done before the men start work.

9427. Are you pretty frequently in the mine yourself? I may say that I am down one part or other of the mine daily.

9428. If there was fire-damp given off in any particular district you would know something about it? Yes; because the deputy reports daily in his report-book in the morning.

9429. What number of men have you working in the mine at the present time? About 290 all told—wheelers included—when we stopped working. We have been idle for three or four weeks.

9430. What kind of doors have you for regulating the ventilation? Timber doors.

9431. Are they all timber doors where the ventilation is going into the main intakes? Yes, all timber doors. That is to separate the main intakes from the returns where access is wanted, and where not wanted stoppings are put in of stone and rubbish.

9432. Is that where the horses are passing through? No.

9433. What kind of doors have you where the horses are passing through? Screen doors.

9434. Is that on the main intake? No.

9435. Where is it? On the bord ends of the last cut-throughs.

9436. Do any of these screen doors get materially damaged occasionally? Sometimes they get a little torn, but there is always a deputy to look to that.

9437. Do they go long without being repaired? No; that is a matter that has daily attention. There is a separate deputy for every section.

9438. What is the effect if these screen doors get damaged during the day? If one gets damaged we put it up again. If it is done by a horse or a driver it is reported to the deputy at once; but where these screens are hung it does not interfere with the ventilation materially.

9439. What size pillars have you in that colliery? Eight yards by 35 yards; but I have adopted 12-yard pillars, because we are working wider bords in some places.

9440. Were the pillars left 8 yards previous to your being there? Some of them were a little thinner than that.

9441. Were some of them very much thinner? According to the plan it shows 8-yard pillars.

9442. What have you found in your experience where you have seen these pillars? I have found them 6 yards by 35 yards, and very few at that; they may vary a little.

9443. Do you know the depth of the shaft? I think about 463 or 465 feet deep.

9444. Are you splitting any of the pillars at the present time? Yes; in the south-east side.

9445. What is the size of those pillars? Thirty-five yards by 8 yards.

9446. They are 8-yard pillars by 35 yards? Yes.

9447. How much coal are you taking out? About 6 yards in the centre.

9448. Is that anywhere near any of the main workings? No; that is going back on the inside.

9449. Have you any knowledge of the shaft pillars at Greta? I cannot say exactly the size of them. I did not measure exactly the size of them on the plan, and of course I could not get round.

9450. You have not got round the shaft pillars to know what they are? No, I have not.

9451. Do you think it is worth your while to make yourself acquainted with them? As soon as I get an opportunity I will get round them.

9452. Do you know that a seam with a high inclination like that will require some pillar to support it? Yes; just the same as another seam.

9453. You think no more there than anywhere else? It is advisable to have them a little stronger on the steep incline, because the pressure naturally bears downwards.

9454. How are your men paid at Greta;—have you a system of averaging? Yes.

9455.

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9455. Are the men paid by weight? Yes.

9456. Have you any check-weighman there? Yes.

9457. How do you weigh? In the usual way. We tip the skip into the weigh-screen, and both weighmen are there. I suppose the two of them decide upon whatever skip they like before it comes to the surface.

9458. You pay on a system of average? Yes.

9459. Are there many skips weighed during the day? I believe there will be as many as thirty or forty on some days, and on other days less.

9460. Are there any days that you do not weigh at all? We weigh every day.

9461. Is the matter of weighing left pretty much in the hands of the weighman and the check-weighman? It is entirely in the hands of the two men.

9462. Does the company's weighman perform any other duties besides weighing? He has no other duties besides weighing.

9463. Have you ever seen the Act that has been recently passed in England called "The Check-weigher's Act" (see Appendix E)? When did this come to pass?

9464. In 1894? Is this another revision of the English Act.

9465. Yes? I never saw that before. I do not think much of it.

9466. *President.*] Why? It simply means that a manager has no power at all for the guidance of his men; that the men can call meetings and impede the working; do anything they like to create a disturbance. They may come and meet in the vicinity of the colliery, probably on the pit top, or anywhere else;—probably when the men are going down the shaft, and, consequently, they may stop the day's work. According to that Act the men can do anything that they pretty well like.

9467. *Mr. Curley.*] Does not the Act only apply to the election of a check-weighman? They can stop the pit and do anything, and if the manager takes any steps to prevent their meetings it is an offence against the Act.

9468. Are you not taking an exaggerated view of the situation? I do not think so. The Act says:—

If the owner, agent, or manager of any mine, or any person employed by, or acting under instructions of any such owner, agent, or manager, interferes with the appointment of a check-weigher, or refuses to afford proper facilities for the holding of any meeting for the purpose of making such appointment in any case in which the persons entitled to make the appointment do not possess or are unable to obtain a suitable meeting-place; or attempts, whether by threats, bribes, promises, notice of dismissal, or otherwise, however to exercise improper influence in respect of such appointment; or to induce the person entitled to appoint a check-weigher or any of them, not to reappoint a check-weigher, or to vote for or against any particular person or class of persons in the appointment of a check-weigher, such owner, agent, or manager, shall be guilty of an offence against the Coal Mines Regulation Act, 1887.

9469. What do they call a suitable meeting-place? They may meet on the pit top, and stop the day's work, which we know they have done before.

9470. I do not know that that has been done in the election of a check-weighman? It has been done. A check-weighman comes to a man and says, "You were not weighed fair," or, "There is some dirt in your skip," and being an irritable man, and not wanting to work, the consequence is that he wants a meeting; and this is all caused through the check-weighman.

9471. The check-weighman cannot do that;—that is not the election of a check-weighman;—that has nothing whatever to do with the election of a check-weighman? If there is a dispute with one check-weighman they may want to elect another.

9472. Do you not know that the men, as a rule, hold their meetings away from the colliery altogether? I do; but I know also that they have held their meetings on the pit top in many cases, and at one time they stopped the pit. If they have any grievance let them ask redress after the day's work is over.

9473. Do you not know that, as a rule, they hold their meetings away from the colliery altogether? I do not know what the general rule may be. They generally hold meetings in a paddock, and come from that to the pit-top.

9474. What is the general rule? I do not think they have any general rule. I have seen them oftener meeting inside the paddock than anything else.

9475. Do you not know they hold their meetings in a hall? But there is not always a hall.

9476. Is it the rule to hold meetings on the pit top? No; I do not say it is the rule, but that they have done it at Greta.

9477. Have you protested against it? Yes.

9478. And was it discontinued? Yes; and they called a meeting in the south main level, and the consequence was they brought thirty men to the pit bottom.

9479. What was that about? Because they thought they were not getting skips quickly enough. I told them if they had any grievance that they should come to me after 4 o'clock; that is, if any accident occurred. Sometimes they have to wait on skips through a few skips coming off the road or anything going wrong with the haulage.

9480. Have you any objection to the men holding a meeting for the purpose of selecting a check-weighman? No, certainly not; if they hold a meeting in a reasonable place.

9481. Would you interfere with them at all? Certainly not; I would not interfere with that.

9482. Do you think that is a right that the men should exercise? I think it is a right for them to see they get justice. I do not object to that for one moment.

9483. Have any of the men complained to you about the ventilation being deficient in any part of the mine? No; not since I have been at Greta.

9484. I suppose a man can complain there if he thought the ventilation was deficient? I am always ready to receive any man and to hear what he has to say, and to deal with him in a reasonable manner.

9485. There would be nothing standing in the way with regard to a man making a complaint to you? No, nothing; so long as he makes his complaint in a reasonable way, and does not impede the work or interfere with any one else.

9486. Suppose that a man found the air so that he could not work that day, that the place was not fit to work in, and he came out, would you call that impeding the work? He is quite justified, under such circumstances, in leaving his work.

9487. If a number of men found that the ventilation was so bad that they could not work, and came out, would you call that impeding the work? No, not if they were all affected in the same way; but if one was affected and the others were not, I would certainly object to it.

9488. Have you any check-inspectors exercising their functions at the present time? None that I am aware of.

- Mr. W. Rennie.
21 Oct., 1895.
9489. Would you object to the men appointing check-inspectors? No; certainly not.
9490. They could appoint check-inspectors if they thought fit? Yes.
9491. Has the inspector ever drawn your attention to anything in connection with the colliery during his visits? The Government inspector has not to my knowledge. There has been nothing to call for attention on his part that I know of.
9492. If he did draw your attention at any time to any matters in connection with the colliery, would you take notice of what he said? I certainly would see to it at once.
9493. Do you say that you have no difficulty at all with the ventilation of that colliery? No difficulty so far.
9494. Is the ventilation well sustained throughout the colliery? Yes; I have had no complaints.
9495. Do you know yourself that the ventilation is well sustained? Well, I am satisfied myself. I have been through all the workings, and am satisfied with the ventilation.
9496. When did you last measure the air? I cannot give the exact date. It was just before I stopped work.
9497. How long is it since you stopped work? We have not done much work during the last five weeks.
9498. How often did you measure the air before you stopped work? I generally measured the air once a fortnight, both in the fan-chamber and in the main intakes and the returns. I got the whole return in the fan-chamber.
9499. Can you give us the readings you got in the intakes on the last occasion? I could not give it from memory.
9500. Can you give us the reading in the returns? In the main return I can.
9501. Can you give us the intake? The total amount in the main aircourse was about 96,000 cubic feet, and in the main return I think it was about 102,000 cubic feet.
9502. Have the men to use powder at that colliery to get their coal? Yes.
9503. They have to use powder in the risc places? Yes.
9504. Have you noticed whether the powder smoke hangs about very much? It does not.
9505. Not even in the risc places? No. I have seen a shot fired, and in less than five minutes the place was clear.
9506. Do you ventilate the mine by fan? Yes; by a Guibal fan.
9507. When does your fireman go to work? At 12 o'clock at night, and knocks off at 6 o'clock the next night—eighteen hours between the two shifts.
9508. You have two fan-engine men? Yes.

[Witness withdrew.]

James Jackson sworn and examined:—

- Mr. J. Jackson,
21 Oct., 1895.
9509. *President.*] What are you, Mr. Jackson? A miner.
9510. Where are you working at present? At the Hetton Colliery.
9511. How long have you been mining? About sixteen years.
9512. Where? Seven years at Hetton, and nine years in the old country, in the county of Durham.
9513. Were you working nine years in England before you came out here? Yes.
9514. *Mr. Curley.*] Have you worked at any other colliery but the Hetton Colliery in this Colony? I did work about three weeks at a little colliery at Hexham.
9515. Was that at North Stockton? Yes; at North Stockton.
9516. Did that colliery stop work? Yes.
9517. Do you recollect what brought about the stoppage? The stoppage was brought about by something in connection with the shaft.
9518. Did the shaft collapse, or something like that? Yes.
9519. *Mr. Gregson.*] Was it a slight failure in the coal? I cannot say that.
9520. *Mr. Curley.*] Have you worked in nearly every part of the Hetton Colliery, in different districts? Yes.
9521. Had you a system of quarterly cavilling? Yes.
9522. Have they had a system of quarterly cavilling all the time you have been there? Yes; ever since I have been at Hetton.
9523. Have you had opportunities by that means of getting into different parts of the mine? Yes.
9524. How have you found the ventilation at that colliery? It has been good in some parts, and very bad in others. It is bad in parts of the mine to-day.
9525. What section of the mine would you call that? From Steel's No. 1 to the old 5th Left.
9526. How many places would that effect? To the best of my knowledge between twenty and twenty-five places.
9527. Is this the district you have spoken about where the ventilation has been very bad? Yes.
9528. What has been the matter there;—has the air not been getting up to the face? According to the reports there has not been sufficient air going into the districts. I brought a sketch with me that you might learn something from. [*See Appendix 4.*]
9529. Will you show us how the air is travelling? [*Witness shows.*] The air in some places is so bad that the men cannot live in it. They cannot work as they ought to work. The air has a scope through a large area into the return.
9530. What do you consider the difficulty yourself? I think it is that the cut-throughs are driven too far. The places are driven too far before a cut-through is put over, or else there ought to be bratticing put up. The defect arises through the air not being properly controlled.
9531. Do you mean that the air is not conducted up to the working face? Yes.
9532. Do you think that there is sufficient air going into the district if it was properly conducted? I think so.
9533. Have these places ever been complained about? Many a time. In fact, last quarter, although the pit was not working barely half-time, there were men who could not work when there was work.
9534. Did the manager find these men other places? No.
9535. What had they to do? Lie idle.
9536. *Mr. Gregson.*] To whom were the complaints made? To the deputy, I suppose.
9537. *Mr. Curley.*] Have you been working in that district yourself? Yes; in Steel's No. 3.
9538. Did you find the air slack? Yes.
9539. How long ago was this? About nine months ago.

9540. Have you worked in No. 1? I worked in No. 1 when she was going special, when the bottom seam was worked, but that is four years ago.

Mr.
J. Jackson.

9541. Do you think that if the air was conducted to the working face, that that would remedy the whole matter? I do.

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9542. How far will these places go in from the shaft bottom? To the best of my belief between 700 and 800 yards.

9543. Are these places going to the rise or to the dip? They are going to the rise.

9544. Do you know if any of these cut-throughs that you have spoken about have been put through at a shorter distance than 35 yards? I do not think so.

9545. *Mr. Gregson.*] Have you ever complained to the inspector? No; only to the manager.

9546. Why have you not complained to the inspector? Because we thought it would be better to get it remedied through the manager.

9547. If the manager did not remedy it, was there not another reference left? Yes; that is a fact.

9548. You did not care to go beyond the manager with your complaint? No; in fact in the state we are in, we can scarcely get men to take offices for fear they might be going too far.

9549. Could you not complain to the inspector without the management knowing anything about the complaint? Yes; that is true.

9550. *Mr. Curley.*] Do you know that the Home Secretary has recommended that the inspector should take notice of anonymous communications? Yes.

9551. You know that? Yes.

9552. Would not that be one way of letting the inspector know about the position of things? Yes; he would know then.

9553. Do you think that the manager should remedy these matters when his attention is drawn to them? Yes, I think he ought to; I might state that a matter comes into my mind in that connection. There is a place in Tighe's Heading going special at the present time. One of the headings got into a fault, and the manager stopped the heading and made the front heading the back heading, and started two men to turn a bord on the backs, and these men were working in there. One cut-through was driven before the heading was over, and the heading holed into the cut-through; and through the manager not putting canvas up to push this air into the men; ten days elapsed, and the day the canvas was hung it was not hung when the men went in at 6 o'clock in the morning, but the check-inspectors happened to be going round that day, and it was hung when the back shift came in at 8 o'clock.

9554. Did the men complain about that place being deficiently ventilated? Yes.

9555. Were there men very much affected in that case? Yes.

9556. Did they complain to the overman or to the deputy? To the deputy.

9557. Taking it all round, how long has this one particular district you have spoken about been deficiently ventilated? Taking it all round, since the working started in that district, it dates back to 1890.

9558. How many men are there in that district? From forty to fifty men.

9559. Does that impress you with the necessity for the air being conducted up to the working-places by a system of bratticing or shorter cut-throughs? Yes.

9560. Do you think that this is absolutely necessary? I do.

9561. Do you know whether the check-inspectors got the minimum quantity of air when they took their last measurement? In some parts of the mine they did not get any reading.

9562. Do you know the reading they would get at the intake split. They got a good reading at the intake split.

9563. Then the fault laid with the distribution of the air? Yes.

9564. Do you know if that was considered a direct split by itself, or whether it was part of another split, where those forty men were? It was not a split by itself.

9565. When you say forty men, do you mean forty men including the front and back shifts? No; forty men in all.

9566. Do you know whether any of these men complained to the manager or not? They complained to the manager as well as the overman.

9567. What did the manager say? He said he would try and remedy it.

9568. From what you know, do you consider that it has been remedied? As far as I know, I do not think it has been remedied.

9569. Has it been remedied sufficiently? There has been something done in one part, but nothing done in the other part.

9570. What part do you mean? In the old fifth left, but there has been nothing done in Steel's No. 1.

9571. Do you see much brattice-cloth used in the colliery at all? There has been no brattice put up; only canvas doors.

9572. In the headings? Yes.

9573. Not in the men's places? There has never been any brattice put up to my knowledge.

9574. Have you any fire-damp in the Hetton Colliery? I cannot say.

9575. Have you ever seen any fire-damp? I have never seen any fire-damp.

9576. Do you think there is any fire-damp? Yes; I think there is some.

9577. *President.*] Why do you think so? I was working behind the shaft, and there was some coal that had been lying there for a certain time, and when you went to disturb it, it was just like a fire; it was very hot. It was small coal that had been lying there for a considerable time.

9578. That would not be gas? That is the only reason I can give.

9579. You have seen nothing beyond this to indicate there was any fire-damp in that colliery? No; nothing.

9580. There is nothing to make you think that is fire-damp? No. This small coal was lying by, and I do not think it had ever been wet.

9581. *Mr. Curley.*] What is the width of your bords? Six yards.

9582. What is the size of the pillars? Six yards.

9583. Are the bords driven by line? Yes.

9584. *President.*] There is no danger from that at all? No, sir.

9585. That is all right? Yes, all right.

9586. Is that colliery under the water? Yes.

9587. Is it under the Newcastle harbour? Yes.

9588.

- Mr. J. Jackson.
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9588. *Mr. Curley.*] Is the roof hard and solid? Yes; there is a good hard roof. When you take the debris and the morgan band down, there is a sort of seggar clay, and above this soft stuff there is a good hard solid roof.
9589. Have you sounded it yourself? Yes.
9590. How much of this clay comes down? From 2 to 4 feet.
9591. Do you think there is any danger from the principle adopted of the 6-yard bords being worked under the harbour? I do not think so. I do not think I would have worked there if I had thought that.
9592. *President.*] Have you seen indications of any danger? No. There have been lots of things said about hearing ferry-boats. You can hear the ferry-boats going over quite distinctly, and you can almost tell the time of day in some places. You can hear the propeller going, and can tell the distinction between a large and a small steamer.
9593. This does not scare you? No; I think there is a good sound roof between us. Water, I think, is a conductor of sound. When the dredges are dredging you can hear the buckets on the bottom.
9594. *Mr. Curley.*] Do you consider that a colliery in that situation will have to be very carefully looked after? Yes, I do.
9595. *President.*] And except with regard to the ventilation, is it carefully looked after? Yes, very carefully. Every place is driven by line, and if you get 3 inches out they make you come back.
9596. *Mr. Curley.*] They chalk you off? Yes; there is a man who comes every morning, and puts the sight on, and if you are 3 inches out, he makes you leave it on. He chalks you off there and then. They are very particular as regards the pillars.
9597. Do they make you set a tree? Yes; and a cap-piece.
9598. Will that make men very careful about keeping their proper width? Yes; it does.
9599. A man does not want to put this extra timber in? No.
9600. *President.*] Has he to do it at his own expense? Yes; he has to do it with his own labour, and while he is doing that he is not getting coal.
9601. *Mr. Curley.*] Which way is the colliery going to the dip? Down the harbour.
9602. Do you go much to the rise the other way? They have not worked the workings up the harbour, for the last two years and five months. They were going to the rise, and the coal was not very good. It was very soft, mucky coal.
9603. Have you come across any faults? Yes, two.
9604. Is there much water given off? Not much.
9605. Is the colliery very dry, taken on the whole? No, wet on the whole; it is not so wet as it used to be.
9606. Do you find wet places very comfortable to work in? No; there were a lot of men suffering at one time.
9607. Suffering from rheumatics? No; if they took the water out, they got no pay for it, and they used to wait till somebody took it out.
9608. Do you often find that the case? It is not so bad now. The manager said he would remedy it as much as he could; but when the pit was lying idle, the company could not afford to send water-bailers to do it. After the men come down they do not get started in the face until 10 o'clock, on account of the water.
9609. Are you paid by weight at that colliery? Yes.
9610. Have you a standard-weight? Yes.
9611. What is the standard? Twelve hundredweight.
9612. Does the bridge register any more than that weight? Yes; but we do not see any more than that weight.
9613. How do you account for that? They will not put it over that. They did, but a bit of a case came on, and ever since that, they have never put it over 12 cwt.
9614. Was that a case in which you made a claim for payment over the standard weight some time ago? Yes.
9615. Were you non-suited in that case in the Court? Yes.
9616. Do you know the reasons for being non-suited? I do not.
9617. Where was the case tried? At Newcastle.
9618. Do you know how long ago that is? To the best of my knowledge, I think it is about three years and six months ago.
9619. Are the men satisfied with the standard weight? No.
9620. Do they want to see it done away with altogether? They do.
9621. How are the skips weighed? Two skips come up in each cage, and the weighman rings a bell for a skip, and they take the first skip in the cage one day and the second skip in the cage the next day. There is a door at the entrance to the box, and this door is drawn back to let the coal down gradually. If the skip goes 12 cwt. you get 12 cwt., but if it goes under 12 cwt. you get paid for what you fill; if it goes over 12 cwt. you do not get anything for what is over. If you have two skips weighed in the day—one 13 cwt. and another 11 cwt.—you get an average of 11 cwt. 2 qrs. They take half of the 12 cwt. and put it on to the half of the 11 cwt., and that makes it 11 cwt. 2 qrs. for that day.
9622. Instead of 12 cwt.? Yes; that is what it ought to be. If any miner fills a skip, and there is 16 cwt. or 17 cwt. of coal in that skip, he only sees 12 cwt. in it.
9623. He is not even educated as to the weight he is filling? No, he is not.
9624. If he knew he was filling over the standard he would know how to gauge it? Yes.
9625. How many skips do you get weighed in a day? Upon an average, 150 skips per day.
9626. Are there 150 skips weighed in one day? Yes.
9627. One hundred and fifty in one day? Yes.
9628. Are you sure of that? I would not say exactly; there might be 100 skips weighed some days and more on other days.
9629. Do you think there is that number of skips weighed? Yes; I should have said that some days there will be 50 skips weighed.
9630. *President.*] You have nothing to complain of except the standard weight? That is all. My opinion is that every skip should be weighed—slack and everything together.
9631. *Mr. Curley.*] Do you think that every individual skip should be weighed? Yes.
9632. Have you ever given the question of working hours any consideration? Yes.

9633. What time do you work at Hetton? At the present time the front-shift men go down at 6 o'clock, and they are not supposed to leave till a quarter past 1 o'clock; the back-shift men go down at 8 o'clock, and no man is allowed to leave the place till 4 o'clock. We have had men sent to the manager for leaving the place at three minutes to 4, and men have been sent back for being on the flat at three minutes past 4, and the manager has told men that if they leave the place before they have permission they must put up with the consequences. As near as I can say, the back shift men are working eight and a half hours.
9634. How many hours are they in the pit altogether? They are eight and a half hours in the pit.
9635. Do you think this question of the working hours is a matter that should be legislated for? Yes.
9636. Why do you think that? Because I think that with the men we have employed at the present time these hours are sufficient for any man to work to give these men employment.
9637. Is that your reason? Yes; one of my principal reasons.
9638. You think that eight hours is long enough to work? Yes.
9639. *President.*] Would you punish any man who cared to work longer than that? Yes; I would, if I had my way.
9640. *Mr. Curley.*] Do you think it would interfere much with the colliery if the hours were legislated for? I do not think so.
9641. You do not think it would interfere with the output? No. If they wanted a large output they would put two shifts of men on.
9642. Do you think that is the general opinion of the men? Yes.
9643. That the hours of labour in the mines should be legislated for? Yes.
9644. What was the system of working in those collieries you have referred to at home? The men used to come down in the front shift at 4 o'clock in the morning, and rise at a quarter past 11 o'clock, and the back shift used to come down at half-past 10 o'clock and rise at 5 o'clock; that was in the last colliery I worked in at home.
9645. What was the system of work pursued there? Bord and pillar.
9646. It was the same system that you are working here? Yes.
9647. What was the width of your bords? Six yards.
9648. What was the size of the pillars? Sixteen yards. We used to take the pillars out.
9649. What was the length of your bord? Twenty-five yards.
9650. Did they use any brattice there? Yes.
9651. Did they use much brattice? Yes; they bratticed right up to the face every day.
9652. How near the face? To within 4 feet of the face.
9653. How deep was that mine? About 160 fathoms deep.
9654. What was the name of the colliery? The Waldridge Fell Colliery.
9655. That colliery was 960 feet deep? Yes.
9656. Was there any gas in that colliery? Yes.
9657. Was there any fire-damp? Yes.
9658. Do you think that there should be substantial pillars left in collieries where it is intended to take pillars out? I do.

Mr.
J. Jackson.
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[Witness withdrew.]

Samuel Rees sworn and examined:—

9659. *President.*] What are you, Mr. Rees? I am a coal-miner.
9660. How long have you been a coal-miner? About 23 years.
9661. Where have you worked? I have worked in the Northern and Western districts, and I am working in the Southern district now.
9662. In this Colony? Yes.
9663. *Mr. Curley.*] Where are you working at the present time? At the Metropolitan Colliery, Helensburgh.
9664. How long have you worked at that colliery? For five years and four months.
9665. Do the miners there work with safety lamps? Yes.
9666. Have they worked with safety lamps during the whole of the time you have been there? Yes, during the whole of the time.
9667. The whole of the miners? Yes; the whole of the miners.
9668. There are no naked lights allowed in that colliery at all? No; no naked lights are allowed at all.
9669. Are the lamps carefully examined every morning? Yes.
9670. Are they examined on the pit top or down below? They are examined down below.
9671. Does the same individual examine the lamps always, or do different men examine them? The deputy over the district you are working in examines the lamps of the miners.
9672. Each particular deputy for the different districts overlooks the lamps? Yes.
9673. Do you know yourself that the lamps are carefully inspected? Yes.
9674. Do you see that done? Yes; and I always try them myself afterwards to make sure.
9675. Who cleans these lamps. Are they cleaned by the men or by the company? The company cleans the lamps.
9676. Do you always find them in good trim? Yes; I have no occasion to complain.
9677. Have the lamps shields on them? Yes.
9678. If there are any breakages in the gauze, are the lamps removed immediately? An accident may happen to a lamp, and it may be a month before that is put right.
9679. Yes, but do you not get another lamp immediately? Yes; and we have to report the accident at once.
9680. Is that one of the special rules at the mine? Yes.
9681. And every man is supposed to obey these laws? Yes.
9682. Do the lamps meet with any accidents of any consequence? Sometimes they get broken; a fall of stone may come on them at times.
9683. Do you know whether there are many accidents that happen to the lamps? There are not many; they are very rare.

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- Mr. S. Rees. 9684. What is your system of working there? We are working the Welsh bord and pillar work.
- 21 Oct., 1895. 9685. How wide is the Welsh bord? Ten yards wide.
9686. Is there any bratticing used at that colliery to conduct the air? Yes, if it is necessary.
9687. Do you pack your refuse in between the two roadways? Yes.
9688. Do you build it up to the roof? Yes.
9689. And does this refuse act partly as a conductor for the air? Yes; and if that is not sufficient, brattice is used.
9690. Does it take much brattice, as far as you have seen? No, not in the Welsh bords.
9691. Very little? Yes, very little.
9692. Are the most of the miners employed at that colliery practical miners? Yes; the majority of them are.
9693. Have you to see the deputy every morning before you get into your working place? Yes.
9694. No man is allowed to go into his working place until he has seen the deputy? No.
9695. Have you ever come across any gas at all;—have you ever seen gas show in the lamp? Well, not since they have had the new fan working.
9696. Did you see gas before that? Yes, when we were driving headings, before we opened out bords.
9697. You have seen a little on the top of the light? Yes.
9698. Is there a good vigorous current of ventilation going through the mine? Yes.
9699. You have no complaints to make with regard to the ventilation? No complaints at all.
9700. Do you know what distance they drive the bords before they put a cut-through over? I have driven them myself 100 yards.
9701. You have driven 100 yards without a cut-through being put in? Yes.
9702. Have you still had plenty of ventilation? Yes.
9703. Do you know the number of men working in that colliery? I cannot give the exact number.
9704. Give us the number as exact as you can;—are there more than 200 men working there? Yes; about 230 miners.
9705. There are over 200 miners? Yes, about 230 miners.
9706. What is the height of your seam? It is 8 ft. 6 in. In many cases they do not work the bottom coal. There is 2 ft. 4 in. of bottom coal.
9707. Would that make it about 6 ft.? Yes, about 6 ft. mostly; sometimes higher, sometimes less.
9708. From what you have seen of the ventilation in that colliery do you think the same ventilation can be carried out in other collieries? Yes.
9709. Have you worked in collieries where the ventilation has been different to what you have found it there? Yes.
9710. What collieries do you refer to? At the Co-operative Colliery in the Northern District.
9711. How was the ventilation there? In some cases very bad.
9712. Was there any fire-damp in the Co-operative Colliery? I have never seen any.
9713. How are you paid down at the Metropolitan Colliery;—are you paid on the average weight? If we get weighed, we get paid on that weight. The weights are all put together and averaged, and the man who does not get his coal weighed gets paid according to the average of the others.
9714. Do you get many skips weighed in a day? No, very few.
9715. How many skips do they weigh in a day? They averaged about twelve skips per day during the last three weeks.
9716. How many skips a day come out of the colliery? From 850 to 900 skips.
9717. Are the men satisfied with this method of weighing? No, they are not; they have tried to get it remedied very often.
9718. Do you know how many skips have been weighed within the last three months or six months? The average will run for the whole of that time thirteen skips per day.
9719. That would be the average? Yes.
9720. Would you call that a very small number? Yes.
9721. A ridiculously small number? Yes.
9722. Do you think that more skips should be weighed? Yes, they should weigh more with their present appliances. I should think they ought to weigh more than double that quantity. Even then the men would not consider that satisfactory.
9723. The men would not consider it satisfactory if double that number of skips were weighed? No.
9724. What would give the men satisfaction? I do not think they would be satisfied unless they had every skip weighed.
9725. Do you think that it is the opinion of the men that they should have every skip weighed? Yes.
9726. Is that your opinion as well? Yes.
9727. Have the men made complaints to the manager about the limited number of skips that were being weighed? Yes, both by letter and by deputation.
9728. What did the manager say with regard to the representation of the men? The last time we sent a deputation to the manager was eleven months ago. We were weighing at that time nineteen skips per day, and we pointed out that that number of skips was not giving satisfaction to the men. The manager said he could not remedy it; that the only way to remedy it was to make the weighman keep on till the pit knocked off, but that would only have given us three more skips per day.
9729. What hours do you work at the Metropolitan Colliery? We start to go down at 7.30 in the morning, and start to come up at 4.30 in the afternoon; all the men must be down before 8 o'clock.
9730. Do both shifts go down together? Yes.
9731. You only work the one shift? Yes, that is the general run, but there are special places with three shifts.
9732. Has the manager ever requested you to work longer hours than those you have mentioned at any time? Yes.
9733. What has he requested you to do? On different occasions he has asked us to work 2 hours over time.
9734. Did you do that? It was done once, but the men refused to do it any more.
9735. Has the manager ever asked you to work on Pay Saturday? Yes, he has asked us three or four times to work on Pay Saturday.
9736. Can you remember the date when he asked you to do this? He has asked us at different times during the last 2 years. He asked us last Thursday to work on Pay Saturday. 9737.

9737. When these requests are made are they made with any authority, such as if you do not do it something else will follow? Yes; only last Thursday the manager threatened to fill the pit with men, so that the miners employed there would only get half-time. Mr. S. Rees.
21 Oct., 1895.
9738. Has the manager ever requested you to work on Sundays? No, but they are doing it all the same; they are working there every alternate Sunday.
9739. What are they working at? Cutting coal.
9740. Cutting coal on the Sunday? Yes.
9741. Do you know that for a fact? Yes.
9742. Is it special work? Yes; it is on the back Sundays, not the pay-week.
9743. Do they go in late on Sunday night? They go in an hour earlier on Saturday night, and they are supposed to knock off earlier. They knock off at 2 o'clock on Sunday morning.
9744. Instead of 4 o'clock? Yes.
9745. How many men do this? About twenty men; perhaps more.
9746. Is this a request made by the management for the men to do this, or do they insist upon it being done? Well, the men do not want to work, but they do not like to say anything. They were told that they had to work those hours when they started this special work.
9747. Have you ever thought over the question of legislation with regard to the working hours? Yes; that is a matter that is continually brought before the miners' meetings by one or other of the miners.
9748. Do you think that the hours for working in the mines should be legislated for? Yes; we can never fix the hours unless they are fixed by law.
9749. Do you think it is the wish of the men that the working hours should be fixed by law? I am positive it is the wish of the men at the Metropolitan Colliery.
9750. That the eight hours should be fixed by law? Yes.
9751. Do you do your own timbering? Yes.
9752. You set your own timber? Yes.
9753. Do you lay your own roads? Yes.
9754. Is the coal very free in many cases down there? Yes, very free.
9755. Unless a man is a thoroughly practical man is he liable to accident? Yes.
9756. And even if he is a practical man? Yes.
9757. Do many accidents take place at that colliery? Yes, a good many.
9758. Do these accidents occur from the coal being thrown out, or from the roof? Well, with the roof and the coal.
9759. Is the roof a bad roof? Some places are very bad.
9760. Have you to use slabs? Yes.
9761. Have you always to keep plenty of timber at hand? Yes.
9762. Is the mine a very dry mine? Yes, a very dry mine.
9763. Do they ever water the roads? Not the travelling roads. I do not know about the other roads.
9764. Have you worked at any other colliery in the Southern district? Yes; at South Bulli and at North Bulli.
9765. How did you find the ventilation at those collieries? Not nearly so good as it is at the Metropolitan Colliery.
9766. *President.*] Are they not obliged to have good ventilation at the Metropolitan Colliery? Yes, we could not work without it.

[Witness withdrew.]

Thomas Lionel Bates, Inspector of Collieries, sworn and examined:—

9767. *President.*] What are you, Mr. Bates? One of the Inspectors of Collieries for the Northern district. I presume I can go anywhere, but I am stationed in the north. Mr.
T. L. Bates.
21 Oct., 1895.
9768. How long have you been an inspector in the Northern district? Eight and a half years.
9769. *Mr. Curley.*] Have you had much mining experience previous to your being appointed an inspector? Yes, I have been connected with mines for twenty-one years.
9770. Where? For eleven years in England, and eighteen months in New Zealand.
9771. What collieries have you been connected with in England? The Rother Vale Collieries, in South Yorkshire.
9772. Do you hold a certificate? Yes, I hold a first-class manager's certificate.
9773. Under the 1872 Act? Yes.
9774. *President.*] Where have you been employed out here? I have been nothing in this Colony except an inspector.
9775. *Mr. Curley.*] What collieries do you inspect in the Northern district? I inspect a portion of the Wallsend Colliery, and the Lambton Colliery, Greta Colliery, the Anvil Creek, at Greta, and a few collieries about Maitland, and the Singleton collieries. Of course, I take all those that Mr. Dixon and Mr. Humble do not take. We divide the work.
9776. Do you inspect the East Greta Colliery? Yes.
9777. And the Greta Colliery? Yes, and Greta.
9778. How do you construe the present Act with regard to the quantity of ventilation required for a mine? I consider that there must not be less than 100 cubic feet of air per minute for each man, boy, and horse passing along the airway past each working-place.
9779. *President.*] Supposing that there is that quantity of air, do you consider that the Act is satisfied? Not necessarily. There may be special circumstances in which it might be desirable to have more air than that, in order to have an adequate amount of ventilation.
9780. *Mr. Curley.*] What are the special circumstances? The existence of noxious gases.
9781. *President.*] Suppose the men were stifled for want of air, would you not give them more air without any of the noxious gases;—would you think that 100 cubic feet was enough where there is no gas? No; I should say that it was not adequate.

9782.

Mr.
T. L. Bates.
21 Oct., 1895.

9782. Supposing the men were working up a bord, is the air to come up the bord? No; the Act says past each working-place. If I found the quantity of air going past the bord I should consider the Act was complied with. Of course, the bord begins with the fresh air and works away from it. A dip-bord is much easier to ventilate than a rise-bord.

9783. If it is a rise-bord there will be some difficulty in getting the air into it? Yes; the air will not go so easily.

9784. Supposing there is an 8-yard pillar, and a miner has to work 35 yards in front of the air, has he to work through an extra 8 yards, making 43 yards altogether;—does he have to put his cut-through in at 27 yards? No; he can come 35 yards, and then put the cut-through through.

9785. That would be 43 yards? Yes.

9786. He has to come 35 yards and then make the cut-through, and the cut-through is added on to the length of the bord, and therefore he would work 43 yards in front of the air? Yes, he would.

9787. *Mr. Curley.*] Do you think that would be the fulfilment of the Act if that was done? Yes, of the present Act.

9788. Is there anything said in the present Act about a minimum quantity? It says that the minimum shall be 100 cubic feet of pure air per minute.

9789. *President.*] Supposing that noxious gas was found in the cut-through, what then? A hundred cubic feet of air would not be enough.

9790. Supposing there was gas in the bord—you say there is to be 100 cubic feet of air as a minimum sweeping along the airway past each working-place;—the working-place is the bord? Yes.

9791. Supposing a miner is working 35 yards in front of the air, and there is gas, what then? I should not consider the 100 cubic feet of air adequate then, because it would not be safe for men to be working in the cut-through with gas in it. The quantity of ventilation would not be adequate then. You would have to use some artificial means to get the air into the cut-through in that case.

9792. *Mr. Gregson.*] Do such cases arise? I have never known one in my experience.

9793. Have you seen cases in which the men have not had adequate ventilation where they are working? I have found cases where there has been less than 100 cubic feet of air, and I consider that is inadequate.

9794. Did you measure the air in the bords? No—where it comes along the airway.

9795. Can you be sure that the men were working with less than 100 cubic feet of air? Yes, if there was actually less than 100 cubic feet in the airways.

9796. Might not some of the men have the benefit of the whole of the air? They might; but if there is a certain quantity of air going in, and there is not 100 cubic feet for each man, I would consider that amount of ventilation deficient.

9797. Will you look at subsection 2 of section 12 of the present Act: "An adequate amount of ventilation shall be constantly produced in every mine to dilute and render harmless noxious gases to such an extent that the working-places of the shafts, levels, stables, and workings of such mine, and the travelling roads to and from such working-places, shall be in a fit state for working and passing therein";—don't you think that is explicit enough—it means that a man must have sufficient air wherever he is in all the working-places? I admit that a man must have plenty of fresh air to work in.

9798. *President.*] Is not *Mr. Gregson* right in saying that there must be an adequate amount of ventilation for the men:—the Act does not say that the working-places are not to be adequately ventilated—do you see that? Yes.

9799. *Mr. Curley.*] From the practice you carry out, according to your statement, you think if there is no gas in the mine, and there is a certain quantity of air going into the split, taking the quantity of air and the number of men, that if each man, boy, and horse has 100 cubic feet of air you can consider the Act is complied with? Yes, I do; except under circumstances where there might be more air required. If there were no exceptional circumstances, I should say the present Act had been complied with.

9800. *President.*] No matter how hot it might be in the bord? No.

9801. Supposing it was a 14-yard pillar, does your argument still hold good? It does.

9802. Would a man have sufficient air there? He would have the quantity required by the Act.

9803. Do you think a man working in a 35-yard bord with 8 or 12 yard pillars before he got his cut-through over would have adequate air there? I do not think he would, but the Act would be complied with, because of these confusing sections about the quantity. I refer to subsections 3 and 4. [*See Appendix B.*]

9804. Have you taken that interpretation of the Act upon yourself, or have the managers thrown that interpretation upon you? It is the interpretation that has been adopted, and what has obtained with the other inspectors. When I was appointed inspector I inquired from the others, in order that I might know what to base my opinion upon.

9805. *Mr. Gregson.*] Had you anything in the way of instructions when you first joined the Service as an inspector? No, I had no instructions whatever. We were left to work the Act out.

9806. *Mr. Curley.*] Did *Mr. Mackenzie*, the Examiner of Coal Fields, not give you any instructions? None at all.

9807. Did he never state how the Act was to be defined? I do not know that I asked him when I was appointed as an inspector. I asked *Mr. Dixon* on various points, and I did not differ, and I acted upon them in conjunction with him.

9808. Do you go into the working-places off the heading occasionally? Yes, very frequently.

9809. Do you do that when you inspect the different collieries? Yes.

9810. Have you ever noticed certain places in the Lambton Colliery where brattice was put in? Yes, in some of the places.

9811. Was that at the request of the men, or did you suggest it? I did not suggest it; I have never had to suggest it.

9812. The manager has done that without any suggestion from you? Yes, he has.

9813. Do you inspect the Jubilee district of the Wallsend Colliery? Yes.

9814. How is the ventilation in that district? Much better than it used to be. It is fairly good now.

9815. What used it to be? It used to be good, but it is better now, because they have an additional intake. They get a portion of the air in without it having to travel so far.

9816. Does it go round the men's places? Certainly it does.

9817. Have you heard of any complaints in any parts of the Wallsend Colliery about defective ventilation? I have had no complaints made to me—none at all.

9818.

9818. Did you notice a report that appeared in the paper where a very limited reading was announced in one of the check-inspector's reports? I may have; but I do not take much notice of what I see in the papers.

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9819. If you saw a reading that gave an average of 35 cubic feet per minute as the amount of air travelling, and this was an accurate statement by the check-inspectors, would you consider the ventilation was very defective there? Yes, if that report was accurate.

9820. Will you look at the check-inspector's report (*see Appendix P*)? Yes; but I do not believe in the newspaper reports. This has reference to Wallsend, but I do not take any notice of such things in the papers.

9821. Suppose that was true? If that was the quantity of air travelling it is too little; it is an infringement of the Act.

9822. *President.*] Whether the Act requires any minimum or not would it be adequate? No; anything under 100 cubic feet would be too little if there was nothing mentioned in the Act. I would fix 100 cubic feet as a minimum.

9823. *Mr. Ourley.*] Would you not also say that a man should have some of that 100 cubic feet of air in his bord? My action in the matter would depend on what the Act said.

9824. What is your opinion in that respect;—should the men have the ventilation in the working-places? Yes; I am as anxious as anyone that the men should have plenty of air to work with.

9825. *President.*] Your idea is that if you had to supply an adequate amount of ventilation you would see that the air was conducted to the working-places? Yes; it will not go there unless it is conducted by some means or other. It will not go there by itself.

9826. Do you say that it should be specified in the Act that that should be done;—looking at the fact that you have an Act which says it is enough if the air is taken past the working-place, do you think that new legislation should specify that the air should be taken into the working-place? I question whether you should say how it is to be done.

9827. Should the Act say how it should be taken there? I do not think so.

9828. Would you have any minimum specified in the Act? I have been thinking a good deal about that minimum. I have held the opinion that there should be no minimum, that we should simply say an adequate amount.

9829. Do you think if sub-section 3 (*see Appendix B*) had not been in the present Act that the Act would have been far better to work under? No doubt it would.

9830. But through there having been a minimum at one time do you think there should be a minimum in a new Bill, so that there should be no mistake about it? If there is no minimum stated we should have to fix a minimum in our own minds. I think on further consideration there might be a minimum fixed as a basis to start from.

9831. And if the minimum was not enough you would give more air? Yes; I would like to have power to give as much more air as is wanted.

9832. Would this meet your views:—"An adequate amount of ventilation shall be constantly produced in every mine, to be in every case at least 100 cubic feet of pure air per minute, and as much more as the inspector may direct for each man, boy, and horse employed therein, a sufficient quantity whereof, according to the judgment of the inspector, shall be taken to within 15 yards of the working-places in non-gaseous mines, and to within 3 yards of the working-places in gaseous mines, to dilute and render harmless noxious gases to such an extent that the working-places of the shafts, levels, stables, and workings of the mine, and the travelling roads to and from those working-places shall be in a fit state for working and passing therein"? Yes, I have no objection whatever to that. I think that might meet the case. The manager must take air into the working-place by any means he may think desirable.

9833. *Mr. Curley.*] Have you noticed the air in the Greta Colliery in the rise places to be somewhat flat at the working-face;—do you go into the men's places frequently? Yes.

9834. How is the air there? It is warm in the rise bords. They are 13 feet high in some of these places, and naturally they get warm, although there may be a very large quantity of air sweeping past.

9835. *Mr. Gregson.*] Suppose you had such a place as that, and you were working under a clause such as the President has just read, how would you proceed to carry out that clause? It would have to be bratticed.

9836. What air would you carry in? You would not need to carry more than the air for two men. I would not carry the whole of the current. If I had 6,000 cubic feet I could not take it all in, because I should lose a certain quantity at the bord end, but I could put a portion of it in, say 2,000 feet, or according to the manner in which the brattice would be placed.

9837. Would you not get some of this air diluted and some undiluted? The greatest quantity of air would go straight along the heading. The brattice would catch one-third or two-thirds, and that would come back again and join the other current, and so on. It is a matter of arranging the brattices. I would not send all the air into the bord.

9838. Don't you think the terms of this clause would oblige you to put the whole of the air in? I scarcely thought so when it was being read. You cannot put the whole of the air in; you are bound to lose some.

9839. If you are content with a minimum, and the minimum is to be 100 cubic feet, if the men had the 200 cubic feet of air per minute in the face, wherever they were working—in the bord or in the cut-through—would you be satisfied, or do you think they should be satisfied? Yes, I should think so.

9840. In a place like that you were speaking of in Greta, how would you measure that air? You could not measure that small quantity in a large place.

9841. How would you word that clause to give equal satisfaction to all of the men? I do not think that I could.

9842. *President.*] Is there any way of specifying it;—how can you find out what is adequate ventilation if your anemometer will not work? We can tell by the lamp pretty well how the air is going.

9843. *Mr. Gregson.*] How did they manage in England? I never saw an inspector measure the air in England. They leave it to the manager.

9844. Would not the same thing be possible here? They are rather different out here to what they are at Home.

9845. Where is the difference, I would like to know? If left to the manager there would be considerable trouble here with the miners.

- Mr. 9846. Why here more than in England? The men here seem to make frivolous complaints.
T. L. Batcs. 9847. If the men have good cause for complaint, and you rectify the grievance do you mind their
21 Oct., 1895. grumbling? No.
9848. Are there in your opinion any distinctions between Great Britain and this Colony that would render the English Act inapplicable here? If there was no quantity stated, and an inspector said to the manager, "You have not enough air," and the manager said "I have," the inspector might call some men and the manager would call some managers to say that there was sufficient air. The question would have to be settled in Court, and would they not have to fix a minimum quantity then?
9849. It is simply a question as to whether the ventilation is adequate or inadequate;—it is a matter for the arbitrators to settle who is right? I suppose they would have to settle it that way, but it would be a difficult matter to settle.
9850. Would there be any more difficulty in settling a dispute here than in England? If an inspector at Home complained it is always remedied at once without going to law.
9851. Why should it not be so here? I do not see why it should not be so.
9852. *Mr. Curley.*] Is there not much more gas in England? The mine I was connected with in England was very gassy.
9853. Is not this one of the conditions that must compel an efficient system of ventilation to be carried out in connection with the mines for the protection of the property itself? Exactly.
9854. Do the men have plenty of air in Great Britain? We had plenty of air where I was, and I should say on the whole that there was plenty of air. There were complaints made to the inspectors occasionally.
9855. And they were rectified? Yes.
9856. Do you know that there are some pits in England that are not gassy? Yes; but I still think the minimum should be stated.
9857. Do you think the English Act is defective in that respect? I do not know that it is defective, but I think a minimum would save a lot of trouble.
9858. *Mr. Gregson.*] It strikes me it would create difficulties? I think we would have something to work upon.
9859. If you say the air is insufficient that is the end of it; it does not matter whether you have an anemometer or not? Perhaps not.
9860. *President.*] How would this meet the difficulty, "and a sufficient quantity thereof"? How would that apply to the long-wall system?
9861. I give you a minimum of so much for the men, and then as you do not want all that—you do not want 6,000 feet where there are only two men working—I say, "and a sufficient quantity whereof shall be"? A sufficient quantity would be determined by the inspector. There might be bother with the manager. I might say to the manager, "You have not got enough air," and he might say, "I have," and a dispute would then arise upon the interpretation.
9862. *Mr. Gregson.*] Are you not there in authority? Then it would go to arbitration.
9863. *Mr. Curley.*] And the men that were working there would have to put up with the consequences, and be half poisoned probably if there was insufficient air? Yes.
9864. *Mr. Gregson.*] I do not understand why there should be these difficulties in this country at all, or why an Act that has been found sufficient in Great Britain should not answer here? Because it is not thought to go far enough. It is not supposed to go far enough into detail.
9865. Do you think that is the fault of the Act? I think it is possible to have too much detail.
9866. The English Act leaves it to the inspector, and you say that Act does not go far enough,—would you leave it like the English Act? I should leave it "adequate" according to the English Act.
9867. Would you leave it according to the English Act just as it is? I would.
9868. *Mr. Curley.*] How would you get rid of that difficulty you have pointed out, where your opinion is against the manager and his opinion against yours,—where would be the determining point? If I said the air was not enough I should have to cause him to supply the necessary quantity. If there was no minimum stated in the Act I should not consider the place properly ventilated with less than 100 cubic feet.
9869. *Mr. Gregson.*] Suppose you were an inspector in England, working under this Act, you would have the same difficulty there. They simply say "This place is not adequately ventilated; you must put a little more air in"? The manager would do it at once.
9870. And the probability is they would do it here? I wish they would.
9871. *President.*] Is there more difficulty with the managers here than in England? I think so. I know that if an inspector asks for a thing to be done in England it is done at once.
9872. And if you ask here are your requests not complied with at once? It is done in a tardy way. It is done just to keep within the Act and nothing more. I do not really see why the English Act should not answer all purposes here. There are some gassy mines there and more difficult workings.
9873. It has been said that in England men have better ventilation because of the existence of gases; here we have a large number of mines not gassy, and they say that on this account managers will not give ventilation unless a quantity is specified? Yes.
9874. *Mr. Gregson.*] One reason of that is the difficulty that you have been under with regard to the ventilation clauses? Yes; that is the whole root of the thing.
9875. If sub-clauses 3 and 4 were taken out of the present Act, you would have simply the wording of the English Act; and do you think this trouble would have occurred if the Act in this country was in accordance with the English Act, or would you be prepared to face it with a clause like the English Act only? I think I would.
9876. *President.*] We agree that the men should have the air, but the question is how are they to have it;—unless it is specified I think there is likely to be difficulty? It simplifies matters if it is specified that the air shall be taken into the working-places.
9877. *Mr. Curley.*] You know that there is a lot of refuse made in these very high mines that you have been speaking about? Yes, a lot; 3 or 4 feet high.
9878. Have you ever been at the Helensburgh Colliery? No; I have not seen it.
9879. Do you not think that a lot of this refuse could be utilised? In some cases it would assist a great deal. It could be utilised to assist the air into the face.

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9880. In conjunction with brattice-cloth? Yes; that could be done.
9881. Do you believe in a minimum quantity being stipulated in the Act? I would rather think it out, and give the matter further consideration.
9882. Do you consider that the air should be conducted up to the working face? It would not be adequate if it was not.
9883. That is one way of answering the question, but I would like you to give us a direct answer? The air must be taken into the place to the men.
9884. Have you given any attention to the question of pillars? No; not particular attention.
9885. Do you think that is a matter that an inspector should give much attention to? Yes; but I do not think that there should be anything about the size of pillars in the Bill. I think that is superfluous.
9886. How many years do you say you have been an inspector? Eight and a half years.
9887. Have you ever drawn attention to the size of pillars during that period? I do not recollect any case in which I have.
9888. Is this not a matter worthy of an inspector's attention? Yes; but that can be dealt with under the 25th section of the present Act. [See Appendix B].
9889. If inspectors pay no attention to these matters now, will it not be bad later on? I pay attention when necessary.
9890. Do you know that pillars may be worked later on? Yes.
9891. And that danger may arise through sufficient pillars not being left? I know that if you do not leave pillars you cannot keep the roof up.
9892. Do you know that the men had to be drawn out at Greta in connection with the creep that occurred there? There was a creep there some two or three years ago, and the men had to be taken away, but the creep was not where the men were working.
9893. Had the men to be withdrawn? Yes; as a precautionary measure.
9894. Where was the creep? A long way to the rise.
9895. Where were the men? Down the hill. They were withdrawn as a precautionary measure in case the creep reached to where they were working.
9896. Do you know the size of the pillars that were left at Greta? There were no pillars at all in some places in the old workings—nothing to speak of.
9897. Do you know that that seam is at an acute angle? No; it is not very steep.
9898. What is it;—is it 1 in 5 or 6? Something about that.
9899. Do you not consider that steep? Moderately steep; not nearly as steep as East Greta.
9900. Do you think that the 3-yard pillars you have spoken about were anything like adequate to be left there? No, I do not think that 3-yard pillars were adequate there.
9901. Did you draw any attention to these matters as an inspector? No, because these pillars were in the old workings twenty years ago.
9902. Was that before your time? Yes, ten years before my time; more than that.
9903. Do you know anything about the splitting of the pillars that is going on at the present time? I know that some large pillars have been split, and that this has been chiefly done to find places for men to work in.
9904. Do you know anything about the shaft pillars at the Greta Colliery? I only know from the plan showing what coal has been left there.
9905. Do you know from your own practical knowledge as an inspector? At one time I measured the pillars near the shaft.
9906. What size did you find these pillars? I found a very large pillar on one side, but it was not so large on the other side. I do not remember the sizes.
9907. Do you know anything about the shaft pillars at East Greta? There is no shaft at East Greta. That colliery is worked by an adit.
9908. Do you know the sizes of the pillars between the two outlets how far they are apart from each other? 70 or 80 yards between two outlets, or perhaps more than that.
9909. What pillars are left in that colliery? They leave about 6-yard pillars; some are larger; near the outcrop they are 12 yards.
9910. Have you any idea what is the weight the seam has got to carry? It varies; it begins at nothing, and goes to a good depth.
9911. Does it dip considerably? Yes, one in one—forty-five degrees.
9912. May it not have to carry a tremendous weight in the course of time? Of course it will. It will be a tremendous depth in time.
9913. Will not that necessitate substantial pillars being left? The places are well timbered; they do not take much coal out.
9914. What is the width of the places? 8-yard bords. They only take 7 or 8 feet of coal out.
9915. Do you mean 7 or 8 feet in height? Yes.
9916. Taking a seam at that inclination, will it not require a larger pillar than if it was on the flat? Yes.
9917. Don't you think it will require larger pillars when they get down, to carry the weight? Yes.
9918. Don't you think a mine has got to carry more weight after it gets opened out—after a course of years? I suppose it has; then there is more coal extracted of course.
9919. Anticipating the weight, should not a good substantial pillar be left? In my opinion, it is perfectly safe at the present time.
9920. But in the future? I do not know that they are going to extract pillars.
9921. Is not that generally the intention; Yes, in most of the mines; but this is an exceptional mine altogether.
9922. Are you aware that companies do not like to leave any coal if they can get it out? They look to get all they can out.
9923. Is it not best to think of these matters now than to reflect later on? Perhaps so.
9924. Do you think that a mine should be a man-trap for men? Certainly not. I do not think that at all.
9925. Do you know whether they have adopted the idea of leaving larger pillars at Wallsend recently? They have some time ago. They are leaving 8-yard pillars now.
9926. Have the management done that of their own accord? I presume they have; they have not done it at my instigation.

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9927. Do you know if any pillars have been worked out at East Greta? I think a few have been worked out at one side of the pit.
9928. You said just now that you did not know whether they were going to take any pillars out? I do not know that they are going to do it in the future.
9929. Did they take the pillars out where there is a high inclination of the seam? Yes.
9930. If they took them out there could they not take them out anywhere else? They could do so.
9931. Do you know anything about a dam there anywhere near where these pillars have been extracted? I do not think it is very near.
9932. How far is it away? I never measured it; I cannot tell you.
9933. Is it not worthy of your attention? Perhaps it is.
9934. What other mines do you inspect besides Lambton, Wallsend, East Greta, Greta, and Anvil Creek? All the mines at Singleton and at West Maitland.
9935. About the engine places and refuge places;—is this a matter that you have given serious attention to? Yes.
9936. Have not numbers of men met with accidents from time to time on the engine places? Yes.
9937. Have not some of them lost their lives? Yes, they have; that is quite true. While we are on that subject I would like to make a remark with regard to the refuge places. I am doubtful if there should be a stipulated size. The danger is of their being too wide, because if they are too wide there is the greatest danger of skips running into them. It is my opinion that the refuge places should be made narrow with plenty of depth.
9938. *Mr. Gregson.*] What about the height in a low seam? If the seam is 5 feet high the refuge places should be 5 feet high.
9939. What if the seam was 4 feet? I would make the refuge places 4 feet high.
9940. Would you fit them into the floor? I do not think so.
9941. Would you take down any roof? No, certainly not; I would not touch the roof. I think they ought to be narrower.
9942. What do you mean by wide? Three or four yards.
9943. You don't like that;—what is about the limit to what you do like? About 3 feet wide and flat, and room to get into them.
9944. *Mr. Curley.*] And how deep? I should not like to say how deep. You might make a minimum not less than 4 feet, or as much more as they liked; as deep as they liked, but not less than 4 feet in.
9945. That is not a very big place, 3 feet wide and 4 feet deep;—would not 6 feet be better? Yes.
9946. Where there is bottom taken up for to run the road down, don't you think that where the manhole is the men should be able to get in without stepping up? Are you referring to that case of Musgrave's. I do not think that would be an element of danger, provided the step was not too high.
9947. It does not matter what height the carch was? I would not like to have them climb too high.
9948. Do you think they should be in level? I do not see any objection to a slight step up.
9949. Would you limit it to a step up? I would not put anything in the Act as to what height it should be. Some of the accidents are largely due to carelessness. I have seen this when I have been in the mine.
9950. May not a man mis-gauge his distance without running any risk? If he knew the sets were coming he ought to take refuge where he is.
9951. Is there anything else that you would like to refer to in the Bill? I think there should be no time specified for the inspector's visits; they should be surprise visits.
9952. Do you think the inspections should be oftener than what they are;—I will read you a statement I have taken from Inspector Dixon's report with regard to the Hamilton Pit affair. He says:—"I do not think Government inspectors visit the mines sufficiently often?" Yes; with some mines we know better than anyone else how often we ought to go. I think it should be left to us to go when we think it is necessary.

[Witness withdrew.]

TUESDAY, 22 OCTOBER, 1895.

[The Commission met in the Board-room, Chief Secretary's Office, at 10 a.m.]

Present:—

FRANCIS EDWARD ROGERS, Esq. Q.C. (PRESIDENT).

JAMES CURLEY, Esq. | JESSE GREGSON, Esq.

Thomas Parton sworn and examined:—

- Mr. T. Parton.
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9953. *President.*] What are you, Mr. Parton? I am a mining engineer and colliery manager.
9954. What colliery do you manage at the present time? The Wallarah Coal Company.
9955. Where is the Wallarah Colliery situated? Sixteen miles south of Newcastle, on the coast.
9956. *Mr. Gregson.*] Do you hold a certificate of competency under the English Act? Yes; under the English Act of 1872.
9957. Were you managing coal-mines in England? Yes; before that time, and up to the time I came out here.
9958. Where were these mines situated? In Staffordshire, Warwickshire, Worcestershire, and Shropshire.
9959. How many years' experience have you had in England altogether? Over twenty-five years.
9960. In England? Yes.
9961. What year did you come to this country in? In 1888—about 7 years ago.
9962. Where have you been during that time? At Wallarah.
9963. Have you been there the whole of the time? Yes, the whole of the time. I am consulting engineer for one or two collieries besides.
9964. Does your recollection go back as far as the negotiations or preparations for the Act of 1872, in England;—do you recollect any of the circumstances in connection with the passing of that Act? Yes.
9965. Was it at the instance of the men or at the instance of the coal-owners? I think it was a great deal at the instigation of the men. 9966,

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9966. Under what Act were you working collieries previous to the Act of 1872? There was an Act of 1850 in England. It was under the Act of 1872 that a certificate was conferred upon managers. It was the first Act that required certificates of competency and certificates of service.

9967. In carrying out the Act of 1872, did you begin to see quickly an improvement in the system adopted? Most decidedly.

9968. Was the system advantageous to the mine-owners? Yes; to the mine-owners and to the whole of the trade.

9969. In about the year 1883 was not a Royal Commission appointed to inquire into accidents in coal-mines? Yes.

9970. And the result of that Commission's labours was the passing of the Act of 1887? Yes; the Commission was appointed chiefly in consequence of the explosions in gaseous mines.

9971. Do you know anything, personally, of that inquiry;—did you give evidence? No; not personally. I came out here about that time, and went back home again, and I was not in the old country so much as before.

9972. Was it under the Act of 1872 that Government inspectors were first appointed? No; inspectors were appointed before the Act of 1872. I remember the first inspector that was appointed to the Staffordshire district.

9973. What class of men were the inspectors chosen from as a rule? They were highly educated men.

9974. Had they been colliery managers? I do not think they had been all practical managers, but they were highly skilled men.

9975. Do you know most of the men who have been appointed since to those positions? Yes; personally.

9976. From what class of men were the recent appointments made? Several of them were managers, but they were first class managers, highly educated, and well skilled in the technical departments.

9977. You have spoken of highly educated men? Yes, they would not be taken from the under-managers. They were men who held good positions, and served apprenticeships to colliery engineers—men above the class of the underground manager.

9978. Would they be University men? Some of them.

9979. Would they pass the Royal School of Mining in Jermyn-street? Some of them.

9980. They were all men of good practical knowledge? Yes; of good practical knowledge. One, in fact, has served under my father as an assistant, and he was about the lowest on the scale. He was a practical man, but not so highly educated as the others, but still a thoroughly good man.

9981. After the Act of 1872 came into force, was there any friction between the inspectors and the managers? There was a little friction at first. The managers had not been used to being controlled by anybody outside of themselves, it was therefore rather irksome to have to come under strict discipline.

9982. Did you ever hear of anything to lead to arbitration? I do not remember one case in my supervision, and my knowledge of those districts. I have heard of such cases in the north of England, but in the three counties I have spoken of, I do not remember one case.

9983. Would not public opinion force the managers to give way to the inspectors? The want of discipline and extra care was so palpable to every man that there was no difficulty. They had been used to primitive ways that were destructive alike to life and property, but afterwards they had to give in to what was as a necessity.

9984. In the course of time did the managers look upon the inspectors as men they could consult? Yes, certainly; the inspectors, in a few years, were looked upon as being the authorities on mining. An inspector never had to speak twice, because he was looked upon by managers and men as an authority, and they thought that what he said was correct;—and, generally speaking, it was.

9985. Did the managers make it their interest to meet the inspectors' wishes? Yes, as far as possible. They were men you could not play with. They represented the Home Secretary, and therefore carried with them authority. They would not tolerate the slightest disrespect, either from owners or managers. They were trusted, and there was very little friction.

9986. What was the ultimate penalty under the Act of 1872, supposing the manager set up his authority against an inspector? I forget the penalty, but I do not know of a case in which a manager has set himself against an inspector.

9987. It was not on account of the powers given to the inspectors under the Act, but rather that the manager recognised the experience and extended knowledge of the inspector? That was it. I had a great deal to do with the inspectors. I took an interest in the scientific institutions in the counties, and I was president of the Mining Institute, where we had 500 or 600 members. We used to go about inspecting the mines, and so I came in contact with them a great deal, and I know their characters very well.

9988. About what salary would an inspector receive? About £800 per annum.

9989. Would that be the highest salary? I think the Northern district paid a little higher salary. The mines were very gaseous in that district. The salary was as low as £600. It ranged from £600 to £800. There was one, a chief of the inspectors, who perhaps received a little more, but I am confident of the £800 in our district. I am not sure what salaries were paid in South Wales or the North of England.

9990. Are the pits in your part of England mostly gassy pits? There are very few gassy pits, on the same footing as the Metropolitan Colliery here. There we had the 10-yard coal, and found gas occasionally, but not sufficient to justify working with lamps. In the seam below that, one seam would be free from gas, and the low coal would be very gaseous. Some parts would be worked with safety-lamps, but not the whole of the estate.

9991. Were some of the seams worked entirely without safety-lamps? Yes; the bulk of them in those three counties. To-day the seam in one of the collieries is 420 yards deep and in the other 620 yards deep; all worked with naked light. They use candles there; not tin lamps, as they do here. The examination on every shift was with a locked safety-lamp; that was imperative.

9992. Do you recollect the clause in the proposed Bill that applies to ventilation;—will you look at section [50] 47, rule 1, on page 23 of the Bill (*see Appendix A*);—what is your opinion of that provision? About adequate ventilation?

9993. Yes? This rule gives the inspector full power to decide himself whether the ventilation is adequate or not. If he went into a mine, and he thought there was not sufficient ventilation, he would say so, and

you

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you would have to alter it. He gives you sufficient notice. In England he always had a basis himself to go upon, and that was that 200 cubic feet of air per minute should be the minimum quantity. He thought that every man, under the most favourable circumstances, should have 200 cubic feet of air per minute, per man and horse, but if there were circumstances that required more air, he would say that there should be more. If there were not 200 cubic feet of air it was not adequate, and he would summon you for it not being sufficient, on the grounds of health alone.

9994. Take the case of one of the collieries you have spoken of, what was the height of the seam? The seams were various heights.

9995. Will you give an instance of a high seam? One half of Staffordshire contains a seam that is 30 feet thick.

9996. What colliery are you speaking about? The Sandwell Park Colliery; that is 420 yards deep.

9997. What would be the output of that colliery? 1,200 tons of coal per day.

9998. Would that be all round coal? No, altogether; they make various sizes. Then there was the Hampstead Colliery, adjoining that colliery; that was 620 yards deep, and they are doing about 1,800 tons per day.

9999. Is there any gas in any of those pits? Very little. In the openings, where the top coal is, gas is frequently found. That is the only place in those 10-yard seams where gas is generally found.

10000. What is the system of working? Square work—a modification of pillar and stall—the pillars are squarer than in the latter system.

10001. What width of stalls do you have between the pillars? Twelve and 14 yards, according to the character of the coal.

10002. Do you work the seam in sections? We take the bottom out first, and gradually work up, and any rubbish is thrown down below. They have to get ladders for the top coal. They cut 9 or 10 feet of the top coal, and drop it all at once.

10003. Is it tender coal? Something like Newcastle coal.

10004. Is there much breakage? Yes; a great deal.

10005. In working out the bottom section, have you seen any traces of gas? Very seldom; with ordinary ventilation, no gas.

10006. Were they working with naked lights? Yes, always, and they are to-day. They have had an explosion since I returned, at the Sandwell Park Colliery; it was through some negligence on the part of one of the deputies.

10007. Was anybody hurt? Yes, three persons; one was badly hurt, but it was through thorough negligence.

10008. Was the ventilation at that pit managed in districts;—were there separate districts? Yes.

10009. Do you call them districts or splits? Splits.

10010. How many men were there in a split? About seventy men.

10011. How many men were there in each of these stalls? About a dozen or more.

10012. Would a dozen men work there? Yes, comfortably. In some places there would be more than 500 tons, and sometimes more than 1,000 tons in one fall.

10013. Do the men work in gangs? They work two at a skip, and there are men throwing the coal back; two loading, and one or two breaking the coal and throwing it back.

10014. What number of men would be working in one of these working-places? I should think there would be room for a dozen men.

10015. As a rule, would a dozen men work in these places? When the coal is thrown they could put that number of men in.

10016. How were the seventy men in a split distributed? In the different openings.

10017. How many openings would there be for each split, speaking on the average? Five or six, possibly a little more.

10018. Would there be an average of ten men in each of the openings? At times; not always.

10019. What was the height of the bottom section? They took from about 9 to 12 feet out.

10020. If there were ten men in one of these openings, and the inspector insisted upon 200 cubic feet of air for each man, 2,000 cubic feet of air would pass into these openings? Yes.

10021. And the intake of the split would have to measure 14,000 cubic feet of air? Yes.

10022. Will you kindly tell us how your air is divided? By bratticing chiefly; not close bratticing.

10023. What quantity of air would be taken into one of the openings? Not more than the 2,000 cubic feet of air if there is no gas.

10024. In what way would you take that much air in and no more? By regulating the air; extending the brattice into the heading. It is not necessary to close in the heading altogether, but to turn it round a little like a hopper will force sufficient air in.

10025. You will extend the wing of the hopper accordingly as you want more air? Yes. There is a separate return for each split.

10026. No second set of men have to deal with the air already used? Not the second split. That was not always so, but that is the most recent method. They were a long time before they began to split the air in Staffordshire, but that was the most recent and by far the best method. In long wall, of course, it is very different.

10027. Would the inspector have any difficulty in making up his mind as to whether the air was adequate? Not the slightest. The inspector always took his anemometer into the mine, and always used it in the various sections of the openings.

10028. Will there be any difficulty in the third place? No; we used to make a place for him in the heading to measure the air.

10029. He did not depend on his own senses, but had the anemometer to show him? Almost invariably he had the anemometer. The inspectors did not go down periodically. It might be six months before they would enter a mine, unless there was an accident, and when they did go they would go to every part and test it. If they came for an accident they did not do that. In that case they would leave the whole mine till another time. When they made an inspection they went right through the mine.

10030. Have they ever been called by the men by anonymous communications? That is very common.

10031. Do the inspectors attend to anonymous communications? Always. They do not like anonymous communications; they prefer it being open, but I know lots of things that have been reported anonymously.

10032.

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10032. Do the men recognise that as being their remedy in a case where they are insufficiently ventilated? Yes; and very rightly so in many cases.

10033. Speaking of the square work, how far would the bratticing extend towards the face? Only just to go through the rib.

10034. You merely pointed the air in? Yes.

10035. In driving these openings you had 10 yards to go before you holed into any place? Yes.

10036. How would the air be taken? Sometimes by bratticing, or pipes.

10037. How close would the air be to the face? Perhaps 6 or 7 yards. I have known it 10 yards.

10038. The return air gets back into the intake? Yes, while they are driving.

10039. I saw something in the Report of the Royal Commission on Labour to the effect that the inspectors' visits had not been quite frequent enough;—was there any feeling of that kind in England? I do not think so.

10040. Perhaps that was a complaint on the part of the men? I never heard of it.

10041. Any way, it was a frequent practice, if there was occasion for it, to send a communication to the inspector? Yes; it was very common, and the inspector always came or sent an assistant.

10042. Did the inspectors have a sufficient knowledge of the individual mines to find their way without one of the mine officials? They would always take an official with them.

10043. Was there any notice given of their visits? No; I never had any notice. I remember one case in which I received an intimation, but that was a case where some men were burnt very badly. We could not trace any gas afterwards, and it was a mystery to us how the accident happened. The inspector came, and he did not know what to do. There was plenty of air, so he appointed a day to have the air stopped, to see if we could force gas by doing so, but we did not clear the mystery then—still there was no gas. A few months afterwards we were working the same seam, and the rock came in one of the roads—what we call the gob roads—and it exposed a seam of chance coal which we did not know anything about. The gas had actually come down hill from this seam of coal, and that explained the mystery.

10044. Is there much shot-firing in working that coal? A great deal.

10045. When the inspectors visit the colliery, in consequence of a call from the men, do they often find something wanting attention, or have they found it was a false alarm? There were grounds for complaint very often.

10046. Did they apply a prompt remedy? Yes; straight away.

10047. Was there any delay about it? Not the slightest.

10048. With regard to other matters than ventilation, do the inspectors have anything to say about what they deem to be a faulty system of working? They would discuss the matter over with the manager, but they would not attempt to interfere beyond that. We often used to discuss the methods of different kinds of working.

10049. But in a glaring case, such as the insufficient size of pillars? Anything affecting the safety of the men they would interfere with at once.

10050. Do the inspectors examine the shafts? Yes.

10051. Did they do this periodically when they came? They generally used to go down the shafts slowly.

10052. Did they ride on the top of the cage? No; ordinarily they inspected the shafts just with the lights of the lamp. I never saw them make a close inspection.

10053. What about the ropes? They did not examine the ropes themselves. The first thing they did would be to look at the report book, which had everything up to date, and if there was any defect they would speak about it. If it was all right they accepted that, and then they would go through the workings; but they never inspected, in the same way as the mine, the ropes or the shafts, unless something occurred that would justify their doing so.

10054. What system had you for inspecting the pit boilers? Up to about fifteen years ago there was no rule or custom—it was simply left to the engineer; but from that time they have been under the control of an insurance company. The insurance company sends an inspector round periodically, and a certificate is given. After the pay Saturday the boilers would be emptied and go under examination.

10055. *President.*] What do they insure? You pay so much to the insurance company, and if you follow out their suggestions, they take the responsibility of any explosion.

10056. Would they pay whatever damage there was through a boiler bursting? Yes; they take the whole responsibility. They have a lot of inspectors, and if they found that their instructions were not carried out, the policy would be nil.

10057. Is it a regular policy? Yes; it is a good system, and works well.

10058. *A. r. Gregson.*] Is the system general throughout England? It is in the Midland Counties; I think it is now pretty general.

10059. Were check-inspectors appointed by the men in England? No.

10060. The men have no check-inspectors? No.

10061. Had they power to appoint check-inspectors under the Act? Yes; but I never knew any check-inspectors in our districts.

10062. You have been all your time at Wallarah, but I suppose you have visited other mines in the Northern District? Yes; a good many of them.

10063. Have you visited any mines in the Southern District? Yes; and in the Western District. I am consulting viewer for the Metropolitan Colliery, and I go west occasionally.

10064. Generally speaking, do you think the provisions in the English Act are applicable to this Colony? I think so. Taking your Northern seams alone, there are a lot of things in the English Act that are not required; but taking the deep mines—the Metropolitan Colliery, for example—that requires as much care as any mine in England; but generally speaking, the English Act would suit this Colony.

10065. As a manager, would you be content to work any of the mines here under the English Act? Quite content. I have not seen the new Bill in England. I know the Act of 1887, but not the Bill since.

10066. *President.*] Do you know about the Check-weighman's Act? Yes; I know that there has been no general alteration since 1887.

10067. *Mr. Gregson.*] With regard to the ventilation; one of the difficulties pointed out here is the interpretation of the existing Act of 1876;—are you acquainted with the provisions of that Act with regard to ventilation? Yes.

10068.

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10068. *President.*] Will you look at subsections II, III, and IV, of section 12 (*see Appendix B*)? Yes; subsection II is similar to the English Act, but the next subsection says: "That an adequate amount of ventilation shall mean not less (as a minimum) than 100 cubic feet of pure air per minute for each man, boy, and horse, which shall sweep undiminished along the air-way past each working-place." That is very ambiguous.

10069. How do you read that subsection;—what would be your administration of it? The general interpretation has been that if you have 100 cubic feet of air the Act has been complied with.

10070. One of the difficulties pointed out is that this has been the interpretation? Yes; I know that from personal experience.

10071. And that unless something is done to ensure the minimum quantity of air in the pit, the same difficulty will prevail in the future as has been in the past? Why does not that difficulty prevail in Great Britain, where the mines are so extensive and so dangerous? The inspectors there have sufficient power to say whether the ventilation is adequate or not. I never knew a case to arise under the English Act.

10072. Do you treat it as a difficulty? Yes; no doubt.

10073. How should that difficulty be got over;—what provisions would you propose in the new Bill? I should be content to take subsection II, and let that stand as it is, and let the inspectors have the power to decide.

10074. We come to another difficulty, that in some of the seams that are pretty high, and where there are two men, a wheeler, and a horse, assuming that the same quantity of air as your inspector thought necessary in England, viz., 200 cubic feet, or, in all, 800 cubic feet passed into each working-place, in some of the places would not there be a difficulty in measuring that air? Yes; there would be some difficulty, unless they had a very narrow place; but the inspector could judge for himself by the flame on his light.

10075. And by his senses? Yes.

10076. Would you be content to abide by his judgment? Yes.

10077. You think there should be no difficulty whatever in carrying out a clause as worded in subsection II of the present Act, owing to the indefiniteness of what is an adequate quantity or what is an inadequate quantity? There might have been some little difficulty in England, but it has come upon them gradually since 1872. It is understood there that there must be 200 cubic feet of air or thereabouts, and you would have to take that for granted here.

10078. Whatever the inspector thought was necessary, whether it was 100, 200, 300 cubic feet or more, would not that have to be left to the inspector? Certainly; but I have no strong objection to its being fixed at 200 cubic feet as a minimum quantity only.

10079. Do you think there is any difficulty on the part of an inspector carrying out a provision that does not stipulate for a minimum quantity? Not the slightest difficulty. In the aggregate the mines of Great Britain are turning out more coal than the mines of the world, and there is no difficulty there.

10080. You think, then, that the practice of Great Britain should be a guide? That is the best guide under the sun.

10081. You think that is enough to warrant you following the enactments there? Yes; you have the skill and practice of the known world there. If there is any change takes place, it is made use of there immediately. You have all the skill of the world to prevent accidents. I do not say it is perfect, but they keep changing according to circumstances. As far as human knowledge can go, you have all the skill up to date in working the British mines right through. The difference is, that you cannot have the same skill here. You have not the variety of coal-mining here. Leaving out the Metropolitan Colliery, you have the simplest mining under the sun—the easiest, and the safest to work. In English mining you get all kinds of difficulties—long wall, modified in many ways; pillar and stall, under a variety of conditions; gaseous mines; different kinds of roof; and the Act provides safety over all those conditions, so that you get the advantage of all this varied experience.

10082. You would be willing to take the English Act without experimenting at all? Yes, most decidedly. They have done the experimenting for us.

10083. You have not only in your mind ventilation, but the size of pillars, and other things? Yes; the Government inspector would not interfere with your system of working except you were working under water, and if he saw that you were working a system that would end in disaster, he would step in and stop the workings immediately. I do not think it is right outside tidal waters for any Act to say that you shall work your mines and have only a certain size for bords or pillars. It might be safe in one mine to work bords 10 yards and in another 4 yards. I think it is iniquitous to fix any size. I think it should be left to the manager of the colliery.

10084. *President.*] Under tidal waters? That should be decided by the Government.

10085. *Mr. Gregson.*] Who are the lessors? Yes; I think it would be sufficient to leave it to them.

10086. That being the case, you would not propose any provision in the Bill? No; that is a matter for the Government leases to deal with.

10087. There is a provision in the Bill, Mr. Parton, on page 8, wishing to give an inspector power to withdraw men in case of danger;—I refer to subsection (v) of section 21 (*see Appendix A*); you will see that that clause is struck out by the Legislative Council;—what do you think of that subsection? An English inspector, if he came into the mine, and saw it was unsafe, would order the manager to stop in a moment at his peril. It is part of an inspector's duty, as I take it, to do so. He is the same as the captain of a ship. He has to look after the safety of the lives. If he goes into a mine, and he sees that a place is not safe, it is his duty to withdraw the men.

10088. Would you have that subsection in the Bill? I do not object to it.

10089. Would it reduce the responsibility of the manager? I do not think so.

10090. Do you think that the manager might feel, supposing he apprehended danger, inclined to say, "Well, the inspector has been here, and he said nothing about this, therefore I must be all right";—would the manager or the inspector have the most intimate knowledge of the mine? The manager may have a knowledge of the mine, but may take risks that the inspector would never dream of.

10091. *President.*] Do you believe in that subsection (v)? I believe that an inspector should have power to stop any part of the mine that he considered was not safe to work.

10092. Would you give an inspector power to call the men out? What is the good of an inspector if he has not that power.

10093. Supposing an inspector says to the manager, "This is dangerous; the men ought to be called out," but the manager differs from him, and says, "I won't call the men out";—the case would then go to arbitration,

arbitration, but do you think that any manager would dare to keep the men in the mine if an inspector said any part of it was dangerous—would he dare to go on? I should not think so; I would not allow my under-manager to do so.

10094. Is it practically necessary that subsection (v) should be in a Bill giving an inspector power to call the men out;—suppose you did not get a good inspector, would you allow an inspector to have that power, because in some instances he might ruin a mine-owner by calling the men out? I am still of the opinion that an inspector, if he is worthy of the name, should have power to tell the manager to stop that part of the mine, and if the manager thinks different, it is a matter to be settled afterwards, but while they are holding the arbitration the thing may be blown up. An inspector would not take that risk unless there was danger. I never knew of a case where a manager would run in the face of an inspector. If the inspector is not far above an ordinary person he has no right to be an inspector. He is the same as the captain of a vessel, who is supposed to know more than the boy about the decks.

10095. It is your opinion that subsection (v) should remain? I am in favour of the inspector having proper power to stop any part of a mine that might be dangerous, and if he has not that power I think that he ought not to be an inspector.

10096. Do you think that this subsection should read this way, "Where imminent and immediate danger exists"? Yes; I assume that it would be in the case of imminent or immediate danger.

10097. Would you leave it to imminent and immediate danger? Yes; that would be better, in extreme cases.

10098. In such cases only you would allow the inspector to call the men out? Yes; in case of imminent or immediate danger.

10099. Present danger? Yes.

10100. Do you think this is a matter calling for legislation;—do you think that a manager would dare to resist an inspector without it being enacted at all? Is there not a case in point at Stockton?

10101. But the inspectors have since declared that mine to be safe? But there they went on in spite of the inspector.

10102. Was it supposed to be dangerous—likely to cause loss of life at any moment? Yes; that would meet what I wish to intimate.

10103. Do you know that the English Act contains nothing on this subject? Yes; because the inspector has the power there.

10104. *Mr. Gregson.*] The inspector here would have the same power as the inspector in England, so that if it is not necessary in England it ought not to be necessary here;—perhaps you do not find the same amount of discipline here? That is just my difficulty. I am trying to avoid saying anything derogatory to the colonial method of working the mines.

10105. *President.*] Do you think there is not the same deference paid to authority? I find that a difficulty myself, but I see it more elsewhere; more than I do in my own place.

10106. Is that where the whole difficulty comes in? Yes.

10107. *Mr. Curley.*] Are you not likely to put in a qualification to hamper an inspector; if a man is a thoroughly capable man, and intelligent, which inspectors are assumed to be, do you not think the clause would stand better as it is at the present time;—does not the word "dangerous" cover everything? If an inspector is equal to what I have told you, I have no objection to the clause remaining as it is; that is, assuming the inspectors are up to the standard they ought to be.

10108. *Mr. Gregson.*] Would you not be content to try the English Act with the materials we have? Yes; if the inspectors have the same power that the inspectors have at home, I would not object to giving it a trial.

10109. And make the inspectors responsible for their own districts in the carrying out of the Act? Yes.

10110. You are filling round and small coal away together at Wallarah? Yes.

10111. Will you look at section [41] 38, on page 18 of the Bill (*see Appendix A*), "payment of persons employed in mines by weight"—you will see that some words in that section are left out, and other words are inserted;—I think you will see that there is a little alteration wanted to meet your case? Yes; this only applies to large coal.

10112. Do you approve generally of the effort on the part of the Legislative Council to make the wording of the clause apply to the circumstances of the Colony as a whole? Yes.

10113. The wording of the clause as it left the Assembly is according to the English Act? Yes.

10114. Do you approve of the effort of the Legislative Council to apply the clause to the practice here? I do not. It leaves out the small with us altogether. I would not override the system of the Colony altogether—a system that has been in vogue for years; but I am working on a different system. The present system of weighing coal goes on all right.

10115. Working generally, selling round coal, other than round, and small coal? Yes.

10116. Is it not reasonable to make the clause applicable to the circumstances in practice? Certainly.

10117. Your circumstances might be met with "where large and small coal is filled away and sold together the coal should be weighed in the skip"? It is not sold together, the men are only paid on it. After it leaves the weigh-bridge it is divided, and you can make round or small, or whatever you like to do with it.

10118. You would require an additional provision for the taring of the tubs? Yes; the tare is taken of the tubs. We weigh every skip, and an average is taken of the skips, and the skip is balanced to that.

10119. Does not the skip vary? There is a check-weighman, and he checks them as often as he can.

10120. Is there any difficulty in drafting a clause to meet your case? No difficulty.

10120½. Would it be possible to require that all the coal should be weighed in the north? It would upset the surface arrangements. If you have a clean seam with very little band, you might do that—that is, without any risk of dirt or rubbish with your coal, but if you have any dirt you would get a vast amount of rubbish, that would give trouble to deal with. I would not do it with our seam if it was not a clean seam. Our coal seam is favourable for the system we have adopted.

10121. You have a weigh-bridge at the tunnel mouth? Just at the foot of the screens—some 300 or 400 yards away. Every skip passes over the weigh-bridge before it gets to the screen. Our coal requires no handling for band.

10122. You simply separate the small from the round? Yes, that is all.

10123. How many skips a day are you lifting? Between 500 and 600 tons per day, and the skips will hold from 15 cwt. to 16 cwt. each.

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10124. And you weigh every skip? Yes; every skip.
10125. *Mr. Curley.*] Do you know anything about the cost of those weighing machines with a dial—self-registering machines? About £12 apiece. I should think an ordinary weigh-bridge for skips would cost from £10 to £15.
10126. Would you regard that as a costly matter to any large company? No.
10127. How long will that kind of weigh-bridge last? From ten to twelve years, with a good maker.
10128. That would practically mean that the cost would be nothing, so to speak? The cost is not much.
10129. You spoke just now about separating the coal;—are you aware that in a number of the collieries in the Northern district there is what is known as the shaker screen, for separating the round from the small coal? Yes.
10130. And that practically the whole of the output of the colliery goes over that screen in the day with the exception of what goes to the weigh-bridge? Yes.
10131. In that respect, therefore, there would be very little alteration needed? Yes, as far as I know.
10132. Would not the weighing of every skip simply mean the computation of what quantity of slack was in the skip, to make a certain allowance in the payment for that;—would not that meet the difficulty of weighing every skip if the standard of the computation could be agreed on between the men and the proprietors? Yes, by mutual arrangement, taking the average of a number of mines over an extensive period.
10133. How is your mine ventilated at Wallarah? By furnace.
10134. Have you erected a furnace there recently? No; we are sinking a new shaft, but have nothing recent.
10135. Not in the new tunnel you opened out some time ago? No.
10136. Your furnace, in that case, is very small? There are two furnaces—one for each split.
10137. You have not to sink your shaft very deep? No; about 30 or 40 feet.
10138. Have you any fire-damp in your colliery? No.
10139. Have you a system of inspection every morning? Yes; every morning a man goes in and marks every place with the date.
10140. Should that system of inspection be carried out in every colliery? Yes.
10141. With regard to sub-section (v) of section 21, giving the inspector power to withdraw men in the face of danger—will you be kind enough to look at that subsection again? Yes.
10142. You see, in the first place, that the section deals with inflammable gases prevailing in any mine or part thereof, or of any cause whatever, the mine or the said part is dangerous, the inspector shall have the power to require the manager to withdraw the men. In the first place, he attempts to move the manager; the matter is under discussion before anything is done, and, in the event of the manager declining to comply with the request of the inspector, should not the inspector have the power to order the men out? Most decidedly; that is my view of inspectorship.
10143. Do you think the inspectors should pay attention to the size of pillars? They should pay attention to anything that affects the safety of the men. The first thing that the inspector should have in view is, that the mine is being worked under safe conditions. The biggest part of his duty is to look after the safety of the men from whatever cause.
10144. *President.*] In those places you mention, where blocks of coal were left 10 yards square, would there be practically a cut-through every 10 yards? It cannot be compared to the bord and pillar system, but you get the air clearer than under the bord and pillar system.
10145. If we had always had the English Act of 1872, or sub-section (ii) of the present Act in this Colony, I can understand there being no difficulty with regard to an adequate quantity of ventilation. If you simply provide for an adequate amount of ventilation, do you not think that it may be considered that it has only to sweep past the working-places—will they understand the administration of it;—will they give the men air up in the bords if you do not prescribe for it? I think we should have a minimum here.
- 10146-7. Would you take the air up to within a reasonable distance of the working-place? Yes; to within a reasonable distance.
10148. Tell me if this provision would meet your views: "An adequate amount of ventilation shall be constantly produced in every mine, to be in every case at least 100 cubic feet of pure air per minute, and as much more as the inspector may direct, for each man, boy, and horse employed therein, a sufficient quantity whereof, according to the judgment of the inspector, shall be taken to within 15 yards of the working-faces in non-gaseous mines, and to within 3 yards of the working-faces in gaseous mines, to dilute and render harmless noxious gases to such an extent that the working-faces of the shafts, levels, stables, and workings of the mine, and the travelling roads to and from those working-faces shall be in a fit state for working and passing therein"? I think that is intelligible.
10149. Does that carry out what you think is right? I do not see any objection to that. In some cases the present system is good enough; it is in my workings at present, but in a mine going to the rise there would not be the same ventilation in the rise as in the dip.
10150. Inspectors and managers have been satisfied with 100 cubic feet of air in the past;—do you think it wise to lay down a rule that the air shall be conducted into the working-faces in the future? Yes; I think so.

[Witness withdrew.]

Andrew Sneddon sworn and examined:—

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10151. *President.*] What are you, Mr. Sneddon? I am a colliery proprietor and manager.
10152. Do you manage your own colliery? Yes.
10153. How many years experience have you had in mining? About thirty-five years.
10154. Have you worked as a practical miner yourself? Yes, I have.
10155. *Mr. Gregson.*] You wanted to have an opportunity for giving evidence before this Commission? Yes.
10156. Will you kindly tell us what evidence you wish to give? I wish to speak with reference to the Bill generally. I presume the evidence wanted is on the points of the Bill as it left the Lower House, and the amendments made by the Upper House. I have a list of the clauses I think I should speak on. Section 3, sub-section (i), on page 2 of the Bill (*see Appendix A*). I approve of the amendments made in

in this clause by the Legislative Council, providing that daily supervision shall be exercised either by the manager or by an under-manager. Section 6, sub-sections (i, ii, iii, and iv), on page 3 of the Bill (*see Appendix A*). What has been substituted by the Legislative Council in new section 6 is pretty much the same.

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10157. *President.*] What have you to say to section 8, on page 3 of the Bill, "qualification and attendance of engine man" (*see Appendix A*);—what do you say to that section? I do not think that is necessary; I think the provisions of the Bill as regards boilers and engines should be left to a special law, and should not apply specially to collieries. Section 9, sub-sections (i, ii, iii), on pages 4 and 5 of the Bill (*see Appendix A*). The same remarks apply to this section as apply to section 8. Section [11] 10, sub-section (i), on page 5 of the Bill (*see Appendix A*). I approve of the amendments in this sub-section that the Court of Inquiry should be a District Court Judge, police magistrate, or stipendiary magistrate. Section 17, on page 7 of the Bill (*see Appendix A*). I do not think that clause is necessary. I look upon it as being inquisitorial. Section [19] 17, sub-section (iii), on page 7 of the Bill (*see Appendix A*). I think the clause should stand as it was originally drafted with regard to certificates of service. The clause should stand as it left the Lower House. Section 21, sub-sections (i, ii, iii, iv, and v), of page 8 of the Bill "powers of inspectors" (*see Appendix A*). I consider the powers given under this clause to inspectors are too extensive.

10158. *President.*] Do you mean the clause as it left the Legislative Assembly or the clause that has been substituted by the Legislative Council? The Legislative Council's clause is more moderate, and I approve of it. The original clause provides that an examination should be made once in each month, and the Legislative Council's clause, is as often as may be necessary.

10159. And you approve of that? I do. It would be for the inspector to judge.

10160. What have you to say to sub-section (v), giving the inspector power to withdraw men in case of danger? I approve of the Legislative Council's amendments. That gives a general expression about the powers of the inspectors without going so much into detail.

10161. What is the next clause that you would like to speak about? Section [22] 20, sub-section (i) on page 9 of the Bill (*see Appendix A*). I approve of the amendment leaving out the words "and enter such report in a book at the mine." The next section is [30] 28, sub-section (iii), on page 14 of the Bill (*see Appendix A*). I approve of the omission of that subsection, because in my case it would be a very serious matter to have to provide all that is required there on my plans. Sub-section [vi] (v), on page 14 of the Bill (*see Appendix A*). I object to the power here conferred upon the Minister as to the exhibition of plans, and giving information. What is here provided, I contend is provided in section [77] 71, on page 37 of the Bill (*see Appendix A*). The next section is section 36, on page 17 of the Bill, "hours of employment" (*see Appendix A*). I do not consider that this is a matter for legislation at all. Section [37] 34, on the same page (*see Appendix A*). I think ten hours is excessive for boys to be employed under ground.

10162. *Mr. Gregson.*] How many hours would you put it? I would limit it to eight hours actual employment. Section [41] 38, sub-section (i), "payment of persons employed in mines by weight" (*see Appendix A*). I object to this clause *in toto*. It is evidently intended that payment in all cases should be made by weight, and I think it should be optional with any colliery proprietor as to the method of payment. I consider it is much better to pay by measurement from a point of economy, and you can also more easily keep your workings uniform. For instance, I pay by measurement, and by so doing I can maintain the pillars to a uniform thickness. There is no inducement for the men to have their places extra wide, as if they were paid by weight, and my experience is that work is carried on more peacefully than where payment is made by weight. Nearly all the trouble that has been in the Northern district has been in consequence of disputes in connection with payment by weight, and for allowances that had to be made for matter other than coal. Sub-section (iii) of the same clause (*see Appendix A*). This subsection has reference to the standard-weight and standard-bar system. This is a question that has caused a great deal of trouble in the Northern district, and I cannot see that the substitution of the standard-bar for the standard-weight is any advantage to any one concerned. Under the standard-weight the miner knows to what extent he may fill, but under the standard-bar he may, if the coal happens to be too high, lose more coal than he would under the standard-weight. Of course it is necessary that there should be some check to prevent excessive filling of skips, and I consider the standard-weight preferable where a check has to be exercised. Section [43] 40, sub-section (i), page 19 of the Bill (*see Appendix A*). This section refers to the appointment of the check-weighman. I think the choice of a person to fill that position should be limited to the employees of the colliery. Section [44] 41, sub-section (i), page 20 of the Bill (*see Appendix A*). This is compulsory payment of the check-weighman. I think it is very improper to insert such a power in the Bill. I have known cases where the men, by a majority, have ordered the check-weighmen not to act for certain individuals, and if such a power exists the men might have to pay for a service that was not rendered to them. Section [50] 47, on page 23, "ventilation of mines" (*see Appendix A*). I approve of this rule as amended by the Legislative Council, because I consider it would be a physical impossibility to put any quantity of pure air into a mine. By the words "pure air" I understand that the air is to be as pure as in the daylight.

10163. *President.*] Why do you object to this? Because the air, in passing round the mine, gets contaminated.

10164. Is it not sent in pure? Yes; it is pure at the entrance, but the clause provides that it is to be constantly produced and sweep undiminished along the airways. I also do not approve of the shortening of the bords.

10165. *Mr. Curley.*] How do you read the present Act of Parliament on the ventilation business? It reads, "that an adequate amount of ventilation shall be constantly produced in every mine to dilute and render harmless noxious gases to such an extent that the working-places of the shafts, levels, stables, and workings of such mine and the travelling-roads to and from such places shall be in a fit state for working and passing therein, and that an adequate amount of ventilation shall mean not less than 100 cubic feet of pure air per minute."

10166. *President.*] How do you understand that section? That 100 cubic feet of pure air per minute shall sweep undiminished along the airway;—that is, that that volume of air is to travel along the main airways.

10167. Is any of it to go into the working-face? No; I do not think it is intended that the air current should be carried into the bords.

10168. What are the people to do up there? There is a distribution from the main current. 10169.

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10169. When they are 35 yards up the bord? Generally, if a place becomes too hot, they put a cut-through over.
10170. *Mr. Curley.*] How thick are the pillars in some cases? They vary—4 yards sometimes.
10171. And 35 and 8? Is 43.
10172. Is that a long distance in front of the air? Going to the rise it may be.
10173. You say it may be;—is it? In some cases. The conditions are not all alike.
10174. Well, under the conditions you cite—going to the rise? One set of workings may rise steeper than another. A place going to dip can go double the distance of a place to the rise.
10175. That would be 86 yards before the air? I believe it would be as good at 86 yards in the dip as at 43 yards in the rise.
10176. Then the cut-through should be half the distance that they are at the present time? I do not think there should be any hard and fast rule. I sometimes put them over at less than 35 yards.
10177. Do you think that the men should have efficient ventilation? Undoubtedly.
10178. That there should always be efficient ventilation throughout the mine? Yes; that there should always be an air current.
10179. *President.*] Everywhere? I do not know whether it is possible to produce it everywhere.
10180. It is possible to produce it everywhere, but do you think the men should work without sufficient air in any place? No.
10181. Well, how are they to get it? Well, the provisions made in most cases are sufficient.
10182. Under the present Act it is not sufficient, because you say the men work 43 yards in front of the air;—what air is there for them then? The passing along of this current of air carries any impurities that are in the working-place. It is only possible in the case of a long-wall to ventilate every working-place.
10183. If people use brattice, could they not ventilate the bords and working-places? The air-current can be carried into the working-place, but to do so you would impair the efficiency of the current.
10184. In that case you would send down a little more air? I question whether you can. You would have to multiply your currents so much. If the mine is divided into parts and the whole current is to be carried into each bord, there are four right-angle turns in each bord. As I read the clause, the air is to be carried past each working-place under the present Act; of course, the air in passing the working-place is distributed into the working-place.
10185. *Mr. Curley.*] Without any means to put it there; it comes of its own accord? Yes; it gets there. When a man goes into his place in the morning the air is fresher than when he left there the previous evening.
10186. *President.*] Do you say that a place is fresher in the morning than it is in the afternoon? Yes; the air-current, while circulating in the night-time, has purified the mine. There is nothing to contaminate the mine.
10187. *Mr. Curley.*] How do you ventilate your mine? By natural draught.
10188. Have you a furnace? Yes.
10189. What kind of a furnace? Brick.
10190. Do you keep it going all day? Yes; all day.
10191. When does your furnaceman start work? I have no furnaceman.
10192. Who looks after the furnace? The person in charge of the mine.
10193. The overman? Yes; the overman.
10194. How many men do you employ at the colliery? Not a great many.
10195. *President.*] How many men are employed? About 50 or 60 at one mine, and about 30 at another.
10196. *Mr. Curley.*] Take the Northern Extended Mine; is that where you have the 50 or 60 men? Yes.
10197. Where there is gas in a mine has not the air current to be taken to the working-face? Where there is gas in the mine it follows, as a matter of course, that the air-current must travel to prevent the accumulation of gas.
10198. If there is black-damp, must you not attempt to get that out? You cannot work in carbonic-acid gas.
10199. In some cases, is it not imperative to get the air-current up to the working-face to get this gas out? Yes; otherwise you cannot work at all.
10200. So that the air-current can be got to the working-face if required? Yes, it is possible; but it is not a general thing that every place in a mine is subject to gas—either explosive gas or carbonic-acid gas.
10201. Does not every place want ventilation? Yes; every place wants ventilation, and every place is ventilated.
10202. Seeing that you say the present conditions are sufficient, in even the rise places, would you propose that in the dip places these places should be extended to double the distance of what they are? No; I would not, for other reasons than ventilation.
10203. What is the next clause in the proposed Bill that you wish to refer to? Rule 4, sub-section (1) (*see Appendix A*), with reference to the inspection of mines. It is quite evident that this inspection is intended where gas exists, I think the clause should be amended, and read, "That where gas exists a competent person, or competent persons." As the rule stands, I consider it should be amended.
10204. *President.*] I do not think we can amend it, as both Houses have agreed to that rule? Will there not be a new Bill introduced? The next rule I wish to refer to is rule 6, on page 25, "fencing of entrances" (*see Appendix A*). I have the same objection to that rule.
10205. *Mr. Curley.*] I might ask you, do you inspect your mine every morning? I do not.
10206. Does the overman? He is about the mine, and passes through it every day.
10207. Does he inspect the mine every morning? I do not think he does.
10208. Are none of your mines inspected every morning? No; I do not think it is necessary. Where no gas exists there is no inspection necessary for that purpose. I was saying that I have the same objection to rule 6 as I had to rule 4, subsection 1.
10209. *Mr. Gregson.*] That rule is not objected to by either House? I am glad to hear it.
10210. All parties have agreed to let that rule stand;—no one objects to it except yourself? I think it is not necessary. No workman has any right to be in any place but his own. If I have to fence every place that is not in actual use, I will have a lot of work to do which I consider is utterly useless. The next rule I would like to draw attention to is part E, of rule 12 (*see Appendix A*). The original clause provides

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provides that no person shall return to a place where a charge has missed fire until a period of eight hours has elapsed from the lighting of the fuse attached to such charge. Would that include a squib?

President: Yes, as it stands.

10211. *President.*] Will it suit you to say, "But in places where a fuse is used, no person shall return to a place where a charge has missed fire, &c."? Yes.

10212. *Mr. Gregson.*] What is the next item you wish to refer to? Rule [20] 19, on page 28—"Trolley over pit mouth." (*See Appendix A.*) I think that rule ought to stand. I think it is a reasonable provision, especially where a shaft is sunk with the aid of an engine, a gin, or a whip. The next rule is rule 25, on page 29—"Coal not to be wrought under roads (*see Appendix A.*)". This rule prohibits the working of coal under any proclaimed road, without the sanction of the Minister. It has been struck out by the Legislative Council, and I am in favour of the omission, as it would prejudice me very materially in my operations.

10213. You are mining under roads? Yes.

10214. What right have you to the coal? I have a lease of the coal.

10215. From whom? Brooks, Kenrick, and Platt.

10216. Was that lease given to you before that road was made? No; but the coal was leased prior to the dedication of any streets or roads.

10217. You are the assignee of their lease? Yes.

10218. Was your lease transferred from somebody else after that road was made? Yes.

10219. How long ago is it since you got this lease? Fourteen or fifteen years ago.

10220. Had those people the right to lease that coal? Yes; they reserved the right to work the coal in all the land they sold.

10221. Did they dedicate the streets? In some cases they did, and in other cases there was no dedication. I am working with a view to protecting the safety of the streets.

10222. Have you not let a street or two down because of your operations? The Newcastle Road was let down.

10223. Was that a proclaimed road? Yes; it was a main road.

10224. Was it a dedicated road? I cannot say.

10225. You object to this rule as it stands? I do. It would have the effect of closing one of my mines.

10226. *Mr. Curley.*] Have you done a lot of undermining about Brookstown? Yes; I worked all the coal that I could get—all that was profitable to work.

10227. Do you know of a street collapsing some time ago and a cart going down on the street, although it was supposed to be kept up? I do not.

10228. You do not know anything about that? I do not.

10229. It does not trouble you whether the streets or the houses come down? I have had to pay for anything I have done, and I have taken all reasonable caution to prevent subsidences.

10230. Had not the whole of the people to make arrangements with you in order that they might get away? I bought the properties at a valuation.

10231. Did not they agree to some kind of valuation in consequence of the scare that your workings were creating? I do not know why there is a scare where I am working.

10232. There was a scare? Interested parties got up a scare.

10233. Had they a right to do so? No; they had no right to do so. If I injure another person I am responsible for it.

10234. You are responsible this far: that unless anybody pursues their right you will in no way recognise it—that is, unless they pursue it in a legal way? Whatever rights persons have I cannot take them from them.

10235. Did you recognise the rights of these people before this arbitration was agreed to? I laid the place out with a view to working with safety.

10236. Did you work it with safety? Yes.

10237. Did any houses collapse? Yes; but that was after I bought them.

10238. Did any houses collapse before you bought them? No.

10239. Did any of the streets collapse? I did not buy any of the streets.

10240. Did any of the streets collapse? No, I do not think so. I have no recollection that they did.

10241. Do you know that the Municipal Councils have stated that this matter has put them to a good deal of expense, in putting streets into repair, and in going into litigation on the matter? I am aware that the Council and their representatives have made all sorts of wild statements. No Councils have been to any expense in repairing streets in connection with my workings.

10242. If a street went down, who would have to repair it but the Council? I do not know of any case where I am working where the municipalities have had to repair a street.

10243. But where you have been working formerly? I have repaired all damages that have occurred to any streets.

10244. Do you know whether the Councils have expended any sums of money for repairing streets? Not for repairing streets.

10245. They have not done that? I have no knowledge that they have ever done so.

10246. If it has been stated that they have been put to expenses, should we accept the statement from a man who is likely to know? I say that, of my knowledge, neither of those Councils have been put to any expense repairing streets.

10247. Have you undermined any properties recently? I am undermining properties now.

10248. Have you damaged the surface in any way? No; I am mining with a view to the safety of the surface.

10249. Do you know Estell's place? Yes.

10250. Have you not injured his property? No.

10251. Had he a tank there? Yes.

10252. Was that tank destroyed? Yes.

10253. Was that the result of undermining? Yes.

10254. Was not that an injury to a man's property? It is an injury to a man's property.

10255. *Mr. Gregson.*] Do you say that you did not do it? Yes: Estell's property is over old workings that had been worked long before he purchased the property or the time at which I received the right to work the coal.

10256. *Mr. Curley.*] How do you account for it collapsing quite recently? I cannot say. 10257.

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10257. Have you pumped any water out there recently? Yes; with a view to working whatever coal I have a right to work.
10258. Had you commenced operations anywhere near this property at all? Nowhere near it.
10259. Had you not begun to pump water? Yes; for some considerable time.
10260. From this particular locality? From the Old Co-operative Mine.
10261. *Mr. Gregson.*] In doing so, did you drain the water from those mines;—have you lowered the level of the water generally in the Old Co-operative Mine? Yes.
10262. *Mr. Curley.*] Did you do any undermining on the public road going to Minmi? Yes.
10263. Was that with the permission of the Department? No.
10264. Had you the right to work under the road? Yes.
10265. Who from? The lessors.
10266. How long has that road been made? Some years.
10267. In that case, did you work with a view to safeguard the road? Yes, I did.
10268. You had some regard to the surface? Yes, I had. I worked places 5 yards wide, where the usual practice is 8 yards wide.
10269. *Mr. Gregson.*] What pillars did you leave? Four and 5-yard pillars.
10270. What was the cover? It varied from 30 feet to 70 feet.
10271. *Mr. Curley.*] Do you think that parties who take up surface land, with the mineral underneath, where the owners have both surface and mineral rights, that after selling the surface owners should allow the coal to be worked in any shape or from? I think if a man sells land and reserves the coal, he does so with the intention of working the coal.
10272. Should he respect the surface value that he sells where people buy it and make homesteads? When a man reserves coal he reserves it with the intention of working it.
10273. Should he respect the surface he has sold? In the places I am working I am working with a view to that object. I have no right to be expected to answer for other people. I think every man has a right to do the best with his property.
10274. Either surface or mineral? Yes.
10275. According to your opinion, should he do so? I do not think so. I think he has a right to work as much as is consistent with the safety of the surface.
10276. Have you anything else that you would like to refer to in the Bill? I would like to refer to rule 34, on page 30, "Examination of boilers" (*see Appendix A*). This rule has been struck out by the Legislative Council, and I think properly so. I think that until a general law is passed that collieries should not be picked out for special legislation in this respect.
10277. How many boilers have you at your Northern Extended Colliery? Two.
10278. How long is it since you purchased them;—how long have they been in use? One has been in use six years.
10279. What about the other one? It has been in use about a year less—five years.
10280. Were they in use before you got them? One of them was.
10281. Where was it in use? At Yates' place, at New Lambton.
10282. Do you know how long it was in use? For a short time.
10283. How long? Not more than a year.
10284. Was it new when Yates got it? I understand it was.
10285. Are they very large boilers? No, small boilers.
10286. What pressure do you work them at? From 40 lb. to 50 lb.
10287. What pressure will they carry? I never tested either of those two boilers. The horizontal boiler for the hauling engine has been tested since the repairs, but it has not been put into work yet.
10288. Do you keep an engineer? I could not say I have an engineer. The man who has charge of the engine and boilers has an engineer's certificate for river steamers.
10289. Is this the man you depend upon for the inspection of the boilers? Yes; I have also had considerable experience myself in connection with boilers.
10290. Can you see any harm that an inspection would do with regard to the inspection of your boilers? I do not think it would do any harm, but until there is a general law passed for the inspection of machinery generally, I do not think that collieries should be singled out. It is not to any colliery proprietor's interest to have defective boilers.
10291. What harm can an inspection do? It cannot do any harm. It will probably be an additional appointment for somebody—an additional burden on the State.
10292. And may it not be the means of preventing some boilers being blown up? I think the Newcastle district has been very free from explosions, showing that reasonable care must have been taken in the management of collieries.
10293. Is that the only reason you can give that it will be burdensome on the State? I have no wish to add to the burdens of the State.
10294. That is the only wish you have? I draw things rather fine. I believe a law for boilers is necessary generally.
10295. Even if it would entail inspectors being appointed? Yes.
10296. In that case the State would have to bear the expense? Yes.
10297. Do you know the system that is in operation in England with regard to boilers? No.
10298. Have you never heard the proprietors talk of the insurance system in connection with boilers? I cannot speak of the practice at home. I was young when I came to this country.
10299. Is there any other matter that you wish to refer to in the Bill? Yes; rule [35] 33, on page 30, which provides for a barometer and thermometer (*see Appendix A*).
10300. *Mr. Gregson.*] There is no objection to that rule? But I object to it.
10301. Nobody else objects to it? In the case of either of my collieries the cost of a barometer and thermometer might as well be thrown into the sea. The rule should be amended to read "Where gas exists."
10302. If the majority are of opinion that that rule should exist, we cannot alter it? I think the law should be framed to meet all cases.
10303. What would a barometer and thermometer cost? Whatever the money was, it would be money wasted. To the like of the A. A. Company it is no object, but in my case it is. I might as well place a barometer and thermometer up on a tree. I think the law should be constructed in an elastic way, to meet various

various conditions. A barometer and thermometer being unnecessary I may not put them there, and consequently I may be liable to a prosecution from the inspector.

10304. *President.*] Do you think there would be a prosecution? In my experience there are any amount of people who are on the alert to prosecute me.

10305. *Mr. Gregson.*] This rule applies to where a shaft is being sunk? I know it does, and if I started to sink a shaft, I should want a barometer and thermometer.

10306. *President.*] Look at what a mine includes, in section [78] 72, on page 38 of the Bill (*see Appendix A*). That section is the same as the English Act, and everybody concurs that the English Act is good? In some cases, the English Act does not apply to the local conditions.

10307. *Mr. Gregson.*] Shall we pass to the next matter you wish to refer to in the Bill? The next matter is rule 41, on page 31—"Person not to be employed in coal-getting without experience." (*See Appendix A*). I object to the whole of that rule, to what might be called inexperienced miners.

10308. Why? As an employer of labour I should have all the labour that is available when it is required.

10309. But you are not to allow a man without experience to work alone, because he might blow up the other people? In the case of a gassy mine it might be a reasonable provision, but it was not inserted for that purpose.

10310. *President.*] It is in the English Act. I cannot understand any reason except that an inexperienced man shall not work without an experienced man? The chief reason is that in times of labour troubles you shall not take any outside labour.

10311. *Mr. Curley.*] You only assume that, Mr. Sneddon? I assume it with good grounds.

10312. *President.*] Do you object to rule 42 (*see Appendix A*)? Yes; these provisions do not affect me in my operations, but, speaking in the interests of the coal-trade generally, I consider it is unnecessarily meddling with the details of management, and, if passed, I think, if I was the proprietor, I should consider whether it was better to shut up or carry on.

10313. Does that apply also to rules 43, 44, 45, and 46 (*see Appendix A*)? Yes; and to section 51, which is consequent on those rules.

10314. *Mr. Curley.*] What precautions would you take yourself? If I was in charge of a mine under tidal waters I would take such precautions as I would deem necessary in the interests of the property and the workmen.

10315. What would you do under the ocean? I would work a bigger proportion of the coal than is spoken about in these rules.

10316. What would you do? I would work half of it.

10317. *Mr. Gregson.*] Would not that depend on circumstances? Yes; but I say all this detail is better left to the management.

10318. *Mr. Curley.*] If you had gas, what would you do? I should take whatever precautions I deemed necessary under the surrounding circumstances.

10319. Would you like to be absolutely free—to have your own way? I cannot, because under the Act the inspectors have certain powers, and if I was to do anything to endanger the men the inspector would act.

10320. Should the inspector have power to draw your attention to general matters? Yes, undoubtedly.

10321. And if he did not think you were right, he should bring you to book? Then it is a question of who is right and who is wrong. It is a very intricate question, and we have had examples.

10322. Would you stipulate any width for bords under the ocean? It would depend on the cover and the nature of the cover. Under certain circumstances, it would be justifiable to work bords the ordinary width.

10323. Eight yards? Yes.

10324. With 200 feet of cover? It would depend what the cover is. If 150 feet of that was water it would not be safe.

10325. What would you do then? Reduce the area.

10326. To what distance? It might be a half.

10327. What would you leave the pillars? Not in excess of the area worked.

10328. *President.*] Would you work narrower bords and have more frequent supports? Yes. It specifies the maximum width of a bord as 6 yards, and you must leave the pillar 12 yards. Where a 6-yard bord was safe a 6-yard support on each side would be ample; that is, in a seam of the normal height. Of course, if it was a high seam, the pillar would be in proportion to the height.

10329. If it was a deeper seam? Then you must take the height of the seam and the weight of the cover.

10330. Would you prohibit the removal of the pillars? In certain cases it might be safe to remove pillars. If there is 100 feet of stiff clay, or a considerable thickness of clay, it might be possible to remove pillars. The German Ocean is worked under and the coal is all taken out.

10331. What is the depth there? About 1,000 feet, or thereabouts.

10332. Would you put in bores in advance in your leading drives, or anything like that? If I had no knowledge of the depth of water I would. Any person working under such conditions would have to post himself up with all the information available.

10333. *President.*] Have you anything else you wish to refer to in the Bill? I think I have passed one matter—rule [40] 38, on page 30, "Periodical inspection on behalf of workmen" (*see Appendix A*).

10334. You do not want the words "any two persons"? I want the clause to read "miners employed in mines."

10335. You do not want "any two persons"? No; not any two persons.

10336. Well? The next thing to which I take exception is section [63] 58, sub-section (II), on page 35 (*see Appendix A*)—the inequality of the penalties. I always understood that in British law all men were equal under the law, but in this section certain men are singled out for extraordinary penalties. I am aware that this section is in the English Act, but to my mind that is no justification. With regard to the under-manager, he may not be able to pay a fine any more than the ordinary workman.

10337. He is supposed to be a more intelligent man? There are certain circumstances in which he might have to commit a breach of the law. The section provides for a fine of £20, but in the case of the other person, £2. In my opinion, the penalty should be the same.

10338. The Lower House wants £1 to read £5; I do not think it is material? It is a matter of principle.

10339. *Mr. Gregson.*] Have you lost sight of the fact that you gave evidence in December, 1890, in connection with this Bill, which is almost the same as you are giving to-day? No.

10340.

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10340. If you were not called some time sooner, it was because we had this evidence here, which will be given full weight to. The evidence you have given to-day is only a repetition of that? I think there are some matters that are additional. The next, and final matter I wish to refer to, is section [77] 71, on page 37 of the Bill. (*See Appendix A*).

10341. *President.*] There is no doubt about that section? I think it should be amended to read after the word "mine" (of which he is the owner or lessee of the minerals in such adjoining lands). The object of the Bill is to guard against encroachment on other properties, and if the persons claim an inspection who do not own the mineral, there can be no encroachment. The term "equitably interested" is very wide and elastic. I have a right to mine under the streets of Platsburg, and in carrying out that mining, no person should have the right of inspection, when I am not encroaching. The property is mine. It is quite justifiable in the case of an adjoining mine-owner.

10342. Why not? Because it gives power to a person owning adjoining land. Why should he have the right, if he knows the coal was sold and he only bought the land?

10343. If you have a right to mine you are not encroaching, but if I own this land I have a right to see where you are working? Under this clause an application was made to inspect my colliery, and I objected because I thought the applicants had no right, but I was ultimately prosecuted and fined, and yet I was right, because they had no right to the coal.

10344. *Mr. Curley.*] You object to the Council having a right to inspect your colliery? I do.

10345. *Mr. Gregson.*] Have they not the care of the streets? Yes.

10346. And do you object to their knowing what is going on underneath the streets? Yes, I do. I have the right of mining under the streets, and I know that there are certain consequences attached to careless mining, and I guard against these, and if anything occurs I have to pay the piper.

10347. Might it not save you a great deal of trouble if the Council had power to see what you are doing? The trouble has been all the other way; it has been purely a personal matter.

10348. *President.*] I do not see how much trouble could arise from an inspection. Do you say that the Municipal Council should not have power to see whether you are mining skilfully or not;—would it not be better for anybody if they had the right to get an injunction against you? An injunction was applied for, and the Judge admitted my right to mine under the streets.

10349. You had to work under the supervision of Mr. Croudace? Yes; but Mr. Croudace did not make any improvement on the method I was working under.

10350. Do you not think people should have the right to see that everything is safe;—should not the Council have the power to look after the interests of the ratepayers? These powers in my case have been wrongly used. I have been put to great annoyance and expense by Municipal Councils in my district, because it was a personal matter.

10351. We are not considering a case between two private people;—can you say that it is wrong for the municipality to have the right to see that you are mining in such a way as to be able to say that it is safe for anybody? There is no such provision in the English law, and if it is not necessary in England there can be no necessity in this Colony.

10352. *Mr. Curley.*] Do you not know that in England the mines are down a great depth? It is there as here; they are both shallow and deep.

10353. Have they shallow mines in England? Yes. Previous to my advent in mining in the Northern district there was never any question as to mining under roads, and no special care was taken wherever a mine was carried on. No matter what the circumstances were it was the ordinary width; but when I came into mining I was not able to work in harmony with the Miners' Union, and every means was taken advantage of to combat me.

10354. You put it down to the Miners' Union? Yes.

10355. Did you ever know the Miners' Union to interfere in these lawsuits? No; but the prominent men in the Miners' Union are the prominent men in municipal matters.

10356. Did you ever know me, as Secretary of the Association, to interfere with any of your undermining business? No, certainly not; but only recently the Chairman of the Miners' Union went with a deputation from the Municipal Conference to the Minister for Mines and there made statements which were untrue and of which he had no means of knowing whether they were true or not.

10357. Should you not add something else to that statement;—should you not say that the Chairman of the Miners' Union owns a homestead on the Co-operative Estate? I am not undermining his homestead, nor likely to undermine it.

10358. Is he not an alderman of the borough? Yes.

10359. Is he not Mayor at the present time? Yes.

10360. Has he not the right to look after the streets? You can often kill a dog with butter.

10361. Because a man happens to be identified with the Union everything he does of a public character is to be attributed to the Union? He made a statement to the Minister that he had no means of ascertaining whether it was true or not. One statement was that I was removing pillars under the old Co-operative Colliery, and, as a matter of fact, the surface would subside; but, as a matter of fact, no pillars have been removed.

10362. Do you intend to take any pillars out? What my future action will be I cannot say; but in the future I must take into consideration the safety of the surface.

10363. You will please yourself what you do? I will please myself what I do with my own. I will not undermine anybody's property for the sake of undermining it and laying it down.

10364. You think the municipalities have no right of inspection to see whether the streets have been interfered with? In my own case it has been purely a personal matter.

10365. The Miners' Union have never taken any action in this matter, and is not that the best proof that they have done nothing? They did not need to do so.

10366. I think you have told us, with regard to the weighing business, that that particular clause in the Bill would compel you to pay by weight. Where do you find that stated in the clause? From my reading of the section I believe that will be the effect of it, and I think those who succeeded in getting the clause drawn intended it to act in that way. That clause has been specially framed to catch me, as well as rule 25. You have given the Department a great deal of trouble about me and my workings.

10367. You say that section [41] 38 in the proposed Bill (*see Appendix A*) would compel you to pay by weight if it became law? I think so.

10368. Where do you find it in the clause;—does it not say "where the amount of wages paid to any of the

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the persons employed in a mine depends on the amount of large shale or coal gotten by them, those persons shall be paid according to the actual weight of such large shale or coal gotten by them, such weight being ascertained in such manner as may be agreed upon by the owner, agent, or manager of the mine on the one part, and the persons so employed on the other part; and in the absence of such agreement such coal or shale shall be truly weighed either at the bottom of the screen or at the place as near to the pit-mouth as is reasonably practicable, &c."—that is, where there is a regulation as to the payment by weight? In the absence of a specific agreement between me and the parties, the clause would compel me to pay by weight.

10369-70. Is that your reason for objecting to it? Yes.

10371. Is your mine almost the only mine where the system of not paying by weight is existing;—is yours not an isolated case? I do not know of any other mine that is not paying by weight.

10372. You do not know of any other proprietary? At the present time I cannot think of any.

10373. Do you not think you are an exception to the general rule in that case? I believe I am an exception in the district. I do not see fit to adopt the method.

10374. I think you said that there was considerable trouble about the payment for certain matters that had to be cleaned from the coal in connection with this very clause? Yes.

10375. Is not that a specific payment that has to be paid for in connection with the workings of a colliery in the way of bands and so on; I am speaking in a general way? Of course it is bound to be a matter of dispute when deductions have to be made. That is one of the reasons why I prefer payment by measurement.

10376. The only matter is that the men are supposed to fill clean coal? I believe the inducement is greater to fill clean coal by measurement than by weight.

10377. That your system is superior to any other system in the district? In that respect it is. If a man is employed by weight, and he can pass stone, there is an inducement to do so.

10378. Do you not know that where a miner is paid by weight, that, as a rule, coal when it is put down the screen goes into the weigh-box, and that it comes under the scrutiny of the weighman? Yes.

10379. And that the refuse is taken out before the coal is weighed? Yes.

10380. What inducement can there be then? The inducement to me to pay by measurement instead of weight is a matter of economy. I save the expense of the men's wages, also the cost of a weigh screen, and weighing apparatus, and there is no friction with the men about being cheated. Every man can check his own work; it is there for him to measure as well as me, and another advantage is that I can with less trouble keep my pillars uniform, because there is no inducement for the men to work the place wider than it ought to be. Beyond a certain width they are not paid.

10381. Are these your only reasons? I think they are good valid reasons.

10382. Is your chief reason in this matter that in the method you have adopted you believe you get your coal worked cheaper than you would under another system? If circumstances were such that I had to pay by district weight, I would have to pay more by weight than I would by measurement. It is all a matter of profit, but the miners employed by me make more money than where they are employed by weight. If the local conditions are such that in the A. A. Company's mines a man can get 2 tons, and in my mine 4 tons with the same exertion, I have no right to pay him what the A. A. Company pays him. If 10s. is the standard, I have no right to pay him more than 10s.

10383. Is not this a matter of general agreement? I have never been a party to any of those agreements.

10384. Were you not a party when you were a miner yourself? Yes.

10385. In that case you were a party? Yes.

10386. With regard to this measurement business, would you have any objection to any man being appointed from amongst the men to go round and see that the measurements were correct, just in the same way as checking the weights? I would have no objection; but it is not necessary.

10387. I ask you that question again: in the event of the men wanting to appoint a man to look after their measurements, and to go round the whole of the colliery and take the measurements from time to time, would you have any objection to the men doing so? None whatever.

10388. Have you any objection to the men appointing a check-weigher? In my case there is no need for a check-weigher, as I do not pay by weight.

10389. Have you any objection to the men appointing a check-weigher? If I was paying by weight I would have no objection.

10390. Would you interfere with any of their meetings with regard to their ballots? I do not see how I could.

10391. Did you discharge some men some time ago? Yes, I did.

10392. How many? Four men.

10393. Why? I suppose that as a man is privileged to leave my employment I can have an equal right to dispense with his services when I think fit. The reason why these men were discharged was that they had made a demand to be paid by weight and I refused to accede to the request. Subsequently a formal request was sent to me in writing, signed by each man in the colliery, and I was given to understand that that course was pursued with your instructions. I declined to pay by weight on that formal request.

10394. And you discharged the men for making this formal request? I discharged the men for having gone in to work on my terms. They first of all signified their determination not to resume work, but when the other men were going to work they wanted to return to work too, and I declined to permit them, but at the solicitation of the other men I allowed them to start; but no sooner had they started than they got up this requisition to pay by weight, and I considered that they had not acted fairly, and therefore I dispensed with their services.

10395. Do you know, independently of what opinion I hold, that these men of their own accord wished to be paid by weight;—do you know that? I cannot say; but before that they had requested to be paid by weight and I declined to do so, and that was at the instigation of people not employed in the colliery.

10396. You think they have no mind of their own? I think they have a mind of their own.

10397. And, having that mind, do you think they should exercise it occasionally of their own free will? They have a mind of their own, but when they become members of an association they are supposed to submit themselves to the will of a majority.

10398. *President.*] I do not think there is anything else we wish you to refer to, Mr. Sneddon.

[Witness withdrew.]

Richard Thomas sworn and examined:—

- Mr. R. Thomas.
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10399. *President.*] What are you, Mr. Thomas? I am colliery manager for Messrs. J. & A. Brown.
10400. Where? At the Brown's and Duckenfield Collieries, Minni.
10401. How long have you been a mining manager? As assistant and manager, I have been connected with mining for the last thirty years? I have been a colliery manager for nineteen years, and was an assistant previous to that.
10402. *Mr. Gregson.*] How many years experience have you had altogether? Thirty years altogether.
10403. Nineteen years of that thirty years as manager? Yes, nineteen years as manager. I hold a first-class certificate under the English Act.
10404. A certificate of competency? Yes.
10405. What other collieries have you managed? In this Colony, the Stockton Colliery; and in England, the Clydach Vale Colliery.
10406. In what part of the old country? In South Wales.
10407. In what year did you leave the old country? A little over nine years ago.
10408. Was that before the Act of 1887 came into force? Yes; I worked under the Act of 1872.
10409. Will you look at our present Coal Mines Act of 1876, subsections (ii), (iii), and (iv), of section 12, with regard to the ventilation of mines (*see Appendix B*);—how do you interpret those clauses? With regard to them as a whole?
10410. Generally, what is the effect of them? As far as the minimum is concerned, I do not consider it too much in a mine, but I think that going into detail too much hampers the working of a mine. I would not object to 100 cubic feet of air as a minimum, or even more; but taking it undiminished, without regard to certain circumstances in various portions of the mine, I think it rather hinders than helps the efficient working of the mine.
10411. What are you bound to give under that Act? 100 cubic feet of air.
10412. Having done that, have you done all that the Act requires? Yes.
10413. Where is that 100 cubic feet of air to be required? Along the airways past each working-place; but subsection (iv) makes the meaning clearer by saying no place shall be driven more than 35 yards before the current.
10414. If you supplied 100 cubic feet of air per minute along the airways past each working-place, would you consider that you had complied with the Act? I would.
10415. Is that the common acceptance of the wording of the Act? I think that is a reasonable construction.
10416. *President.*] Do you say that if you have supplied 100 cubic feet of air that you have done all that is necessary in all cases? So long as it is sufficient to dilute and render harmless noxious gases.
10417. If you have supplied 100 cubic feet of air, have you done all that is required by the Act? I have.
10418. No matter whether the gases are diluted or not? Oh, no; I consider I would not have done so. This provision makes it very difficult for the inspector to prove his case.
10419. What do the words "not less as a minimum" mean? It really means that you shall keep that place free from noxious gases, but even without noxious gases you must send 100 cubic feet of air there.
10420. What place do you refer to; you said you must keep that place free from gas? The working-place, and all places where men travel.
10421. Are all the working-places to be kept free from deleterious gases? I consider I am bound to do that by this Act.
10422. Is there anything else you have to do? Yes; to restrict the splits to seventy men.
10423. And have you not to keep the places in a fit state for working and passing therein? True, that is another provision.
10424. Do you think that the provisions in the proposed Bill are sufficient? I consider they are more than sufficient.
10425. What would you suggest for the proposed Bill? I consider that an adequate amount of ventilation is all that is required. That is still the provision in England, and the matter has been thoroughly thrashed out, and the inadequacy of this provision has never been spoken of by inspectors or miners' advocates. This is what we have acted upon all through. It gives the inspector full power, no matter if there was 300, 400, or 500 cubic feet of air, to prosecute a manager if the place was not fit for working or passing therein. Under the English Act a manager is not bound to provide any quantity.
10426. Do you think that sub-clauses (iii) and (iv) have tended to confuse matters and make them worse than they might have been? Yes, as they imply that the old workings do not need ventilation, whereas, the Royal Commission at home, in their final report—
10427. Which Royal Commission? The Commission on Accidents in Mines—have laid very great stress upon the importance of ventilating worked out parts of the mine.
10428. Do you think that subsections (iii) and (iv) of the present Act in this Colony have produced some confusion here? I have seen nothing as yet.
10429. You do not think that they have caused any confusion at all? Not as yet.
10430. You think that as long as an adequate amount of ventilation has to be supplied that these two subsections may be dispensed with? I am of that opinion.
10431. That, having an adequate amount of ventilation in all parts of the mine, nothing more is needed? I think not, and it gives the inspector a freer hand to demand what quantity he thinks necessary.
10432. Would you be surprised to hear that there has been a good deal of doubt cast upon the working of the present Act in this Colony;—have you not heard anything? No; I have not heard anything, except that it is supposed that this 100 cubic feet would hamper an inspector if he wanted to conduct a prosecution—that a Magistrate would take the 100 cubic feet as sufficient. I would take it that I would be bound by subsection (ii) in the same way as I would be at Home.
10433. You think that subsections (iii) and (iv) are superfluous? I consider the ground is wholly covered by subsection (ii).
10434. Would you accept the wording of the English Act with regard to ventilation in the proposed Bill;—that is virtually subsection (ii) of the Act of 1876? I would.
10435. You do not think that the provision in the proposed Bill with regard to splits and cut-throughs is necessary? No, I do not.
10436. Do you think that any minimum should be provided? I do not see any necessity for it, but I do not see any harm in a minimum.

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10437. Do you not think there would be a doubt in the event of the magistrate convicting? In that respect I do. An inspector would have much greater difficulty in carrying his case through.
10438. You are aware that some of the seams in this Colony are 3 and 4 yards high? Yes.
10439. Supposing there was a minimum of 100 or 150 cubic feet of air per minute, how could you measure that air in the working-place? You could not measure it for a small number of men.
10440. There are two men working in each place as a rule, and occasionally a wheeler and a horse? Yes.
10441. That would be 600 cubic feet of air for a place 3 yards high? That would require a velocity of 30 feet, and the anemometer would not register that.
10442. How would an inspector know that the place was adequately ventilated? An inspector never uses the anemometer at home—he carries a safety-lamp.
10443. How would an inspector know, in the case we are speaking of, whether the mine was adequately ventilated? His light would show him.
10444. His lamp? Yes.
10445. And his own senses? Yes.
10446. His sense of smell would help him? No; not in all cases.
10447. Would he not smell the powder smoke? Yes.
10448. His own senses and the flame of his lamp would be sufficient? Yes; at home the inspector never measures the current.
10449. Do you think that would be sufficient to enable the inspector to say whether there was an adequate quantity of ventilation? Decidedly.
10450. If it were objected to—suppose the manager held a different opinion to the inspector, and said that the mine was adequately ventilated? In that case the inspector would always have the workmen to stand by to prove his case. If gas showed in his lamp the proof would be there at once.
10451. The case would go to arbitration? I have seen no case of dispute in which it was necessary to go into arbitration.
10452. Speaking of your general experience, is it likely that the manager would object to the inspector's dictum? I have never heard of a complaint to that effect at all.
10453. Do you think it is likely? I do not think it is.
10454. Do you think a manager would rectify the defect or fight it out before an Arbitration Board? I think there is the greatest wish on the part of managers to carry out whatever the inspector may require.
10455. To give more air if the inspector says more air is wanted? True.
10456. If the inspector does not use his anemometer in the working-places, where does he use it? At different places in the split. If he thinks the air is slack in any portion of the mine, he tries it in the main intakes and the returns.
10457. Assuming a split with sixty men in it, that would be 9,000 cubic feet of air on a basis of 150 cubic feet per minute, how many places would there be going in such a district? Thirty places.
10458. Allowing for the wheelers, say twenty-six or twenty-seven places? The wheelers are not counted.
10459. I assume a case for my own purpose;—assuming that there are sixty men, boys, and horses in a split, how many working-places would there be? Say twenty-seven.
10460. How would you propose to carry the air into each place of these twenty-seven places? I should propose to keep the full quantity on the main airway, and to take a sufficient quantity into each bord to dilute and render harmless noxious gases.
10461. How would you do that? By a sheet.
10462. How far would that be sufficient—say the bord was 35 yards? If it was rising very sharply I should think it necessary to go at least half the distance. In flat bords, or dip bords, perhaps 8 or 10 yards from the airway.
10463. Are you working under these conditions now? No; we adopt no system of bratticing at all.
10464. Does sufficient air go in? Yes; to dilute and render harmless noxious gases with the exception of powder smoke.
10465. Is that not to be provided for? It does not come exactly under the title of a dangerous gas; we do not put any bratticing for it.
10466. Although not a deleterious gas it is uncomfortable to work in? True.
10467. If you were without sub-clauses 3 and 4, would you have to alter your system of working in any way? No; we would carry on just as we are now.
10468. In doing so you think you would comply with the terms of the English Act, which is subsection (11) of the present Act in this Colony? Yes.
10469. You would not need any alteration whatever? None.
10470. Under those circumstances the inspector would be satisfied? Yes.
10471. How do you pay the minors for hewing at your colliery? Three shillings per ton.
10472. How do you measure the payment? By weight.
10473. Do you weigh all the skips? We take an average.
10474. Have you more than one weigh-bridge? One weigh-bridge at each colliery.
10475. How many screens have you for the coal to pass over? One weigh-screen and two travelling belts at each colliery.
10476. Is the weigh-bridge at a separate screen? Yes.
10477. Is that kept in operation the whole of the day? Yes.
10478. How many skips are weighed during the day? About thirty-five or forty would be a fair day's weighing.
10479. Has your weighman any other duties to perform? He simply sees that the men at the band-screen keep at their posts, but he can see that from the weigh-house.
10480. Are the men satisfied with the number of skips you weigh? I have never had any complaints.
10481. You have never had any complaints since you have been at Brown's collieries? There have been times when they did not consider that a sufficient quantity of skips were weighed, but that has been quickly remedied. Under ordinary circumstances there have been no complaints.
10482. How long is it since the last complaint? About three or four years ago.
10483. Did you increase the number of skips to be weighed? I told the weighers to keep up till the last hour of the day.
10484. And since then you have had no complaints? No, not since that time.

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10485. In your part of Wales, Mr. Thomas, were check-inspectors appointed by the men? Yes; they appointed check-inspectors, but we had to pay them before they would go round.
10486. Do you say that the mine-owners had to pay them? Yes; the miners would not take that amount of interest to send them around.
10487. You were anxious they should send check-inspectors around? Yes.
10488. Was that the usual practice? I know it was our practice.
10489. You do not know if it was done at other collieries? I cannot be positive.
10490. Do you know if the check-inspectors ever made complaints to the inspectors about anything they found wrong? No; I do not know of any such case.
10491. Are you aware that complaints have been made by the men to the inspectors? I heard on one occasion of an anonymous letter being sent to the inspector, and he inquired into the complaint.
10492. Did the inspector inquire into the complaint? Yes, he did.
10493. You have probably read in the reports that the Secretary of State in England encourages anonymous communications, and wishes the inspectors to attend to these complaints? Yes, and not to reveal the names.
10494. Do you look upon that as a fair protection? Yes.
10495. And as a manager you would not object to it? Not at all. If any man is dissatisfied, the sooner he is satisfied on that point the better.
10496. Have you ever had any notice of the visits of the inspectors to your colliery? No.
10497. How do they generally come? By 'bus from Wallsend. Sometimes I meet them in the workings when I am going round the mine.
10498. Have any complaints been made to the inspectors with regard to the Duckenfield mines? I have not heard of one.
10499. Has the inspector ever complained to you with regard to any of your arrangements? He notified me of the scarcity of air in one district of Brown's Colliery, and it was remedied. He visited it a few days afterwards and found that it was all right.
10500. Is that a thing that might happen in any mine? Yes.
10501. Occasionally? Yes, occasionally.
10502. The clause in the English Act that applies to the payment of the miner refers, you are probably aware, to mines of minerals other than coal? Yes.
10503. Are you aware that the Legislative Council when this Bill was before them proposed an alteration in the Bill to suit the practice carried on in this country? Yes.
10504. In your opinion is that a wise thing to do, or do you think it better to be contented with the wording of the old Act? I cannot see that there was ever any difficulty arising under the wording of the old Act.
10505. You would be content with the wording of the old Act? Yes; contracted to be gotten, I think, covers the ground, the meaning being large coal.
10506. The wording of the Act and the practice are not consistent with one another? The mineral contracted to be gotten is round marketable coal.
10507. Would you say round coal, not coal round and small? Yes.
10508. *Mr. Curley.*] Where it was contracted to be gotten in that way would it not mean still that? Yes; whatever is contracted to be gotten.
10509. *Mr. Gregson.*] Have you looked through the proposed Bill at all? Yes.
10510. Have you any suggestions to make that you would like to lay before the Commission? With regard to hours of employment, I consider that there is no necessity to compel men not to work more than eight hours. In fact, I think it is about the first time that legislation has interfered with adult labour, and until the hours they work can be proved to be hurtful or conducive to accident, I do not think they should be interfered with.
10511. Has that subject been inquired into in Great Britain? Yes, and largely petitioned against by the men themselves. In fact, one of the leading representatives of the men, Mr. Burt, took a very strong stand against it. It was endeavoured to be proved by the advocates that long hours were conducive to accidents, but in going into the matter they found that nearly all the accidents happened in the earlier parts of the day.
10512. Where did you get that information from? From the proceedings of the House of Commons.
10513. What is your authority for that statement? I read the reports of the proceedings in the *Colliery Guardian*. The speaker was Mr. David Thomas, my old master, and he presented a petition from 26,000 miners against that provision.
10514. *Mr. Curley.*] Do you know the number of hours they work in that district? Nine working hours.
10515. *Mr. Gregson.*] Was the occasion of the debate you speak of when the Bill was before the House of Commons last year? Yes.
10516. What became of the Bill? The eight-hour clause was thrown out.
10517. Why? On the strength of the opposition from the men themselves; that clinched the matter.
10518. Was it not on the proposition of your friend, Mr. Thomas, that it should be optional in each district? Yes; so that the miners should say whether they should have it or not.
10519. And then the promoters of the Bill threw it out? Yes.
10520. You consider that you are supported in what you say about the eight-hour provision by what has transpired in Great Britain? Yes; I consider that is likely to produce accidents. Any curtailment of the time will mean less attention to the safety of the working place. A miner may have filled his last skip, and finds it necessary to timber his bord, but his time is up, and next morning, through the bord not being properly timbered, it may lead to an accident through his wanting to get coal at once to keep the wheeler going. Most of the accidents in mines happen through the miner wanting to get the last bit of coal for the skip before he puts up a sprag or a prop.
10521. Have you any other remarks you would like to make with regard to the proposed Bill? With regard to the distance that shafts should be kept apart, I consider that 15 yards as a minimum is quite sufficient. There are circumstances where the surface area is limited, and to have the shafts 50 yards apart means not only a greater area on the surface, but allowing more for shaft pillars below.
10522. *President.*] What about 30 yards? I should say 20 yards is enough for all practical purposes, as the Minister has the right to use discretionary powers, if he considers a greater distance to be necessary.
10523. Not the Minister? I mean the inspector, 10524.

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R. Thomas.
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10524. Is there anything in this: One of our witnesses has said that in case of anything happening to one shaft, the other shaft would necessarily be involved. What do you think of that;—do you know any place where the shafts are only 15 yards apart? It is a little distance for shafts of a depth exceeding 200 feet, but for shallow shafts it is ample. With shafts 60 or 80 feet deep, it would be ridiculous to work a mine and take up 50 yards between the two shafts.

10525. *Mr. Gregson.*] It must apply to all the circumstances of the Colony;—should you not be content to compromise;—an Act of Parliament cannot be made to apply to shallow shafts only? An inspector has the right to require a greater distance where he thinks fit.

10526. Would you leave it to the inspector? Yes, under the dangerous practice clause. I do not think it is likely to affect us very much, because our seams are getting deeper and deeper.

10527. You consider that a good distance between shafts is advisable, not only for the stability of the shafts, but for the convenience on the surface? Yes.

10528. And underground too? Yes; I would not object to 30 yards.

10529. Have you anything else that you wish to draw attention to, Mr. Thomas? With regard to check-inspectors, I think that they should be appointed from amongst the men engaged in the mine. I refer to rule [40] 38, on page 30 of the Bill (*see Appendix A*).

10530. There again, you see, you have picked on one of the difficult matters? I will admit that I am against the recent English practice on that point, but our labour troubles lead us into many complications, and we may have men appointed to inspect our mines whose interest is not to keep the masters and men on an amicable footing. We do not find the same thing in England.

10531. *Mr. Curley.*] Is not that an unfounded insinuation you are making? We know that there are men——

10532. Can you point to any instance where check-inspectors have been appointed from any pernicious motives? Take for instance the experience they had at the Co-operative Colliery.

10533. *Mr. Gregson.*] As long as they were not mining engineers, would you object to them going round the mine on behalf of the workmen? I would object.

10534. You think it would be better for them to be chosen from men who are at the colliery? Yes. The men who are at the mine know most about it. There has been nothing in the past to show that their inspection has not been an adequate one.

10535. *Mr. Curley.*] A small mine might not be in a position to pay the men? They would have to pay more for an outsider.

10536. *Mr. Gregson.*] On behalf of the proprietors, they have committed themselves by saying they will take the English Act? I look upon this provision as a drawback; I am willing to take the English Act as a whole, but I am not willing to take the worst provisions in the English Act and have them tacked on to our own.

10537. What else would you like to refer to? I have nothing else. I think that in this matter of a certificated manager, where only ten men are employed, seeing that the Legislature intends to provide first-class men, that it is an unnecessary expense in a small mine. A second-class manager should be allowed to take a mine with thirty men or less.

10538. You would not suggest that the Act should ignore small mines; it has been suggested that managers of small mines might have a permit for a year—say, a permit on the inspector's recommendation;—what do you think of that suggestion? I prefer the certificate, because that is liable to be withdrawn in a case of incompetency or neglect. A matter of a permit would, perhaps, be difficult to deal with. I assume that a second-class certificate will be granted on showing practical knowledge. I do not think a mine should be left without a second-class certificated man.

10539. Have you anything else you wish to refer to, Mr. Thomas? I decidedly object to the word "serious" in subsection (1) of section [31] 29, on page 15 of the Bill, in connection with reporting accidents in mines (*see Appendix A*).

10540. *Mr. Curley.*] What is your objection to that section? Because it would cover all sorts of accidents. If a man cuts his finger it would have to be reported. We should want an inspector on the ground the whole of the time; and if an accident was reported, the working-place would have to be left idle until the inspector came. It would keep a manager going inquiring into these little things. It would keep the inspector going, and the mine idle, and I am sure the men in a short time would object to it. We have to keep the place idle now when an accident is reported.

10541. *Mr. Gregson.*] Have you anything else you wish to refer to? I object to allowing miners to depute any person outside of their own number to extract reports from the book in the colliery office.

10542. You do not object to any person employed in the mine inspecting the books or taking copies for themselves? No; we object to them deputing that right to anybody else.

10543. *President.*] Do you know that right is in the English Act? The same feeling would arise there as regards bringing anybody in as a check-inspector.

10544. *Mr. Curley.*] How long were you at the Stockton Colliery? About three years.

10545. In what year did you take the management there? In 1886.

10546. How did you find the condition of that mine with regard to the pillars? They were very thin pillars; a number of them were thin pillars. I do not think they were all thin pillars, but a great number of them were.

10547. Would you consider them too thin? Oh, yes.

10548. Had these pillars been left prior to your becoming manager? Yes.

10549. Did you leave any such pillars as these yourself? Not to my knowledge. They might run occasionally thin, but not in a general way. We kept lines on the bords, and occasionally they would run thin.

10550. Is the size of pillars a matter that requires consideration in colliery management? Undoubtedly.

10551. I believe there was an extensive fall during your management at Stockton? Yes.

10552. Where was this fall? At the top drive bords, where the most of those thin pillars were.

10553. Did it come over the pillars? It broke up with the pillars.

10554. Do you think that was one of the reasons that it broke up—I mean in consequence of the thin pillars? Yes.

10555. Did that fall go over any of the main roads? Yes.

10556. For any distance? For a distance of about 5 chains.

10557. Did that interfere with the working of the colliery at all? Yes; we had to stop the colliery.

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R. Thomas.
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10558. What year was that in? About the end of the year 1888, or the beginning of the year 1889.
10559. Had you to suspend work? Yes.
10560. For some time? Yes.
10561. For how long? For about a fortnight.
10562. Did the roof give indications of coming away before it fell? There was a great deal of crushing on those pillars.
10563. For how long? It started at the far end, at a distance of five cut-throughs—150 yards. It started there for about two months before it fell.
10564. Did it fall during the day or during the night-time? It did not come away suddenly; it started at the face; we struck a wbin intrusion.
10565. It caused you to suspend work on your main way? It never blocked the main-way. We started timbering before it came on.
10566. You kept the men out as a precautionary measure during the time you were repairing it? Yes.
10567. Did the fall come right round the main-way where you put the timber in? It came in the top drive, in the upper portion of the seam.
10568. Was that the only fall you had of any dimensions while you were there? Yes, with the exception of an isolated bord, with the thin top coal, but never with the main roof.
10569. What kind of roof did you find in that fall;—what was the quality of it? Shale and sandstone; more shale than sandstone; thinly bedded.
10570. What distance would this be from the shaft bottom? I should think the nearest point would be 70 yards.
10571. Was that coming in a northerly direction, north-west or north-east from the shaft? The closest point would be almost northerly, if anything, a little west.
10572. Was there any quantity of water given off in any of those falls? No; not a drop.
10573. Was your main drive going up that way, from the top working or from the lower working? There was a main drive in the lower workings. They were called our north-west headings, and a drive crossing it to serve five or six bords. We had there a slant road.
10574. How did you find the pillars in the bottom seam? They were not quite so bad as the others, but they were thin in places. There was one group of bords—I think about seven or eight bords—where there was hardly a thick pillar in the lot; that was in the top drive.
10575. I am asking you about the bottom drive? There were thin pillars in the bottom drive.
10576. What was the width of the bords? They were supposed to be 8 yards.
10577. Were they 8 yards? There were some above that; they ran in some places as much as 10 yards.
10578. Did you put down a bore there? No; we bored from the lower seam up in the mine, but never on the surface.
10579. How far was that bore in? At a distance of (say) half a mile from the shaft, to test for the upper seam.
10580. Did you test it at any time for the thickness of the rock? Not above the upper seam.
10581. Do you know of any places that were worked under the harbour during your time? No.
10582. Not under tidal waters? No, not under tidal waters.
10583. Is there one of your intake roads at Minni, where you have passed through some ground where an extensive fall came away some years ago? That portion is closed up.
10584. Is that portion finished? Yes; what we call the straight in, or that was what it was called then.
10585. Is that where the men complained of passing through some black-damp occasionally? That was before my time.
10586. Do you know of any place of that kind at the present time? No; occasionally we see a little black-damp near the fault furnace.
10587. Is that on one of the intakes or the return? It is in the return, near to the furnace.
10588. Have the men to pass through this at all? No; they do not pass there now. They used to, but we have a separate communication now.
10589. What is the width of the bords you are driving now? Eight yards.
10590. What is the size of the pillars? Five yards.
10591. What do you think is the depth of the colliery? The deepest workings where we are at present would be something like about 300 feet.
10592. Do you drive your bords by line? No.
10593. Are your pillars kept to anything like the size you intend them—5 yards? Fairly well.
10594. Do you think that these pillars will be ample in pillar-working later on? I do not think we will be able to extract all the pillars.
10595. Why? Because there is not a sufficient margin of strength left.
10596. Do you know if the mine is worked with a view to extracting pillars? As far as I can understand, it is the intention of the proprietors to leave the pillars.
10597. Have you made any recommendations yourself as manager as to the utility of leaving larger pillars in the mine? No; so long as I know it is not their intention to work the pillars.
10598. Have you made any recommendations at any time? No, I have not.
10599. Has the inspector at any time when he has visited your colliery drawn your attention to the pillars at all? Never.
10600. Do you use any brattice or canvas at all? Only in the narrow headings.
10601. Not in the bords? No.
10602. Have you not some rise places? Yes.
10603. Where the men are 35 yards before the air, and have a cut-through to put over, another 5 yards, making about 40 yards before the current of air from the headings, do you not think that some of this canvas brattice might be used to conduct some of the air to the men? We could not do it with advantage. What the men are doing is that they place the dirt in such a way that it leaves a space behind.
10604. That is, the men are doing it themselves? There is no other way, because our place is blocked up with dirt. It does not leave brattice room with our seam.
10605. The men will have to put up with the inconvenience of deficient air in those cases;—I think you admitted that the powder smoke hung about these places? Yes.
10606. If you get 100 cubic feet of air you have spoken about on the heading as a minimum, I think I understood you to say you considered the Act complied with—that is where there is no fire-damp or black-damp? Yes.
- 10607.

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R. Thomas.
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10607. You consider the Act is complied with? Yes.
10608. Does it prevent you from providing more air? No; I think Mr. Fegan was kind enough to credit us with having 200 feet per man.
10609. Where? In the tables Mr. Fegan laid before the Select Committee.
10610. Do you not think with regard to the word "adequate" in any new provision, that that word to some extent would leave the question still in an indefinite form? It would leave it in this way: that the inspector could demand whatever quantity the mine required. We would either have to comply with his request, or submit the matter to arbitration.
10611. Might not this arbitration last for weeks? He could close the mine apprehending danger.
- 10611½. If the manager would not provide the air, should the inspector have that power if he thought fit? Yes.
10612. With regard to the appointment of a check-weigher;—have you any objection to the men selecting their check-weigher? No objection at all.
- 10612¼. Have you any objection to the men meeting for that purpose? Decidedly not; we have encouraged them; we have even stopped the check-weighman's money for them.
10613. Do you measure the air in the mine very frequently? I generally take it by the flame on my lamp. I can judge by this very nearly, but if I have any doubt I take the anemometer.
- 10613½. How often do you take the anemometer? I do not think I have taken the anemometer in a dozen times in the whole time.
10614. When did you last take it? I suppose nearly eighteen months ago.
- 10614¼. Have you a travelling screen at your colliery? Yes.
10615. At both places? Yes.
- 10615½. Do you find these travelling screens a great advantage? Yes.
10616. More economical than the old custom? Yes; more economical and more efficient.
- 10616¼. Do you inspect the working-places in the mine every morning? Yes.
10617. In all parts of the pit? Yes.
- 10617¼. Have you any fire-damp given off? In some of the winning-out headings.
10618. We had your furnace-men here, and I think they stated that their starting time was about 6 o'clock in the morning? Yes.
10619. Would it not be better for the men if the furnace-man was in the mine earlier? We have a man in all night. We damp the fire, and it gives a brisk blaze at 4 o'clock in the morning. If the man there all night finds the air not brisk, he goes to the furnace, and we have had no complaints of slackness in the air in the mornings.
10620. It struck me that you consumed a very limited quantity of coal? They keep a good brisk fire. We have three furnaces and a fan going.
10621. Can they use as much coal as they please? Yes, as much as they like; and if we find the fire dull we reprimand them for it.
10622. Do you regard good ventilation as one of the prime things in mining? I think a well-ventilated mine is the cheapest mine.
10623. I suppose you cannot get the coal very well without blasting? There must be a certain amount of blasting, although the best miners blast least.
10624. Where powder smoke is, it is difficult to clean coal unless you have a good current of ventilation? Yes.

[Witness withdrew.]

Jacob Carlos Jones sworn and examined:—

Mr.
J. C. Jones.
22 Oct., 1895.

10625. *Mr. Gregson.*] What are you, Mr. Jones? A colliery manager and mining engineer.
10626. What colliery do you represent? The South Bulli Colliery, in the Illawarra district.
10627. How many years have you been there? I have been five years at the South Bulli Colliery as manager, and ten years in the district as manager.
10628. How many years experience have you had in coal-mining altogether? Twenty-seven years.
10629. Out of that twenty-seven years how long have you been manager? Ten years in the Illawarra district, and I was assistant manager in the Newcastle district for seven years.
10630. You wanted to give some evidence in reference to the proposed Coal-mining Bill? Yes; I would like to say a few words upon the eight hours. It is intended to make eight hours compulsory in mines, and that is going to add from 4d. to 6d. a ton on to our cost. If we are going to make all our day men work eight hours only, it will prove that it is almost impracticable to work.
10631. You do not think that the eight hours clause should become law? Certainly not.
10632. And your reason is that it would be impracticable? Yes, and costly. It would reduce the labour of our men two hours a day.
10633. *Mr. Curley.*] You said 6d. per ton? Yes.
10634. *President.*] How long do your men work in the face of the mine? Eight hours; then the men outside of the mine must be taken into consideration; it would reduce their labour to, say, two hours per day. That is where the item of cost comes in. The additional cost to us would be enormous. Additional plant would be required to maintain the output, and the plant we have already would deteriorate, and we would get one-fifth less work out of them. Then, again, rolling-stock and all the machinery has to be maintained. I may say that nobody in the coal trade objects to the coal-getter working the eight hours, but the day men's labour is light, so that the plea of hard work does not come in as far as they are concerned.
10635. You say that nobody has asked the coal-getters to work more than eight hours? No; not at my colliery. Again, in the system of weighing, it is proposed to make us weigh every skip that comes out of the mine. In South Bulli, and probably in all the southern collieries, it is almost impracticable to do this. We have not the space on the surface, and our screens are just a few yards from the tunnel-mouth. We want space for a weigh-bridge and forty skips as well, and that we could not do; and then there is no benefit to anybody. In South Wales, where I have been, they weighed every skip, but there they had large skips carrying from 25 to 30 cwt. Then to show you the means they adopt there, they have the "billy fairplay," and it would be compulsory for us to have the same thing here. That is objectionable,
and

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and has caused more strife than anything else. They rather think they are robbed because the skip is weighed in the gross, and it is tipped over the screen, and the "billy fairplay" shows 5 cwt. less. "Billy fairplay" is a box underneath the screen, and the weighman after weighing the skip in the gross tips it into the screen, and supposing the skip in the gross weighed 30 cwt., and the "billy fairplay" represented 5 cwt., the miner would only be paid for 25 cwt. That would cause more strife than the present system.

10636. *Mr. Curley.*] That is the system in South Wales;—may there not be instances where the small coal is paid for? Yes; and then it would be weighed just the same.

10637. If all coal was paid for, both small and large, would not that be fairer? It would involve alteration in the present practice, and it is not marketable in that way.

10638. Supposing one third was knocked off for small coal? I do not think it would be workable. The great objection to filling all away together, is the inducement for the miner to break his coal.

10639. If he knows that there is only one-third coming off, you think he will not bother about having a fair amount of large coal? That is it exactly. I found it in North Illawarra; the yield of slack increased 10 per cent.

10640. You think if the miner is only paid for large coal, he gets as much large as possible? Yes.

10641. *Mr. Gregson.*] You object to having every skip weighed? Yes, in the south.

10642. Where do you weigh? We weigh at the foot of the screen.

10643. You weigh every skip that is weighed, by itself? Yes.

10644. *President.*] What percentage of skips do you weigh? We weigh, on an average, thirty-five skips a day—about 3½ or 4 per cent. We get 1,000 skips per day, and we weigh thirty-five or forty skips out of that 1,000.

10645. Is your weighbridge going all day? Practically it is.

10646. Does your weighman do anything else besides weighing? No.

10647. *Mr. Gregson.*] What put it into your head that the Commission wanted every skip weighed? It is in the Bill.

10648. There is nothing to prevent arrangements being made? I have not looked to see that.

10649. *Mr. Curley.*] Have you a standard weight at South Bulli? Yes; 15 cwt. is the standard, and 13 cwt. 2 qrs. is the average of what we weigh.

10650. *President.*] Will you look at section [41] 38, on page 18 of the Bill, subsection (1)—"Payment of persons employed in mines by weight" (*see Appendix A*);—you will see the words between the lines 30 and 40—"such weight being ascertained in such manner as may be agreed upon by the owner, agent, or manager of the mine on the one part and the person so employed on the other part; and in the absence of such agreement, such coal or shale shall be truly weighed either at the bottom of the screen or at a place as near to the pit mouth as is reasonably practicable"? That is one of the amendments suggested by the Upper House.

10651. *Mr. Gregson.*] If you look at the clause in the present Act of 1876, you will see that there is nothing there to compel you to weigh every skip? I have it in my mind that it was suggested that every skip should be weighed; but if not, there is no necessity to object to it.

10652-3. The clause of the present Act has obtained for a good many years, and nobody has claimed under it that every skip should be weighed, and that is how the Assembly left it? There is no objection to it as it is at present; our miners have not complained about the weight.

10654. Under the proposed Bill standard weight is abolished? I wish it was not.

[Witness withdrew.]

WEDNESDAY, 23 OCTOBER, 1895.

[The Commission met in the Board Room, Chief Secretary's Office, at 10 a.m.]

Present:—

FRANCIS EDWARD ROGERS, Esq., Q.C., PRESIDENT.

JAMES CURLEY, Esq.

JESSE GREGSON, Esq.

Harrie Wood, Esq., Under Secretary, Department of Mines and Agriculture, sworn and examined:—

Harrie Wood,
Esq.
23 Oct., 1895.

10655. *President.*] You are the Under Secretary for Mines, Mr. Wood? Yes.

10656. How long have you occupied that position? Since 1874.

10657. *Mr. Curley.*] Have you a record of the principal communications that have passed between the Inspectors of Collieries and your Department? Yes; I have their reports.

10658. Have you the opinions given by the Attorney-General from time to time on matters pertaining to mining? Yes.

10659. Have you an opinion given by Mr. Attorney-General Barton, to the effect that inspectors were not to apprehend danger? Yes.

10660. Will you let the Commission see that document? Yes. [Document handed in. *See Appendix Z.*]

10661. I notice that there are two questions on this communication;—can you say how these questions came to be submitted;—were these questions submitted to the Attorney-General at the time? Yes.

10662. How did they come to be submitted? I presume some question was raised by somebody outside which we had to get information upon.

10663. I see that the first subject is, "If a mine, or any part of a mine, is found by the examiner or inspector to be dangerous, does (under General Rule 5) the obligation to withdraw the workmen from the mine rest upon the examiner, or inspector, or &c., &c.?" and the second subject is, "Is the examiner or inspector required, under General Rule 5, of section 25, to anticipate danger"? I may say that those specific questions were raised by me upon some communication that came to the Department.

10664. Did the inspector raise the question himself? Well, I really could not say that from memory. If I had been asked to look up the papers I have no doubt that I could have obtained that information for you. It would be proper to say that I raised these questions for submission to the Attorney-General.

10665. Have you a copy of Inspector Dixon's report in connection with the Hamilton Pit disaster? Yes. [Report handed in. *See Appendix S.*]

10666.

10666. In connection with any reports that an inspector may make with regard to the condition of a colliery which he may consider unsatisfactory, has he, in the first place, to submit those reports to the Department, or does he take individual action immediately? In the first place he usually reports to the Department.

Harris Wood,
Esq.
23 Oct., 1895.

10667. Is that only in cases where he is likely to take any action? Where he is proposing to take proceedings.

10668. It is only in cases of that character? Yes. He also reports the results of his periodical inspections to the Department.

10669. What is done supposing an inspector sees something that ought to be remedied immediately? He notifies the manager, and enters it in the book.

10670. Is that part of his duty? Yes.

10671. It has been stated here, by one of the inspectors at least, that intimations to managers are mostly given verbally? Yes.

10672. Do you not think that a written communication would carry more weight? My impression is that if there is anything the matter of serious consequence the inspector does as a matter of fact enter it in the book, and if trivial he will call the attention of the manager to the matter, and the manager would remedy it.

10673. What might be deemed a trivial matter might end with bad results? Yes.

10674. Would it not be better to have a written notification? I can imagine it would involve a considerable amount of trouble, and probably unnecessary trouble. An inspector might see little things of no great consequence perhaps better remedied than left alone, and on the spot he tells the manager and the under-manager, and the thing is dealt with at once.

10675. In the event of anything arising later on; a question of dispute might arise whether a manager had been informed, and in that case there would be only one man's word against the other? There would be a difficulty then.

10676. You could not say what was done unless a report was made? No. In answer to that, I may say that since the present Act has been in operation no such case has come under my notice, as far as my memory serves me.

10677. With regard to those leases under ocean waters? Yes.

10678. Have you fixed any conditions with regard to the issue of these leases? There are conditions in the leases.

10679. What leases now are affected by these conditions? The Hetton lease, some of the Stockton ocean leases, the Wickham and Bullock Island lease, and probably some few others; but any that are under the ocean or tidal waters contain these special conditions.

10680. *President.*] What are the conditions in these leases? Size of pillars and width of bords, and so on (*see Appendix Q*).

10681. Would that always be the case without legislation? Yes, I think so. I think we would continue to impose conditions such as these, or some modification of them.

10682. All the coal-fields under the ocean are worked under leases granted by the Government? Yes; leased from the Crown.

10683. There is no private property held at all? It is all Crown land.

10684. *Mr. Curley.*] Do you stipulate for companies taking soundings, or putting boreholes in advance of the main workings? Yes.

10685. *President.*] Will you look at the proposed Coal-mining Bill, rules 42, 44, and perhaps rule 45, on page 31 of the Bill (*see Appendix A*). These rules practically relate to mining under tidal waters, and under the ocean? Yes.

10686. Are conditions equivalent to those rules really inserted in every lease? Yes; I could not say they would be *verbatim*, but substantially the same.

10687. Having the same effect? Yes.

10688. Who inspects for you to see that the requirements of the lease are being fulfilled? The inspectors.

10689. Are they furnished with copies of the conditions? A copy of every lease is lodged in every office of the Examiner of Coal-fields, and is open to inspection by the inspectors at any time.

10690. *Mr. Curley.*] With regard to the duties of the inspectors,—has each particular inspector a certain district? Yes.

10691. They are individually inspectors on their own account? Yes; that is so, no doubt. The question of seniority arises where one may have to act for another. In the event of the Examiner of Coal-fields being absent Mr. Dixon may act for him, and the next in seniority may act for Mr. Dixon, and so on.

10692. So far as the Act is concerned, I do not suppose there is a senior position for anybody? Under the present Act the Examiner of Coal-fields is the head of the branch.

[Witness withdrew.]

Jacob Carlos Jones re-examined:—

Witness: Some remark was made yesterday, and I was led to understand that the basis of this inquiry is on the Bill as it left the Assembly and the amendments made by the Legislative Council. It was said that the Council approved of standard weight being abolished, and, if you will permit me, I strongly object to the abolition of the standard-weight system.

Mr.
J. C. Jones.
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10693. *President.*] While we have to consider the Bill as it left the Assembly and went to the Upper House, there are certain things that both Houses have agreed on, and one of these things is that the standard-weight system should be abolished? I shall abide by your ruling, by all means, but I thought the matter was open all through. This being the case, I will say no more about the standard weight. I would like to say something on the weighing of every skip.

10694. *Mr. Gregson.*] That is not obligatory in the Bill? Is there not an attempt made to make it obligatory?

10695. I do not think so. If you look at section [41] 38, on page 18 of the Bill (*see Appendix A*) you will see that it is not proposed to make it obligatory by the Legislative Assembly or by the Legislative Council.

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The Assembly had it "unless otherwise mutually agreed upon," and the Council had an equivalent provision—"in such manner as may be agreed upon by the owner, agent, or manager of the mine on the one part, and the persons so employed on the other part," so virtually it is the same opinion in both Houses? I see.

10696. There is a qualifying clause, "of the mineral contracted to be gotten"; the thing is qualified right through? Yes. I would like to refer to the pay Saturday. The section I refer to is section 36, on page 17 of the Bill, "hours of employment" (*see Appendix A*). In the south the miners themselves have given up the idea of an idle pay Saturday, because we have worked the last three consecutive pay Saturdays, and the miners have found this necessary where the trade is depending upon the weather. I certainly would object to see what is laid down here in clause 36 carried out.

10697. *Mr. Curley.*] Has not this been done after considerable pressure from the Company? No; I think their own wisdom has shown them that it is necessary.

10698. We know of notifications being put up on the pay Saturday? They have agreed to it in my case.

10699. They have agreed to it very reluctantly in some quarters, I know? Of course you are all aware we have no harbours down there, and that is a strong reason why we should work when the weather permits us.

10700. What time do you expect the men to start work in the day? Seven o'clock is the hour for a Saturday. There is only one shift on the Saturday.

10701. If you do not blow for them at 7 o'clock? They are not expected to work. If we want them to work on Saturday we blow the whistle the previous night at 5 o'clock.

10702. And on other days? We blow the whistle at 8 o'clock in the morning for the back shift.

10703. If there is no whistle are they free for the day? Yes.

10704. Do you get the men to work later than the usual hours during the week? No; unfortunately we have failed to get them.

10705. Have you requested them to do so? Yes; we have blown on some occasions after the usual hour, but the men would not turn up.

10706. You would have worked later if the men had complied with your request? Just so. The provision for bratticing in the Bill is certainly unnecessary. I have gone into a calculation for the last twelve months just to estimate pretty nearly what the bratticing would cost. We have driven 3,400 yards of bords and 5,660 yards of headings, and I have estimated for the purpose of calculation that an average of 9,000 yards has been driven for the year. That is the aggregate. Perhaps it is a little more than that; but that is the average for the twelve months.

10707. Was that last year? Yes; ending this month—from October to October. The cost of bratticing, the nails, and the extra props and the labour, I have estimated as £2,770, which is equivalent to 4 43d. per ton on an annual output of 150,000 tons.

10708. *President.*] Is that what bratticing would cost? That is it. It is difficult to work out, but that is as near as possible.

10709. *Mr. Curley.*] Have you put that quantity of coal out? No; our output last year was from 115,000 to 120,000 tons of large coal.

10710. Does this calculation include your small coal? No.

10711. How much would the quantity be, taking round and small altogether? 150,000 tons of round and small; probably more this year.

10712. How much more? 10,000 tons more this year than last, from October to October.

10713. Round and small? Yes.

10714. What is the height of your seam? The average height is from 7 ft. 6 in. to 8 feet.

10715. Does the whole of your mine run that average? Yes, all that we work; I do not include the rolls.

10716. What is your colliery capable of putting out with present appliances? 200,000 tons.

10717. Is that round and small? Yes.

10718. How many working miners have you, all told, for the places that you speak of? From 190 to 200 miners.

10719. Do two men work in a place? Yes.

10720. That would be ninety-five places you would have going? We have, I think, from ninety-five to 100 numbers.

10721. What brattice is your estimate based for—wood or canvas cloth? Canvas bratticing cloth.

10722. What price do you allow? Eight pence per square yard.

10723. Cannot you get it for 7d.? That includes delivery at the colliery, and we always get the widest we possibly can get.

10724. How many yards of bratticing would there be in each place? It depends on the system of working.

10725. Have you estimated for bratticing right up to the face? I have estimated brattice for what we have driven yards of coal. I have assumed that the brattice deteriorates every four months, or three times a year.

10726. How do you know it requires renewing two or three times every year? We know from experience; we use a little of it occasionally.

10727. Where? For ventilating purposes—doors and headings.

10728. Is your mine very dry? Perfectly dry. There is not only natural decay, but the wear and tear in pulling down and re-erecting it.

10729. If another man that had used brattice for a considerable period of time in a dry mine similar to yours had said that he had used it over and over again, and he had some that was there when he was there which had been in use for eighteen months, and this was in a mine where they were compelled to use brattice, do you not think he ought to know something about it? He ought to know something.

10730. If it did last the time he states, would that materially alter your calculation? Yes; it would reduce my cost. I estimated for South Bulli only.

10731. How many men have you calculated for? Four men.

10732. At how much per day? Seven to 8 shillings per day. It runs into £400—that is at 8s. per day for labour.

10733. Would not two men be an ample allowance for you to make? It takes two men now doing very little else than attending to the ventilation.

10734. If you make a calculation you have a right to confine them to that exclusively? Yes; if they were entirely on bratticing it would take four men to do it. You cannot get brattice the full width from floor to roof.

10735.

10735. If one man had looked after sixty places in another mine, in the face of that would you consider your calculation excessive? It depends on the conditions—the height of the seam and the various other things. One man could not look after sixty places in the South Bulli Mine. I would like to refer to the matter of pillars.

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10736. *President.*] Do you refer to working under the land or under the ocean? Under the land principally; there are special provisions under tidal waters.

10737. *Mr. Curley.*] Cannot you give us your opinion? My opinion is that large pillars undoubtedly should be maintained. I know that I have had to alter the system altogether at South Bulli. We are leaving large pillars.

10738. What size? From 12 to 20 yards.

10739. What is the width of your bord? About 8 yards.

10740. *President.*] Are you working under a mountain? Yes.

10741. Can you legislate for a matter like this satisfactorily? No.

10742. Must it not be left to the experience of the managers? Yes.

10743. The conditions vary in every mine? Yes.

10744. You cannot legislate for matters of that kind? You cannot manage a mine by Act of Parliament.

10745. *Mr. Gregson.*] Do you propose to work out your pillars? Yes, certainly; that is why I leave large pillars. If I did not intend to extract them, smaller pillars would have done.

10746. *Mr. Curley.*] Are not most mines worked with a view to extracting pillars? I do not know.

10747. *Mr. Gregson.*] It depends on the value of the ground overhead? Yes.

[Witness withdrew.]

Thomas Ellis sworn and examined:—

10748. *President.*] What are you, Mr. Ellis? I am a miner.

10749. How long have you been a miner? For nearly forty years.

10750. Where have you been employed? I was in the old country until eight years ago, and I have been in the South Coast of this Colony, Wollongong district, up to the latter part of 1890, and I was in Queensland for about one year and a half.

10751. What mines have you been employed at? At the Mount Kembla and the Metropolitan Collieries.

10752. Where have you been employed the remainder of the time? Since the latter part of 1890 I have been in the Northern district.

10753. *Mr. Gregson.*] What part of the Northern district? The Helton Mine.

10754. Have you been in the Helton Mine all the time? Yes.

10755. *Mr. Curley.*] Have you worked at the Helton Colliery for any length of time? Since four days after the unfortunate maritime strike was settled.

10756. You have worked there from that time until now? Yes.

10757. Are there any particular clauses in the proposed Bill that you wish to refer to? Taking the Bill as a whole, as I have seen it in the local papers, I think it is a very fair Bill.

10758. *President.*] Do you refer to the Bill as it left the Legislative Assembly, or as it has been amended by the Legislative Council? As it left the Legislative Assembly; but I think that there are one or two items that are not mentioned in the Bill that should be in it.

10759. *Mr. Curley.*] What are they? In the first place there should be a clause in the Bill that within a given time, say nine months from the passing of the Act, any deputy should hold an ambulance certificate, or else not hold the situation.

10760. *President.*] What is an ambulance certificate? To pass an examination in order that they might give aid to the injured.

10761. *Mr. Curley.*] That is nine months after the passing of the Act? Yes; that is a reasonable time for them to acquire the knowledge.

10762. Do you know that there is a provision in the Bill to this effect;—will you look at rule [36] 34, on page 30 of the Bill (*see Appendix A*)? Yes; but that should extend into the mine. Stretchers should be kept in different districts of the mine.

10763. Why do you advocate that? Because they are readier there, and more useful if kept on the spot. If they have to be brought from the surface it might cause delay in getting proper medical assistance.

10764. What is the method of bringing injured men out of the mine? To double them up and bring them out in a skip, which in some cases is very injurious to the patient.

10765. *President.*] Do they double a man up if he is hurt? It is usual to put them in a skip, and skips are about 40 inches in length. That is invariably the custom, and if they are injured about the thigh or the back, or internally, it is often a very serious matter to put them into a skip. There should always be a stretcher to put them in.

10766. Would it not depend upon the nature of the accident;—surely they would not double a man up and drop him into a skip? Let them make him as comfortable as they can, the length of the skip will not allow of him being laid out to the best advantage. I have had cases in the old country where, by having the men and the stretchers close to the part where the accident has occurred, it has saved a good deal of suffering.

10767. *Mr. Gregson.*] Is that the practice in the old country? Yes; and there are competitions there now for silver and gold medals.

10768. Is that the practice? Yes; and also ambulance baskets, scissors, sponges, bandages—what is called the St. John's Ambulance Basket.

10769. Is that obligatory under the Act? The employer I was last engaged with sent word out that it was compulsory for the deputies to hold an ambulance certificate, and that they had to keep an ambulance in every district of the mine.

10770. Will not rule 34 meet what you require,—“Where persons are employed underground, ambulances or stretchers, with splints and bandages, shall be kept at the mine ready for immediate use in case of accident”? They kept them down the mine before I left the old country.

10771. *Mr. Curley.*] What district was that in? Barnsley District—Moukbretton Colliery.

10772. Have you anything to say about the ventilation? Yes; where I am working this quarter we have bad ventilation.

10773.

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- Mr. T. Ellis. 10773. What mine is that in? The Hetton Mine.
- 23 Oct., 1895. 10774. What is the name of the district? Steel's No. 1.
10775. What are you working in? A bord of tops; and what makes it a great deal worse, is that the Morgan has to be shot down. Although the ventilation is so bad the Morgan is shot down in the day-time, and we often cannot see the skip for powder-smoke. The pit was idle from the 3rd to the 14th of this month, and the Morgan shooting should have been done during that time, but when we went to work before the back shift came in we could not see through the Morgan shooters firing shots. They put from 1 lb. to 2 lb. of powder in each shot, and it makes it very bad for us to clean our coal and also to work.
- 10775½. Is there a fair amount of air on the heading? Not a good current; most of it is return air; it is all open workings, and there is no provision for each man to have his share of what comes into the heading.
10776. Do you think that bratticing should be used? Yes; or some other means of conducting the air into all the places.
10777. When you say the air is defective in that district is your case the only one? It is a general complaint in that district; that is, the 5th left hand and Steel's No. 1—they meet in each other.
10778. Have you worked in those districts for any length of time? Not till last quarter.
10779. Not during all the time you have been at the colliery? I was working in the 5th left-hand two years ago, when the bottoms were being taken out.
10780. Is there anything else you would like to refer to? I think the time has arrived to empower the Humane Society's officials to have access to the mine at any time they think fit.
10781. What is your object for requiring that? To stop cruelty to the horses—working the horses in a cruel way.
10782. Would you like to refer to anything else? The weighing clause I think needs amending standard weight should be abolished.
10783. *President.*] That is agreed to by both Houses of Parliament? Thank you.
10784. *Mr. Curley.*] You have a system of standard weight, and you object to it? Yes.
10785. You do not think it should be continued? No; I would like to see the day when every skip of coal that goes off the cage should be weighed.
10786. Have you approached the manager to get this standard weight done away with? Yes, and the directors too.
10787. How about the appointment of a check-weigher? I think the miners should choose whom they think fit, seeing that they have to pay him, and he cannot necessarily impede the working of the mine. If the miners like to go away from their own mine to select a check-weighman, I cannot see why they should not do so.
10788. What about the working hours? No longer than eight hours from bank to bank.
10789. Would you legislate for that, or leave it a matter between the men and the manager? I would legislate for it.
10790. *President.*] If a man worked longer than that time would you put him in gaol? I would.
10791. That is your idea of liberty? Yes; that is my idea of liberty. We are compelled to work longer than we wish, or move from the colliery.
10792. Are they very exact with regard to the working hours of the colliery? We must stop at the face until they knock us off. The men objected, and sent a deputation to the manager, but he would not flinch one iota, and, rather than cause a disturbance at the present time, the men submitted, but very unwillingly.
10793. *Mr. Curley.*] If you are sick, or wanted to come out for any special reason, would there be any objection? I know of no one who has been sick, who has been objected to, but men have been reported for being on the road away from their working-places, at three minutes past 4 o'clock.
10794. Are the places driven by line at your colliery? Yes.
10795. Do you know that you are working under tidal waters? Yes.
10796. Do you think that the mine is being carefully worked? Well, with regard to the pillars, fairly well. I cannot find any fault with regard to the work under tidal waters.
10797. *President.*] Every care is taken? Yes.
10798. *Mr. Curley.*] Have you ever seen anything of an unusual character that would require special attention? No. There have been times when the men reported things when I was delegate, that we had to see the manager about. It was when they were beginning to take the top coal out, and letting the roof down. The manager asked us to see the place, and to my knowledge there was no need of any fear or alarm.
10799. Do they leave timber in the bords? No; it is all drawn out.
10800. In the course of years, do you not think an extensive pressure will settle down on that mine? I do not think, according to the strata above it, that there is any fear of it breaking through.
10801. In the roof? In the roof.
10802. You do not think that timber is required in the bords after they are abandoned? Personally I do not.
10803. Have you ever written to the inspector on any matters in connection with the colliery? No; perhaps if I had done so, I might have been jeopardising my position.
10804. Do you know that the Home Secretary has informed the inspectors that they are to take notice of anonymous communications? No; I did not know that.
10805. That has been done? It will be a very wise plan.
10806. If anonymous letters are really sincere, and do not treat grounds of complaints in a light way, the value of these letters will remain? Yes.
10807. *President.*] You are in favour of the Bill as it left the Legislative Assembly, with the amendments you have suggested? Yes.
10808. You think the Bill as it left the Legislative Council is all wrong? Yes.

[Witness withdrew.]

Michael Yates sworn and examined:—

10809. *President.*] What are you, Mr. Yates? I call myself a miner; I have been a miner all my life. Mr. M. Yates.
 10810. How many years have you been a miner? I went to work when I was eleven years old, and I am 23 Oct., 1895.
 sixty-five years of age next month. I have been connected with mines for fifty-four years.
10811. *Mr. Curley.*] Have you been a colliery manager? Yes; I have been working mines, and have been the manager of them.
10812. *President.*] Have you anything to do with those mines now? I have left mining now.
10813. How many years have you been manager of a colliery? I can hardly tell; I was managing a mine in the old country before I came out here.
10814. When did you come out here? In 1863. I went to work first for the A. A. Company.
10815. What as? A coal-miner.
10816. How long altogether? About half the time as a coal-miner, and half the time as overman and manager—perhaps eighteen years as overman and manager.
10817. How long were you manager in the old country? About ten years.
10818. In England? Yes; in England, South Staffordshire.
10819. You have been overman and manager for about eighteen years? Yes; about eighteen years.
10820. I understand that you wish to say something about the proposed Coal Mining Bill? Yes. I was one of a committee of three appointed by the miners to draw up suggestions to guide Mr. Farnell, when he administered the Mines Department, with regard to matters that would be suitable to be inserted in the Bill. The miners had persuaded Mr. Farnell to introduce the Bill, and I was made conversant with the present Bill, and what we had in it then. We wanted 200 cubic feet of air per minute as the minimum, or the standard, but that was cut down to 100 cubic feet. I still think we ought to have 200 cubic feet as a minimum quantity of air. The Bill was framed by Mr. Farnell, but did not become law until Mr. Lucas came into power.
10821. *Mr. Curley.*] You propose to increase the 100, or 150 cubic feet to 200 cubic feet as a minimum quantity? Yes. Under the present system of working—bord and stall—it is very difficult to conduct the air to the face sufficiently to give men good air to work in without bratticing, and bratticing is an expensive way of conducting the air where it can be avoided. If there was 200 cubic feet of air per minute, and the pillars were shortened, instead of having the cut-throughs every 35 yards, I would have a new road heading every 20 yards, and I think this, with the 200 cubic feet of air per minute, would be sufficient air to make it good for the men to work in without any doors or bratticing where there is no inflammable gas. Many years ago I read the evidence given before a Commission when they passed the first Coal-fields Act in England, and one colliery manager was in favour of a minimum quantity of air for sanitary purposes, to dilute the black-damp, powder-smoke, and bad smells from sweating horses. He was in favour of not less than 100 cubic feet; but under the present system it is not sufficient without bratticing, and I think 200 cubic feet would be required, to make it reasonably healthy, and these short pillars would do without any bratticing, or any doors. These cut-throughs are put through and often filled up with refuse. If they were made headings instead of cut-throughs the air would go through, and if they were limited to 30 yards, it would be better.
10822. Is not a cut-through and a heading the same thing;—you want the cut-throughs every 30 yards? Yes. The air travels down the heading instead of down the cut-throughs, and if it was made the heading all the air would be turned through the cut-throughs. I am very much in favour of retaining the minimum for sanitary purposes, independent of the fire-damp. The black-damp, sweating men, and powder smoke, is far more injurious than the fire-damp. You hear old miners say they wish there was more gas, because they would be compelled to have more air. The ill effects of black-damp show upon health stealthily, and it is often a matter of dispute between the inspectors and the managers. I heard a dispute between Mr. Winship and an inspector on this point. One said there was sufficient air, and the other said there was not. There are no means of proving when air is not pure enough for a man to live in it, and in the absence of that, a minimum quantity of 200 cubic feet of air per minute would remedy the evil, and make it healthy for men to work in—that is, with headings every 30 yards.
10823. You would make every bord 30 yards? Yes; the pillars every 30 yards. The air always takes the shortest course, and it will have to be stopped or blocked before it would force its way through the new cut-through.
10824. *President.*] Are you in favour of a minimum quantity being stipulated in the Bill? Yes; because it is so disputable what is sufficient under the present system. It would require 200 cubic feet of air per minute to make it healthy for men to work in.
10825. How will this clause meet your views: "An adequate amount of ventilation shall be constantly produced in every mine, to be in every case at least 100 cubic feet of pure air per minute, and as much more as the inspector may direct for each man, boy, and horse employed therein, a sufficient quantity whereof, according to the judgment of the inspector, shall be taken to within 15 yards of the working-faces in non-gaseous mines and to within 3 yards of the working-faces in gaseous mines to dilute and render harmless noxious gases, to such an extent that the working-places of the shafts, levels, stables, and workings of the mine, and the travelling roads to and from those working-places shall be in a fit state for working and passing therein"? The 100 cubic feet is scarcely enough.
10826. Is the other part of the clause enough? Fifteen yards would be half the distance; that will do, but it will be difficult to give effect to it.
10827. That is a matter for the manager—the place has to be ventilated? Yes; but you ought to have 200 cubic feet of air per minute, and lessen the men in a split from seventy to fifty men.
10828. Is not that a matter for the manager as to how many men should be in a split? Now, the managers work up to the standard, and they will not have less than the seventy men. They got up to the limit, and sometimes over; but I think fifty men are plenty in a split. If they can alter the system—if they could work on the long-wall system—the mine could be easier ventilated, and a less amount of air would be required, because the air sweeps the face all the time.
10829. *Mr. Curley.*] Can they work the long-wall system? Yes; some of the mines are very favourable to long-wall working. They made an attempt at New Lambton, but they did not understand it. This pillar and stall working is a national loss; there are two or three mines where half of the coal is left behind.
10830. What mines do you refer to? Lambton and New Lambton. I worked thousands of tons that they left at New Lambton. 10831.

- Mr. M. Yates. 10831. What about the people on the surface, when you took the lease from the Lambton people and took out the greater part of the coal? There was no one on the surface.
- 23 Oct., 1895. 10832. Did the surface come down? Yes.
10833. Do you know that in most of the mines where they are working the bord and pillar system it is the intention to take the pillars out later on? The New Lambton people left the pillars in; very few pillars were worked there.
10834. But in a general way? Yes, in a general way. It is the intention to take the pillars out, but it is impossible to work them all out.
10835. If larger pillars were left would they not get them out better? Yes, if they drove down the centre and worked back they would; but then there would be expense with the narrow work.
10836. *President.*] I suppose managers have considered all these matters? I cannot account why they do not adopt the longwall system. It is easier worked and there are no fast ends. As they undermine it they loosen it on one side and shoot it with the powder. In longwall the creep or the weight does all that. If it is properly managed there is a continual creep on the face, and that would prevent a lot of the blasting. In the Raspberry Gully pit—the Waratah pit—I introduced the system of wide bords. We had two roads, and we gobbed it up in the middle. There was a great quantity of powder-smoke, and the skips coming up the heading used to sweep the powder-smoke away immediately.

[Witness withdrew.]

Henry George Pullin sworn and examined:—

- Mr. 10837. *President.*] What are you? I am a miner, and have had twenty years experience as such in the Newcastle district. I am now working in the A.A. Company's Colliery, and have been working there all the time I have mentioned.
- H. G. Pullin. 23 Oct., 1895. 10838. *Mr. Ourley.*] Where are you working at the present time? At the Company's No. 2 pit, known as the Borehole.
10839. Have you worked a considerable time in the mine? Over twenty years.
10840. In that particular mine? Yes.
10841. Then you are pretty well acquainted with the whole colliery? Nearly all of it.
10842. What kind of work is being carried on at the present time;—is it all pillar-work? All pillar-work where I have been.
10843. Where you have been lately? Yes.
10844. For how long? For the last two years, as near as I can judge.
10845. Do you know the size of these pillars? Various sizes.
10846. Can you mention the sizes and widths of those you have worked in? From 3 yards up to 16 yards.
10847. Have you seen any less than 3 yards? I have not worked in any less. I have seen some less in the old workings.
10848. Have you seen any other men working in pillars less than 3 yards in width? No.
10849. How many men work in these 3-yard places at a time? Two.
10850. What particular district are you working in at the present time? No. 5 cross-cut section.
10851. Have you been in it when any fall has taken place in the goaf? Not at the exact time. I had to leave before it came in.
10852. You had to leave your working-place? Yes.
10853. When you knew it was working in the goaf? Yes.
10854. Did a fall of any extent take place? I could not tell how far it went.
10855. Did it come anywhere near the pillar you were working in? It came to the edge of it. It was solid outside of that.
10856. It broke off at the pillar? Yes.
10857. Have you noticed any other falls in the same way in the other districts? No; that is the only fall I have been near.
10858. Do you know whether that fall came over any pillars or not? It did not come over any outside. There may have been pillars that were left in.
10859. It did not come over any of the pillars that the men were working in? No.
10860. Do you sometimes find a small pillar very inconvenient to work in? It does not pay very well.
10861. You mean it does not pay the miner very well? Yes.
10862. Why? It is nearly all small coal.
10863. Is great care being exercised by the management at the present time in connection with the working of these pillars? As far as I am concerned they are very careful.
10864. As far as you have seen? Yes.
10865. Plenty of timber there? Yes.
10866. Have you noticed that to be the case in every part of the mine where you have worked pillars? Yes.
10867. There is no lack in the supply of timber? Not as far as I have seen.
10868. From what you have seen in connection with the working of these pillars, do you consider that larger pillars ought to be left in a mine? Larger than some that are left.
10869. You think that? Yes.
10870. *President.*] How old are those small pillars that have been left;—are they very many years old? It is hard to tell the age of some of them.
10871. They were there before your time? Yes.
10872. *Mr. Ourley.*] Have you ever acted as check inspector? Yes; on two or three occasions.
10873. And you have gone round the different parts of the mine? Yes; the whole of it where the air was travelling.
10874. Did you ever notice any defects in connection with the ventilation? In some places you could get no measurement.
10875. Did you consider that the air was defective in some places you visited? Yes.
10876. Did you bring this under the notice of the manager? Yes; of the manager or overman.
10877. Did they attempt to remedy matters? In nearly all cases they did.

10878.

10878. What was the defect; was it that the air was not taken up to the face; or was it that there was not sufficient going into the district? The travelling roads were blocked up in most instances.
10879. The travelling roads? The airways.
10880. Do you think that some effort should be made to keep the airways clear at all times? Yes.
10881. You have no standard weight at your colliery? No.
10882. You are paid for all you fill? We are paid for all we fill.
10883. Paid on an average? Yes.
10884. All weights that you get in one day are put together and averaged if there is more than one weight? Yes.
10885. And you are paid on that average? Yes.
10886. But you get a fair number of skips weighed? Yes.
10887. There are no complaints about that? No.
10888. How many men are there at this pillar-work at the present time? I think there are about 190 in the pit altogether, so far as I know.
10889. What is the system;—do they work in two or in three shifts? Two and three shifts—mostly three.
10890. Have you seen the proposed Bill which has passed the Legislative Assembly? Yes.
10891. Have you looked over it? Over some portions of it.
10892. Have you seen the erasures made in it by the Legislative Council? I have not taken particular notice of those.
10893. So far as you have seen any portion of the Bill have you anything to say in regard to it? No.
10894. You have nothing to say? No.
10895. Do you think that the ventilation should be conducted into the working-places of a mine? Yes.
10896. *President.*] Is it conducted into the working-places where you are? No; it is only on the outside of the working-places.
10897. At the entrance? Yes.
10898. *Mr. Curley.*] On the heading? Yes.
10899. When you were check-inspector I dare say you went into some of the men's places occasionally? Each one.
10900. You went into each man's place? Yes.
10901. Did you ever notice the powder-smoke hanging about the working-faces? Yes; in many cases.
10902. And if the air was conducted into those places do you not think it would tend to sweep that out? Yes.
10903. Have you noticed the powder-smoke hanging in your own places in certain cases? Yes.
10904. Longer than it should have done? Yes.
10905. And from that, I suppose, you would judge that the air should be brought more into the face of the place to sweep this smoke away? Yes.

[Witness withdrew.]

Jonathan May sworn and examined:—

10906. *President.*] What is your position now? Lecturer on Coal Mining under the Technical Education Department. I am a mining engineer and colliery manager.
- 10907-8. What experience have you had? From the age of 9 years to that of 17 years I discharged the duties of boys connected with mining, and from the age of 17 years to that of 21 years I studied the principles of mining under a gentleman—Mr. Cowley—who was mining engineer to the Duke of Cleveland. From that time to the present I have had the control of mining operations in every official capacity—as deputy, overman, under-manager, and manager. I hold a first-class certificate of competency under the English Act.
10909. *Mr. Curley.*] Where have you managed? Both in New South Wales and at Home.
- 10910-1. At what collieries? The Mittagong, and at the Boollara in Victoria.
10912. Where did you manage in England? At the Woodland Collieries, Durham, I was under-manager.
10913. How many years have you been out here? Ten years.
10914. Have you been in many mines out here? A good few of them.
10915. Visited them? Yes.
10916. In the north, or in any other districts? North, south, and west.
10917. Are you acquainted with the system of bord and pillar working? Yes.
10918. And long-wall working? Yes.
10919. Have you ever given much attention to the question of ventilation in connection with collieries? Yes.
- 10920-1. Are you acquainted with the opinions of mining authorities as to the quantity of air required in a mine? Yes.
- 10922-3. What is about the general tenor of these opinions with regard to the minimum quantity of air? I cannot do better than quote my own evidence in Mr. Fegan's report, page 5. "Mr. Herbert Mackworth said, 'a minimum of 100 cubic feet per man for each man and boy, for sanitary purposes alone, where there is no escape of fire-damp and little of any other mineral gas.' Mr. Hedley says:—'From 100 to 500 cubic feet per minute for each collier.' Mr. T. J. Taylor says:—'In a mine yielding no fire-damp, with 120 to 130 persons employed, a current of from 20,000 to 30,000 cubic feet per minute, properly conveyed up to the face of the working and made to sweep the district in which the people are employed; in fiery mines a much greater quantity than this.' Professor Phillips, another competent authority, says:—'In most of the fiery mines an average of 600 cubic feet per minute per collier.'" I do not think you could possibly get better authorities. They are all men of extensive experience. In Pennsylvania, America, the quantity must not be less than 200 cubic feet per minute.
- 10924-5. Who are you quoting from now? I am quoting the law of Pennsylvania, America.
- 10926-7. What book are you quoting from? "Ventilation made Easy," by Fairley. Professor Abel wrote a very instructive book in connection with accidents in mines, and you will find the same matter there. Article X:—Section III, of the Mining Laws of Pennsylvania, 1885, reads, "The minimum quantity of air thus produced shall not be less than two hundred (200) cubic feet for each and every person employed in any mine, and as much more as the circumstances may require."
10928. What page is that on? Page 78 of the American Edition. He says that "the quantity of air shall not be less than 200 cubic feet per minute." They make a distinction between the anthracite and the

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Mr. J. May. the bituminous. The bituminous law of Pennsylvania states that "where fire-damp has been detected the minimum shall be not less than 150 cubic feet of air." They are both statute laws.

23 Oct., 1895. 10929. Of Pennsylvania? Both of Pennsylvania. One relates to anthracite mines, and the other to bituminous mines. In the anthracite mines they use a little more powder, and that is the reason of the difference.

10930. Are you satisfied from your mining experience that there should be a minimum quantity of air? Distinctly, there should be a minimum quantity. The average of those authorities gives it that there should not be less than 230 cubic feet of air. My own experience was obtained from a mine where there would be an average of 500 to 600 cubic feet of air per minute.

10931. That would be where there was gas or fire-damp given off? Yes; it is almost a God-send to have a little gas in a mine so far as the men's health is concerned.

10932. *President.*] Because they get more air? They are sure to get air then. There may have been innumerable difficulties before that as to producing the air; but once they get gas the air is there.

10933. The management supply it? They simply supply it; they put it in circulation at once.

10934. *Mr. Curley.*] What you mean by that statement is that it has got to be done in the interests of the colliery itself? It simply has to be done in the interests of the colliery. But there is one thing certain—that it is distinctly cheaper and more economical, so far as the management of the mine is concerned, to provide plenty of air, simply because they can get more work out of the men. The cheapest mines that I have ever been in have always been the best managed, both for ventilation and other arrangements; but ventilation particularly is a most important item.

10935. How do you account for that;—would you consider the men are more active at their work? If you do not provide a man with sufficient oxygen he cannot do the same amount of work he can do if he gets plenty of it.

10936. You think a mining law should stipulate a minimum quantity? Distinctly. Here are ten or twelve American States, every one of which has a minimum. Of course, they now produce more coal than Great Britain does.

10937. *Mr. Gregson.*] Per man? I could not say the amount per man, but the total amount of coal produced by these States has overtaken that produced in Great Britain.

10938. *Mr. Curley.*] That is, in the aggregate output? Yes.

10939. *President.*] Does that book give any extract from the statutes of any of those States? They are simply extracts, but they do not give the wording.

10940. What is the coal used here? Bituminous. We have no anthracite of any consequence. I do not remember any anthracite that we have.

10941. *Mr. Curley.*] Do you consider that the ventilation in a mine should be conducted up to the working-face in any shape or form? It is always conducted up to the working face if you have got fire-damp.

10942. *President.*] But apart from that, should it be conducted to within a reasonable distance of the working-face? It ought to be conducted within a reasonable distance of the face.

10943. What would you say that would be? Opinions differ very largely on that matter. I quite believe there was an intention on the part of whoever framed our Mining Act, to limit the distance each man should work before the air current; but really there is no limit now.

10944. Why? The Act says a man shall not work more than 35 yards in advance of the air without a cut-through put through.

10945. You mean there is no limit to the distance he may work before the air current? Not as the Act is interpreted.

10946. Do you not think that the Act meant that air was to be supplied everywhere—if it was properly administered? I have an idea that it meant to limit the distance a man should work before an air-current, and that it meant 35 yards. On page 4 it says, "and no working-place shall be driven more than 35 yards before the current of air, without a cut-through put through or bratticed up to within 3 yards of the face." My idea is that whoever framed that meant that they were to be 35 yards from the current of air to the intersection of the bord and cut-through.

10947. If there is 100 cubic feet going along the airway, would you say that the Act had been complied with? There might be 500 cubic feet going along the airway, and the Act would not be complied with. They limit it in one direction only; but if 100, 200, 300, 400, 500, or 1,000 cubic feet of air is not adequate, they must provide more.

10948. Look at sub-section 2; do you not think that they really meant that an adequate amount should be in each working-place, and that they made a great mistake by putting in sub-sections 3 and 4? I am sure they meant that there should be an adequate amount of air in each working-place, so that if the inspector went into a working-place and said it was not adequately ventilated, he could take action under these clauses to see that it was so. He could under section 25.

10949. It seems to contemplate that the men might work 35 yards before the air? It is not clearly worded; but that is what I think they meant. They meant that the men should work not more than 35 yards before the current, by driving the places 35 yards, and bratticing only one place. They could have a cut-through at 35 yards. [*Witness here explained on plan, that by bratticing the going bord all the rest of the bords could be holed at the 35 yards.*]

10950. *Mr. Curley.*] Under the present system? Yes.

10951. That would be a considerable improvement upon what is taking place? Yes; there is no difficulty about it. My own computation of the cost of bratticing is about one penny per ton to brattice the whole of them; but to brattice this one place it would only be about one-thirtieth part of it.

10952. *President.*] Do you say that a minimum amount of air should be provided in the Bill? Yes; distinctly a minimum amount. It is a distinct improvement on the English Act. The English Act says: "an adequate amount"; but it should never be forgotten that all English mining is in a very small area, and the consequence is that the inspectors—and even the managers themselves—have had a very careful training; and supposing one of the mines is badly ventilated, the men begin to talk about it, and the manager feels very much disgraced,—more especially in the case of a fiery mine. If a man gets burned in a fiery mine the manager feels terribly disgraced, and as a consequence you will always find plenty of ventilation. I would venture to say that the average mines in Great Britain vary from 300 to 400 cubic feet of air.

10953.

10953. *Mr. Curley.*] Have you looked at the suggestion in the proposed Bill—section 46—to carry the air within 15 yards of the face by brattice or otherwise? Yes.
10954. Would that be a very costly matter? To brattice every place in a fiery mine costs on an average 1d. per ton out here. There is some very good evidence on that point by Mr. Green, if you will refer to it. He thought it would not cost a penny. He thought it would cost about four-tenths of a penny per ton. I attach a great deal of importance to his evidence, for the reason that he was a certificated colliery manager who had been very carefully trained, and was actually doing the work himself at that time—or at least had done the work a short time previously to that at the Seaham Colliery. He stated that the cost would be about four-tenths of a penny. I would not ask any questions about a minimum, but establish it right away. There should be a minimum in every mine in the world. It would be a distinct improvement. I have known cases in England where a minimum would have been a distinct improvement to the English Act.
10955. To the English Act, 1887? Not of 1887. That has been passed since I came out here. The 1872 Act, I mean.
10956. The same section? Yes.
10957. You say it would have been a distinct improvement to the Act in England? Most certainly.
10958. Do you believe in a mine being divided into splits? Most certainly. [*Witness explains on plan.*]
10959. *President.*] Would those splits be a matter of good management? They ought to be compulsory, and then it is only making good management compulsory.
10960. *Mr. Curley.*] You consider the question of splits should be set out in legislation? Most distinctly. The Anthracite law of Pennsylvania says: "Not more than seventy-five persons shall be employed at the same time in one current or split." The Bituminous law of Pennsylvania says: "Not more than sixty-five persons shall be allowed to work in one current."
10961. Do you think there should be a limitation as to the distance that the place should be before the air? Yes.
10962. And that that should be definitely set out in legislation? Yes; most certainly.
10963. Would setting out these distinctions or methods of mining in any possible way hamper a good manager? Most certainly not. A competent manager always lays out his mine straight off on those lines. He always arranges to split his air, as by doing so he gets a very much larger quantity with the same ventilating power.
10964. You think a good manager would in no way look upon this as hampering him? Most certainly not.
10965. From your experience of mining do you think all this can be done, and done efficiently? You have it in the present Act. In the present New South Wales Act we have the principle of limiting the distance or dividing the air current. It states that not more than so many men shall be in a split.
10966. But the difficulty is to a great extent in connection with the administration? If you make some clear wording or instructions for the inspectors you would have no difficulty.
10967. How have you computed the cost of the brattice? By my own actual experience, which I have compared with the experience of others, at home it used to cost, for material and labour, barely a halfpenny a ton. That is my own computation. Out here, with higher wages and extra cost of material, I think it would cost a penny on an average. Of course, bad cases may cost a little more, and good cases may not cost quite so much, but I think it is a fair average.
10968. What would you think of statements of 4d., 5d., or 6d.? I should think that they included the hewing price in that. In one of our collieries in England we used to pay 7d. per ton. We used to brattice every place. I suppose the brattice would cost us a halfpenny, and the other 7d. or 7½d. for hewing and brattice.
10969. Was your estimate based on brattice cloth? Yes.
10970. At what price? I think we paid about 6d. per square yard, if I remember rightly.
10971. I mean the estimate you have made with regard to the mines here? I am speaking now of the penny per ton on the estimate I made in giving evidence before the Upper House. I am speaking from memory, but I am satisfied my figures were fairly correct at that time.
10972. What was the brattice composed of that you say cost a halfpenny per ton at home? Just canvas brattice similar to what we have here. I remember being with the Northern Institute and paying a visit to the Bore-hole Colliery once. It was just similar canvas to that. The same line.
10973. Do you look upon the system of ventilation as one of the chief items in connection with mine management? Most certainly. The best ventilated mines are always the most cheaply worked. There is no question about that.
10974. If mines can be bratticed at home in England, and the ventilation can be kept up at the efficient standard you speak of, do you not think the same thing can be done here? Most certainly; the same thing is done here in the Newcastle district. I think if you take the Seaham, West Wallsend, Durham, Burwood Extended, Dudley, and part of J. and A. Brown's collieries, you will find they are all bratticed. That is the evidence of one of the inspectors.
10975. You do not consider that the enacting of those provisions that are proposed in the new Bill with regard to a minimum quantity of air, the stipulation of distance before the air, or the bratticing or carrying of the air up to within 15 yards of the face, &c., will do anything that is calculated to ruin the mining industry in any shape or form? Certainly not.
10976. Would you regard a statement of that kind as a very absurd one? Yes; very absurd indeed, because there is only one part of it at present that is at all questionable—I would not say objectionable—and that is, the 15 yards before the air, where gas does not exist. The cost of bratticing every working place is probably, on an average, a penny per ton. It is quite possible that some arrangement might have been made with regard to improving the clause they speak of here, in reference to the 35 yards. The reason why all this trouble has cropped up about the ventilation is simply, I presume, on account of bad ventilation—that is, when this clause was put in the old Act. If men had never worked more than 35 yards before the air current, I am of opinion that trouble would not have cropped up about the 15 yards. It is better to limit the distance for a man to work to 15 yards. So far as working in the face is concerned, I would prefer to be only 15 yards in front of the air current. If the men had never been more than 35 yards before the air current, it is just possible we would never have had the 15 yards.
10977. But if managers themselves at the present time admit that the place gets warm, and that the powder smoke hangs even at 35 yards, do you not think there is reason—more particularly in the rise places—

Mr. J. May. places—why even then there should be a shorter distance before the air? If ever you mention the words “rise place,” they always say “dip place” next. The point is to take a level place and split the difference between the two. With that level place you should have in the Bill a reasonable distance that a man should work before the air current. If you think the 15 yards reasonable, all right; but you should have a reasonable limit.

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10978. Have you given any attention to the question of working hours as proposed in this Bill? Having been connected with mining ever since I have been a boy I have given a very great deal of attention to it.

10979. Do you know the hours worked in the counties of Durham and Northumberland, in England? In the collieries that I have had control of, the men averaged for ten years, thirteen hours a day—two shifts. I was ten years in my last appointment.

10980. It was stated here yesterday by a witness that Mr. Burt had opposed the legislation at home in connection with the eight hours? Yes; for the best reason in the world.

10981. Can you give any kind of reason why a circumstance of that kind should arise? Yes.

10982. What would you consider a sufficient reason for a circumstance of that kind? The best reason is perhaps the statement by Sir Joseph Pease in a deputation to Mr. Gladstone. He said, “The miners’ hours now worked were not unreasonable, for, on an average, over the whole United Kingdom they were only seven hours twenty minutes per day. The longest hours were at Nottingham—eight hours twenty-three minutes; and the shortest in Durham—five hours thirty-seven minutes.” Sir Joseph Pease is one of the most extensive coal proprietors in Great Britain.

10983. When was that statement made? That statement was made certainly within the last two years, when there was some little agitation over the eight hours. They carried it twice, if I remember rightly in the House of Commons.

10984. Do you think that this would in any way seriously affect the working of the collieries with regard to their outputs—taking the coal trade as a whole in the Colony? Certainly not.

10985. You do not think that to apply the eight hours would affect them injuriously in any way? No.

10986. *President.*] Would you punish a man for working more than eight hours? Oh, yes. There would not be the slightest use making a law if there was no penalty. If a man sends dirty coal out of the mine you may talk to him; but if you stop the skip or fine him he will not do it next time.

10987. *Mr. Curley.*] Do you think it would add anything like 7d. a ton to the cost? No; most certainly not. I could understand that being the case in a place like Great Britain, where they draw coal about eleven hours a day. If you suddenly dropped drawing coal from eleven hours to eight hours I could understand it; but out here, if I remember rightly, you had some arrangement in an agreement about eight hours or a little over in the Newcastle district. It might possibly mean a matter of fifteen minutes difference altogether between what you want and what they have actually in existence. You had an eight hours drawing coal in one of your agreements, I believe. The reason why Mr. Burt opposed the eight hours was because the men were not working the eight hours. It was simply lengthening their hours. That is why he opposed it. The men in Durham do not work eight hours by any means.

10988. Do you think that would be the principal reason why those representatives opposed it—if they did oppose it? That would be the reason.

10989. Because they had less than eight hours? Yes; because they had less. They are not going to lengthen their hours by Act of Parliament, surely. I am rather inclined to think I once read a remark of Mr. Burt or Chas. Fenwick’s, to the effect that if other men had not the sense to reduce their hours, they were not going to lengthen their hours to suit them.

10990. I suppose you know this Colony and the working conditions pretty well by this time? Yes; I have had nine years’ experience of it now.

10991. Do you think that any arrangement to shorten the hours to anything like eight uniformly can be brought about by mutual agreement between the men and the proprietors? Most certainly not. If you want it established as a principle you must do it by legislation.

10992. Do you consider eight hours quite long enough for any miner to work in a mine? I have always been used to much less than eight hours. I was telling you that the men in Durham and Northumberland do not average more than thirteen hours—if so much—two shifts, and having been used to short hours I have a very high opinion of the eight-hours principle.

10993. You said something just now about the inspectors having some kind of definite authority;—do you think it is desirable that the inspectors should have some definite powers or authority under this Act? Yes. If you want an inspector to act you must lay down very clearly his instructions. You could not have a better illustration than that case at Stockton, for example. I am certain that there are cases when an inspector might withdraw workmen, and you would find those very workmen perhaps finding fault with the inspector. You must make his instructions very clear, because he would not like those men to find fault with him if he thought it necessary to withdraw them for their own safety.

10994. And the manager might complain as well? Yes; you make his instructions clear and he will carry them out.

10995. *President.*] Is there a necessity to legislate about that;—would not a man who was properly administering the Act withdraw the men himself, supposing he saw pressing danger? Yes; under the English Act, which is very simple. The present Act of New South Wales is almost similarly worded. It simply says: “If from any cause whatever the inspector finds a place not safe, he must withdraw the men.”

10996. The Colonial Act does not say that. It says:—“The men shall be withdrawn”? Yes—“If from any cause whatever” covers the whole ground for the inspector. Page 8 of the proposed Bill, subsection (v) section 21 says: “Until the same is stated by the inspector to be safe.” Would not the English clause do there very well.

10997. Supposing an inspector came along and saw there was pressing danger, and said to the manager, “These men ought to be withdrawn at once; there is pressing danger;” do you think any manager would dare resist him? He would not do so if there was pressing danger, but it is simply a question of difference of opinion. Under the English Act, if an inspector finds any practice or thing that he considers dangerous he draws the attention of the manager to it, and if the manager thinks that the inspector is wrong, he just states his case to the Mines Department; and then the matter is settled by arbitration.

10998. That is the way here; do you not believe in that? Yes.

10999. Do you think it is necessary to have any such enactment as sub-section (v), page 8 (*see Appendix A*)? I prefer the English Act in that particular case. I can quite understand that there may be special cases sometimes.

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11000. I meant to say, would that section be of use practically? I prefer the English reading.

11001. *Mr. Curley.*] Do you not say that in the event of immediate danger the English Act says he is to give notice? If it was a case of immediate danger the Mines Inspector in Great Britain would go to the manager and ask him to stop the place; I cannot imagine an intelligent manager refusing to stop a place if there is immediate danger.

11002. Do you know that the inspector's authority has been defied here? Where?

11003. I think you cited the case of Stockton? They had a means of dealing with the case under the old Act in that particular instance. Clause 25 says:—"If in any respect (which is not provided against by any express provision of this Act, or by any special rule) any inspector find any mine, or any part thereof, or any matter, thing, or practice in, or connected with any such mine to be dangerous, or defective, so as in his opinion to threaten or tend to the bodily injury of any person, such inspector may give notice in writing to the owner or agent of the mine." The inspectors could have taken action under that clause. They could have used their own discretion whether they took the 5th sub-section of clause 12 or the 25th clause.

11004. They did take the 5th? Well, it proved to be useless. The mine went on.

11005. Did it not prove useless because the management and the men combined defied the inspector's authority? Then the inspector could have taken action under the 25th section.

11006. *President.*] There was only a pecuniary penalty imposed under the old Act, whereas now, for an offence against this Act or Bill, a man is liable to three months imprisonment. Is there any necessity to enact that 5th sub-section on p. 8. It is not in the English Act. Can you understand a manager refusing to withdraw the men in a case where the inspector says:—"There is danger; you must withdraw your men at once"? I cannot understand a manager refusing. At the same time I am satisfied that the inspector should have some definite instructions in a case of emergency, but under the English Act it is just about similar to that we have here. I have never heard of any difficulty under it. As for the Stockton case, I am perfectly satisfied they could have taken action under the 25th section.

11007. *Mr. Curley.*] Supposing they had taken action under the 25th section? Then it would have been referred to arbitration. The law was treated with contempt in that case, but if that had been referred to arbitration, it would not have been treated with contempt.

11008. But suppose the company had refused to go to arbitration? They are compelled to do so under the present Act.

11009. If they could defy the law in one instance, they could also do so in another? Not in an arbitration.

11010. If they would not go to arbitration, could you drag them there? Yes.

11011. With regard to such a case as the one you have just cited, where there is an emergency, and where something very serious is impending, would that be a time to wait for any arbitration? Most certainly not; but here it says, "If the owner or agent of the mine objects to remedy the matter complained of in the notice, he may, within seven days after the receipt of the notice sent him by the inspector, send an objection in writing, stating the grounds thereof to the Minister, and thereupon the matter shall be determined by arbitration in manner provided by the Act."

11012. I dare say you know the very peculiar conditions under which some of these men are now working—under tidal waters, &c.? Yes.

11013. And if any serious calamity was impending over a mine, would that be a time to talk about giving notice and waiting for arbitration? The best thing would be for the inspector to serve a notice on the manager.

11014. And stop the colliery? Just to serve a notice on him and then the matter would be settled, just the same as cases are settled under the English Act. I can quite understand there may be special cases of imminent danger, but in a case of that kind I could not understand how any manager would stop at all to think about the matter, but comply straight off with his request. I can give you an illustration. In Great Britain a mine was being worked on the long-wall principle. The inspector visited the mine, and he was not satisfied that the mine was safe if they fired shots in the gateway. The manager objected to discontinue shot-firing. The inspector said it was dangerous. The manager said, "I am quite satisfied that the place is not dangerous." Then the matter was settled by compulsory arbitration under the Act.

11015. *President.*] In the meantime, pending the decision, he did not fire any shots? If he had done so he would have had to take the consequences, which would have been very serious.

11016. What would they be? In the event of any of the men being injured or hurt by an explosion that would be a *prima facie* case for a prosecution. The manager must take the responsibility of his action until the matter is settled.

11017. That is to say, it would be the very strongest evidence of negligence against him? Yes.

11018. If a man's death was caused it would be the very strongest evidence of negligence, causing really manslaughter? Yes; I have never heard of any trouble like that under the English Act; but I can quite understand that a case could arise. That Stockton case could have been arranged under the 25th clause.

11019. To go back to what I was asking, there is no necessity, you think, for legislation to interfere in the way that 5th sub-section does? I consider that the English Act, so far as I am aware, is quite satisfactory.

11020. *Mr. Curley.*] Would you not add that part of clause 20, page 9 of the proposed Bill, which has been erased, viz., "and enter such report in a book at the mine"? I am satisfied with the English Act on that score.

11021. Is there anything else in the Act to which you would like to refer? I may say, generally, that to my way of thinking the best thing you could do would be to adopt the English Act. You have in the present Act the principle of a minimum quantity of air, the principle of limiting the distance before the air current, and the principle of limiting the number of men in a split. These are probably the three most important points so far as any alterations are concerned. I should certainly recommend you to adopt the English Act with those three additions—limit the distance which the men should work before an air current to a reasonable distance, have a minimum quantity of air, and have a maximum number of men in one split. These are about the principal points. There is one thing, however, about the English Act which I would like to point out, and that is the utter uselessness of the check-inspector's inspection. It is simply a useless inspection.

11022. It satisfies the men? If it pleases them it does not hurt anybody. You can quite see, however, that in a great number of these cases the check-inspectors are not in a position to say what the mine is like.

- Mr. J. May. like. You can readily understand that when work is very hard to get, no men are going to run the risk of making a statement which would offend the manager.
- 23 Oct., 1895. 11023. Mr. Gregson.] But as to that, they can please themselves? Certainly, if it pleases them all right; it is, however, utterly useless.
11024. Mr. Curley.] You said just now that you thought these were the leading points that should be embodied in the Bill in conjunction with the English Act? Limiting the distance before the air current, limiting the number of men in a split, and the minimum quantity of air—those are the three leading principles wanted. They are in the present Act.
11025. What about the eight hours? I would introduce it into the present Act on the lines of the Victorian Mines Act, which is eight hours from face to bank. There is a splitting of the difference.
11026. It would mean about eight and a quarter or eight and a half hours? Yes; and it is possible that if the eight hours principle was not put into the present Act, it could be put into a separate measure; but certainly I believe in making the eight hours compulsory.
11027. Either in this Act or out of it? Either in this Act, or by a separate Act.
11028. President.] But is it not a matter that ought to be fought out far more as a matter of general principle than in an Act of this kind? I think everyone admits that eight hours is long enough to work underground.
11029. The question is, should it be enacted? You will never get it otherwise. With reference to the examination by the workmen, I have pointed out why I consider it useless. I consider it would be better if the mine was inspected by the inspector more frequently.
11030. You mean by the Government inspectors? Yes. There is just one word I want to say about the certificates in the new Bill. If you make it similar to the English Act you will find that there must be a portion of that examination oral. I would strongly recommend that to be introduced. I now want to refer to one of the schedules in regard to the drawing of coal. In the English Act there is a table in which a return can be given of the number of days in a month on which coal has been worked. It is on page 21 of the English Act; "The number of days in each month in which coal or iron-stone has been drawn."
11031. You think that should be embodied in the Bill? The point about it is, that in the Bill they should have the number of days worked per week, to show the average at the end of the year of all the mines.
11032. The number of days that the colliery has been at work? Yes; per week. The reason of that is simply that there are a number of collieries in the Newcastle district which have been established without any warrant from a commercial point of view, and if you take the ten following collieries—the A. and A. Co., Newcastle, Wallsend, Lambton, Co-operative, Newcastle Coal Co., Waratah, Minmi, Stockton, Wickham and Bullock Island, and the Hetton—they could supply the whole of the trade in the Newcastle district by working not quite four days a week, and yet nearly twenty more mines have been established. There are the Greta, Burwood, New Lambton, Great Northern, Taralba, West Wallsend, Monk Wearmouth, South Burwood, Burwood Extended, and the Redhead. There has been over a million sterling spent on these mines, and the ten I first mentioned could supply the whole of the trade. I think it would be quite fair to say that one-third of the mines in the Newcastle district could supply the whole of the trade. That being the case, in the interests of legitimate mining, it would be only fair that some means should be adopted to give the public some idea of what is going on. There are two mines idle out of every three. That means that the capital spent on them is simply wasted.
11033. With regard to the question of pillars, do you consider that substantial pillars should be left in a mine? Most certainly.
11034. I suppose you know that in the working of pillars men have got to depend for their safety very frequently upon the pillars that are left when any extensive fall takes place in the goaf? Most certainly.
11035. Can a mine not be worked more economically with a larger pillar than with a smaller one? The pillars are always regulated by the depth from the surface. I have worked pillars from 5 yards by 20 yards to 25 yards by 30 yards, and the 5 yards by 20 yards were the stronger pillars, proportionately, to the work they had to do. You can always have a good idea about the pillar question this way. One inch square by twelve inches in depth, of average coal measures, equal 1 lb. in weight—that is the average pressure on the coal seam. One hundred feet would equal 100 lb. per square inch according to depth. At the bottom of this harbour here you would have a pressure of about 3,000 lb. weight per square inch.
11036. Do you think there should be a stipulated size with regard to the pillars under tidal waters in the ocean? Under tidal waters there should be some special arrangements, but that could be better arranged for when the leases were given.
11037. President.] By the Government? By the Government; but anyhow, for those leases that are at present in existence, the Government could always take action under that clause. They could always make some arrangements to make provision in that direction, but for future leases the Government should draw up certain regulations to cover their working under tidal waters. Take this case under Sydney harbour. That is not so dangerous as the Delta collieries, the ocean leases yonder at Newcastle.
11038. Mr. Gregson.] Did I understand you to say that there were provisions in the English Act for the examination of managers? The arrangement in all the best centres of Great Britain is that the examination shall be partly written and partly oral.
11039. Did I understand you to say that it was provided for under the English Act? It is not; but they are asking for it under the amended Act now.
11040. Where did you see a copy of the amended Act? I left it on my table at home. You will find it in the *Colliery Guardian*.
11041. Who introduced the Act? It was introduced by Mr. Asquith, the Home Secretary. It is customary in all the best centres to have it oral, but they want to make it compulsory. It is a great mistake not to have an oral examination.
11042. President.] They can have it how they like under the present Act? Yes; but they should make it compulsory. Suppose you put down written questions for candidates you will find perhaps that young men of good education, who are well coached, will fly through the examination, but if they had to pass an oral examination before two practical men, it might make a very great difference. In that case, however, the men who had practical experience would have a good show.

[Witness withdrew.]

Daniel

Daniel Alexander Wilberforce Robertson recalled :—

[At the request of the President and members of the Commission, and through a reference made by Mr. Dixon, senior inspector of collieries in the Northern district, Mr. Robertson was in attendance with his colliery plan, which shows all the important surface buildings, railways, tunnels, roads, creeks, and the township of Helensburgh, together with the reduced levels, both surface and underground, and the distances of the underground portions below the surface. The plan was inspected by the Commissioners.] Mr. D. A. W. Robertson.
23 Oct., 1895.

11043. *Mr. Gregson.*] Do you approve of the whole of the surface being put on a pit plan? I approve of all the buildings and important surface features being shown on the plan.

11044. You do not think it sufficient to have a tracing? So far as the interest of the public is concerned, that would be sufficient, but as a matter of convenience to the manager I should prefer one plan, with the buildings, &c., shown over the workings. Our working plan is only for underground purposes. It is unnecessary to have a pair of plans, but it is necessary to have the information on one plan at least.

11045. *Mr. Curley.*] Do you find any difficulty in carrying this out? There is a little trouble, but no difficulty. It is a matter of surveying, and in a colliery of any consequence it should be done. If there is a staff there is no reason why it should not be done.

11046. You think it should be done? All important buildings should be shown on one plan at all events. I can speak of my experience of Home collieries, and there I have never seen it in any other way. Every colliery plan I have had to do with—and I have had a good deal to do with surveying, has had the important surface works on it.

11047. *Mr. Gregson.*] What cover have you over the goaf? About 1,450 feet at one place, but more at other places.

11048. Is the high ground extending? It is a series of gorges.

[Witness withdrew.]

TUESDAY, 5 NOVEMBER, 1895.

[The Commission met in the Board-room, Chief Secretary's Office, at 10 a.m.]

Present:—

FRANCIS EDWARD ROGERS, Esq., Q.C. (PRESIDENT.)

JAMES CURLEY, Esq. | JESSE GREGSON, Esq.

AFTERNOON SITTING.

Thomas Croudace, Esq., sworn and examined :—

11049. *President.*] What position do you occupy, Mr. Croudace? I am General Manager for the Scottish Australian Mining Company. T. Croudace,
Esq.

11050. What mines come under your supervision? We have coal mines in Newcastle, and copper mines in another part of the Colony. 5 Nov., 1895.

11051. What collieries are you the General Manager of? The Lambton, Burwood, and Durham Collieries.

11052. I understand that you wish to give some evidence on the Coal Mines Bill, which this Commission is dealing with? Yes, I would like to refer to one or two matters in connection with the Bill.

11053. Will you kindly say what are the matters you wish to refer to? The first is the system of standard weight. We weigh by standard weight, or have a standard weight, at the Lambton Colliery, and I wish to lay before you a few simple facts upon this method of weighing. I prefer the system of standard weight to the standard bar system, and certainly before the unlimited filling of the coal tubs—that is, without any limit to the filling of the coal by the miners. It is absolutely necessary that there should be some check to prevent the over filling of the tubs by the miners, and one system adopted has been standard weight, and the other the standard bar, and of the two systems I think the standard weight is preferable. I would like to give a few facts in connection with our system of weighing by standard weight. I might explain that I know there is a prevailing opinion amongst the miners that the companies who adopt the standard weight system get a large preference, or a great advantage by acquiring a large quantity of coal in excess of the quantity paid to the miners, and I want to show what has taken place for ten years past, at the Lambton Colliery. I have the weights for each half-year, as paid to the miners, and as weighed over the Government weigh bridge before going into the ships. Commencing from 30th June, 1884, and terminating 19th October, 1895, rather more than 10 years, the figures I have show that we have suffered a loss, or paid to the miners 8,209 tons more than we have been paid for the coal that has gone into the ships according to the Government weight. I had at first the weights for five years taken out, and the figures showed a loss of some 2,000 tons.

11054. As far as standard weight is concerned, Mr. Croudace, I may tell you that both the Legislative Assembly and the Legislative Council have come to the conclusion that standard weight ought to be abolished? I know that, although I did my best to prevent it. I consider that where the system of standard weight is adopted any loss to the miner is minimised, because he rarely ever fills over from $\frac{1}{2}$ a cwt. to 1 cwt. in the skip.

11055. I fear we cannot interfere in this matter? I thought it was in the power of the Commission to express an opinion whether they thought fit to alter the system. I know by experience that the loss by standard bar is much greater to the miner, and more difficult to deal with.

11056. I think as far as standard weight is concerned we need not take up your time. If you have anything else you wish to refer to, I think it would be better for you to do so? Yes, I would like to refer to the question of splits in the Act. I have always disagreed with that provision—that is, the number of men to be employed in each split. I think that in the system of working any colliery, and in fact working every colliery, that the number of men to work in each split ought to be left entirely to the management, for the very obvious reason that the manager is much more qualified and capable, both from his professional calling, and also from the facts that concern the men, such as the character and nature of the roof and floor, as to what is the best system of working, and also the division of that mine into parts. I think that the Bill should not control in any way, as it does now, by stipulating the number of men and boys, together with the horses that should be in a split. 11057.

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11057. Will you look at subsection 3 of section 49-46, on page 23 of the Bill. (*See Appendix A*). You object to that subsection being in the Bill? Yes; there is no man so well qualified to judge as the manager how many men should be employed in a split, and different mines really necessitate different operations—what will apply to one mine with given surroundings, cannot apply to another without probably serious loss. You cannot always work the longwall system, because if the roof and floor are soft it will not admit of it. In fact, you cannot lay down any hard and fast system, and I think that subsection should be erased, as it has been by the Upper House.

11058. Is there any other point that you wish to refer to? I think that the distance for cut-throughs should not be stipulated in a Bill. The distance is put down at 35 yards, and it was attempted to reduce this distance to 30 yards, but this, I think, should rest with the manager, because if he has any system of bratticing he can carry his cut-throughs much further, and the more cut-throughs you have, the more you weaken your coal-mine, or coal district.

11059. You think this is a matter that should be left to the management? Yes.

11060. As to the system of ventilation, do you mind telling me whether you think that the air should be taken to within a reasonable distance of the working face? I do; some little time ago I bratticed the whole of our Lambton Colliery, and I had not one expression of opinion from the miners, either verbally or by letter, of their approval of such a system, and I thought the least they would have done would be to express an opinion.

11061. Did they express any disapproval? Some of the miners objected to the smell of the brattice-cloth, and some thought that the current of ventilation was too strong going across the heading.

11062. *Mr. Curley.*] Did not Mason express an opinion on this matter? Not to me, personally.

11063. *President.*] If you say that nothing is to be said about cut-throughs, surely bratticing would be necessary? I believe in a certain amount of bratticing; but you must understand that under our present conditions it is absolutely necessary to brattice where gas exists.

11064. But where gas does not exist? So far as the principle is concerned, I do not dispute that a certain amount of bratticing would be more beneficial than without it; yet we have worked for a great many years without brattice. We had, some time ago, to ventilate more places than usual; but within the last two years—perhaps three years ago—I ventilated the whole of the mine. We have left off doing this for well on to twelve months, and as far as any opinion went none was expressed. Cut-throughs are necessary for air; but we used to have them at a distance of 40 yards, and this was reduced to 35 yards, and attempted to be reduced to 30 yards. Of course, if you do not have cut-throughs, you must have bratticing.

11065. You agree the men must have air? Undoubtedly. In the mines about Newcastle, and in the Southern district, every person that comes in displaces a certain quantity of air; and I may tell you that the men cannot work well in a draught. Where brattice is, men would have to shield themselves from the draught, because it would give them lumbago; in fact, it very frequently does. I think if you insist upon brattice, it should be recommended in moderation.

11066. We want to insist upon ventilation, but we may differ as to the mode of it. In the way the present Act has been administered, if there has been 100 cubic feet of air passing along the airway, it has been considered, in many instances, that the Act has been complied with? After thirty-three years' experience in this Colony, I can say that you rarely ever hear a man complain, unless his place is going ahead of the air. He may then complain and say—"it is getting hot, will you put a little brattice in?" and invariably, I may say, brattice is put into that place.

11067. How do men get air where you are working an ordinary bord? It goes past the end of the bord.

11068. Past the entrance? Yes.

11069. How does the air get into the bord? If it is a dip bord there is natural ventilation, the weight of the air finds the floor, and the heated air finds its way out by the roof; but in a rise bord it is not so.

11070. What do they do in a rise bord? Every time a tub comes into the bord it displaces the air, and every time a man or a horse comes in it displaces a certain amount of air, and the same natural ventilation goes on; but not in the same degree in the rise places as in the dip places.

11071. Do you not think that there ought to be some provision made either in accordance with the English Act, or in any other way for taking the air into these bords? I think so.

11072. For many years they have been used to looking upon the minimum of 100 cubic feet as adequate under the present Act, under all circumstances? Even before there was any minimum specified, they were satisfied with the quantity of air, excepting in special places—those that are going ahead of the ordinary workings.

11073. Is there any other point you would like to refer to, Mr. Croudace? I do not want to enforce the 35 yards before a cut-through is put through. I presume that these cut-throughs would have to appertain under all conditions of the mine. In a fiery mine an explosion may occur, and the more openings there are render the danger attending the explosion, and the effect of the explosion, much greater. In the development of any new colliery the manager lays out his plans differently, and in all the main roads, the most approved system in England is to make the cut-throughs extend to 250 or 300 yards, so as to have a solid untouched block of coal between the two openings. Under this system, in the case of an explosion, the workings can be reached much more quickly than if you have ten cut-throughs in, say, 250 yards. The back cut-throughs are stopped up, and in the event of an explosion are blown to pieces, and would have to be built up to reach the workings where the explosion took place. That is prevented by putting cut-throughs at distances varying from 250 to 350 yards. When the first cut-through that may have been affected by the explosion has been stopped, you can go straight ahead for 250 or 300 yards before you come to another. I consider that system much better than forcing the cut-throughs to be put every 35 yards. This is only meant to refer to ordinary bords in the Bill; but it is necessary, for the protection of the coal-owner and the miners' lives, that these cut-throughs should be at the discretion of the manager.

11074. You think it is better to say nothing about cut-throughs in the Bill; but to provide for ventilation, and leave it to the manager to provide the best way to give it? I think so; I am sure of it.

11075. You would not provide for any minimum in the Bill? No; I do not believe in stating a minimum. We shelter ourselves under the minimum. I think you cannot beat the English Act which provides for an adequate amount of ventilation which may, in some instances, be only 40 or 50 feet, or it may be ten times as much.

11076. The difficulty in the way is that people have worked so long under an Act under which you say you have protected yourself;—if a minimum is not prescribed, 100 cubic feet of air may be considered safe under all circumstances? That may be done, of course. I think a manager would know when he is dealing with gas, which is the greatest enemy a manager has to deal with.

11077.

11077. Some people say that the miners prefer working in a gassy mine, because they get better ventilation? That is a common expression. There is always better ventilation where there is gas. T. Croudace, Esq.
11078. In this Colony the majority of the mines are not gassy, and that being so, would you not make some provision, looking at what the state of things has been, to have some stipulation as to the minimum, allowing managers at the same time to give as much as is necessary? I think the word "adequate" provides all that is necessary. I can scarcely realise a case where a manager would not wish to give a man a fair amount of air. 5 Nov., 1895.
11079. Is there any other point you wish to refer to in the Bill? I would like the Commission to bear in mind the cut-throughs in the case of the opening out of new mines. In the opening out of the Durham mine I have prepared for the system I have spoken about. The first stenton is 250 yards, and was all bratticed. If cut-throughs are provided to be put every 35 yards, I will have to make them, and so be prevented from carrying out the system I have described.
11080. I think all that is asked for is proper ventilation without insisting as to the particular mode of giving it:—there may be a strong difference of opinion as to whether a minimum quantity should be specified in the Bill? I understand.
11081. As to the mode of giving the ventilation, you think that should be left to the discretion of the manager? Yes; the cut-throughs should be left to the discretion of the manager.
11082. You think the way he should give the air should be left to his discretion? I do, without doubt.
11083. Are there any other matters in the Bill you would like to refer to? Yes; the question of working under ocean or tidal waters. I think that should not be altogether controlled by the Government. The sections in the Bill dealing with this matter have been eliminated by the Legislative Council.
11084. You think properly so? I do. It is specified in the Bill at what depths they are not to extract pillars, and that borings have to be certain widths, &c. I wish to point out that the cover over the coal-seam, and the thickness of the seam are important factors, and that it is absurd to lay down any such dictum as this.
11085. You want these things left to the discretion of the manager? I do. If you have a 10-foot seam, and have a roof over that, of say a good deal of sand, some clay and rotten shale, I think at a depth of between 400 and 500 feet you are allowed to extract that seam, but you are not allowed to extract a thinner seam with well stratified compacted rock. The thing is an absurdity on the face of it. Here again comes the necessity for leaving these things in the hands of the manager, holding him responsible for any damage through improper working. I think this ought to be eliminated from a Coal-mines Bill, otherwise it will prevent valuable properties from being worked, and may give, if there is a deeper seam, a privilege of working it to the detriment of the miner as well as the whole colliery.
11086. *Mr. Curley.* Have you an ocean lousehold? Yes, both at the Burwood and Durham collieries.
11087. You want absolute freedom to do as you please? I do.
11088. Without any restrictions? Yes.
11089. In any shape or form? Yes, except my own good sense after consultation with the officials from time to time. You may rely upon it I won't run any risk. I will not attempt to work when there is water, or run the risk of loss of life.
11090. Do you think that no other judgment ought to come in except the manager's? You have a judgment in connection with the inspectors. Although their powers have been curtailed by the amendment proposed by the Upper House, still they have the power to act.
11091. What power do you refer to? If they think it is dangerous they can create an arbitration. You will see with a very high seam, and very poor cover, say up to 500 feet, you can extract that, while under certain conditions such extraction would be highly dangerous.
11092. Where do you find that in the Bill? It is in the Act of 1876, that we are working under now. In rule 42 of the Bill it says, "In no case shall pillars under ocean or tidal waters be removed."
11093. If you had no provision, according to the opinion you now give, who is going to stop it? I can scarcely imagine a competent person having full charge of such things running such a risk.
11094. Do you know anything about the Stockton Colliery? Yes.
11095. Do you know the pillars that were left there? Yes, I do.
11096. Was there anybody to interfere at that colliery with the pillar working? Well, I do not know. I think the inspector, or inspectors, should have expressed an opinion upon those pillars.
11097. Should not the manager or his Board of Directors have prevented the inspectors doing that by doing it themselves on their own account? Undoubtedly.
11098. If you have examples that managers will not do these things, and no attention has been drawn to it by inspectors, has not the time arrived when something else should be done? I cannot realise how you are to do it in the way the Bill proposes.
11099. You would let the present system go on? I think the warning they have received at Stockton and Ferndale will be a warning that will last for generations in the Newcastle coal district; but because one man may have committed an error, it does not follow that others will, and that you should inflict penalties to operate in this harsh way.
11100. You cannot confine these errors to one mine or one manager? I think it is wrong to attempt anything by legislation in the way that is proposed. You cannot lay down the conditions; they lay themselves down, and the judgment of the manager comes in under the conditions to say what is the most desirable thing to do. I was going to call your attention to another matter in the Bill, to be found in rule 46, on page 32: "Size of pillars in mines not under river, or ocean, or tidal waters." (*See Appendix A*) It says: "Where it is intended to remove the pillars, the borings shall not exceed in width 8 yards, and the pillars shall not be less than 8 yards wide." Here a clear error is committed. In working the outcrop seams it will be found much cheaper and more desirable near the outcrop to leave thinner pillars, because the roof is imperfectly stratified and you lose your pillars, and the loss pillar you can lose the better. This is simply another instance of what I consider the want of soundness of judgment in laying down any hard and fast rule or principle for mining.
11101. Are you speaking now from your experience in the northern district? Yes.
11102. In enunciating this opinion? Yes; from experience, and what I know generally takes place.
11103. I am afraid the record of the district will be against you? No; I say you can get the coal out, *Mr. Curley*, and get it out more safely in the outcrop portions of our seam by leaving smaller pillars.
11104. Are you an advocate for leaving small pillars in a mine? As a rule, no. I advocate where there is ample cover, and of a proper character—that is, well stratified rock—large pillars. 11105.

- T. Croudace, Esq.
5 Nov., 1895.
11105. What practice have you followed in that respect in the Lambton Colliery? Near the outcrop?
11106. All round the colliery? In the outcrop, small pillars; further to the dip, larger pillars.
11107. Have you not an all-round system of 8-yard bords and 4-yard pillars? We have them varying from about 2 or 3 yards up to 8 and 10 yards.
11108. Has not 8-yard bords and 4-yard pillars been the general practice? No.
11109. Not only in your colliery, but in the whole district? I cannot say much for the other collieries; they thicken their pillars as they go under deeper cover.
11110. I am going back a few years ago, before any prominence was given to this question? I think at that time they would be pretty well all on the outcrop.
11111. I am afraid not? The bulk of them, I think. You see Minmi is largely the outcrop, also Lambton, Wallsend, and Waratah. It is not until you come to the A. A. Co. and Newcastle Co. that the conditions alter.
11112. What about Minmi? That is largely an outcrop. Then their seam is much thinner towards the dip—much thinner than the generality of the seams.
11113. Are not some portions of the Minmi seam very deep? Under the ranges they may have it.
11114. Are not some portions of the Lambton seam very deep? Yes; under the ranges.
11115. Wallsend and Co-operative? I do not think there is a very deep cover under the Co-operative.
11116. Has the practice of the district improved in this respect—are larger pillars being left? Yes, I think so. All the new collieries are much deeper, as a rule, and better stratified, and they would naturally leave larger pillars, with a view to getting them extracted; but still I do not think the size of pillars ought to be laid down under a hard-and-fast rule. I think the time has come when 8-yard bords should be abolished; it is an old primitive system.
11117. About ventilation that you have spoken about;—how often do you think a manager should measure the air in the mine to see what he has going? Where a manager has not much gas it does not require much measurement.
11118. Would you fix a time in the Bill—say once a fortnight, or once a week, or something of that kind? I do not think there would be any harm in that.
11119. Say in each particular district? There would not be any harm in that.
11120. Would you ask them to enter these measurements in a book? It generally is. Under the English Act it is entered in a book, and under the English Act you deal with the thermometer and the barometer. Their mines are much more fiery; they have more atmospheric changes to deal with, in which the gas exudes under some conditions much more rapidly than under other conditions.
11121. Do you not get that in this country? Sometimes.
11122. Is it not likely that a manager may get lax when he knows there is no gas to look after? Where there is no gas you do not want so much air. A man breathes very little air in a minute. You could not swallow a cubic foot of air if you were paid £12,000 for it.
11123. Many a miner would like to swallow more than he gets? He could not swallow a cubic foot.
11124. Do you not think, as I have already put the question, that the fact of no fire-damp being in a mine has a tendency to make the manager lax with regard to the ventilation? It would make him somewhat indifferent, naturally. I wish it to be clearly understood that neither the coal-owner nor the mine-manager, or the miner has any greater enemy than fire-damp.
11125. Are there not other enemies, such as carbonic acid gas? Very very little carbonic acid gas, and that is near the outcrop, given off from the clay principally.
11126. Have you not a little of it? Yes; in our outcrop where we leave the small pillars. We had to commence a system of bratticing to overcome the carbonic acid from the clay overhead, but otherwise there is very little carbonic acid given off in the district. Of course, in a limestone country there is a large quantity of carbonic acid gas given off.
11127. Your workings are very extensive, especially in the Lambton Colliery? Yes.
11128. There is a large expansion of air throughout the mine? Yes.
11129. Under the present Act no place is to be driven more than 35 yards before a cut-through is put over or brattice used? Yes.
11130. A man has to put his cut-through over as well as that? Yes.
11131. That means more than 35 yards? Yes.
11132. Will not a man find the air defective in a rise bord? It is generally a little warmer as he gets to the cut-through.
11133. Have you worked simply to keep within the meaning of the Act, or to give a man substantial ventilation? We prefer good ventilation, because a man works better with good ventilation.
11134. You say that you have only bratticed a few places as an experiment, but, as a general rule, you do not use brattice? I say that we have been compelled from time to time in places that are in advance of the general workings, such as winning headings, to use brattice, because there was no means of putting a cut-through, and in the ordinary workings we have had to brattice in the outcrop coal where gas was given off. Some time ago I had all the working-places bratticed, and I assure you I have not had a man saying, "Well done!" or, "Thank you, Mr. Croudace, you have given us good air."
11135. Are you sure that Mason did not mention the matter to you? I know Mason did, not many weeks ago—within six weeks ago. I mentioned to him that it was a curious thing that none of the men had expressed approval of the bratticing.
11136. Did he express his approval of it? Yes; he did.
11137. You found one man? Yes; but that was afterwards, about five or six weeks ago.
11138. What was your object in bratticing the colliery? Just to see whether the men really wanted it, or whether it was beneficial.
11139. Did you think it was beneficial yourself? I would be bound to say it ought to be.
11140. Will you let us have a definite opinion? If you ask me if the principle of bratticing is better than without, I would say bratticing is better.
11141. Will the air come of itself without being conducted? Yes; in dip workings very readily.
11142. What distance? One hundred yards if necessary. I have seen myself perfect ventilation in a dip narrow bord.
11143. How far to the rise? Not so far to the rise.
11144. Would you like to work 100 yards in front of the air off a heading? I would rather have the air behind me.
- 11145.

T. Croudace,
Esq.
5 Nov., 1896.

11145. You have mentioned something about a mine being divided into parts? Yes.
11146. Where a mine is divided into parts every cut-through would not be of the dimensions you have spoken about;—you spoke about a cut-through not being put in for some 200 or 300 yards? Yes, the main drives, and all the panels of working; that is what I want to have protected. The ordinary bords are usually driven 44 yards.
11147. Are you sure? Yes.
11148. Are they not 30 yards? No; the pillars are usually 22 x 44.
11149. Where? In the most approved collieries and for a number of years.
11150. Can you mention any of the collieries? In the majority of the large collieries in the north of England.
11151. Can you name any of the collieries? That used to be the system when I was serving my time.
11152. Where were you serving your time? At the East Hetton Collieries. We had thirteen collieries there.
11153. How long ago? It is about forty years ago.
11154. Has the system of mining changed since that time? In some instances, but not in others.
11155. Is not the system now bords 20 and 30 yards in length? Not that I am aware of. Of course, I would like you to understand that it is necessary to have shorter pillars in working thicker seams. In Staffordshire there is quite a different system to the North of England. There they leave small square pillars.
11156. At short intervals? Yes; there they have different conditions to operate upon. Pillars are practically left in the place of props. The enormous height of the seam necessitates this.
11157. Have you ever been in the Cambois Colliery, or the Bedlington Collieries? Yes.
11158. What are the lengths of the bords at the Bedlington Coal Company's Colliery? I should say about 40 yards. I have not measured particularly where they are working their big pillars. In some of the districts they were working longwall.
11159. Do you not think the bord and pillars were both 30 yards? I cannot say positively, but I do not think so.
11160. Do you think a miner who worked there ought to know? Yes, I should think so, although miners do not always notice the distance.
11161. You have assigned a reason why you do not wish any interference with this matter? Yes.
11162. You want no stipulation in the Bill? No.
11163. Is it because you want to extend the length of your cut-through;—would you like to have that liberty? I would, undoubtedly.
11164. To any length you please? I would not extend it beyond 44 yards; that is 2 chains.
11165. You know the system of ventilation at the present time? Yes.
11166. How would you ventilate them if you extended them to 44 yards? I would take brattice in so far.
11167. How far? Just according to the conditions. If a dip bord, not more than 2 or 3 yards.
11168. Any gas in the mine? In a dip bord probably more than 2 or 3 yards from the canvas door. In a rise bord it might have to be taken 10 or 15 yards in. I do not think it would be necessary to take it beyond.
11169. Would you give the inspector power to say whether the place was sufficiently ventilated? Yes; always power to raise the question.
11170. And if he said there should be more ventilation, would you comply with what he said willingly? Not if I thought it did not require it.
11171. Would you challenge the inspector's opinion? I would. I think the opinion of a manager at any colliery is more to be relied upon than the opinion of an inspector, because he is in daily touch with the colliery, and an inspector may not visit the colliery more than once in two months.
11172. How are the inspectors going to carry out their duties if managers combat their opinions in the way you suggest;—who is responsible for the mine? If you make the inspectors responsible the managers will welcome the hour that it comes, but you cannot make the managers responsible under an Act, and then have the inspectors to come in and override them. Take the case at Stockton; the inspectors went down that mine and ordered the men out. Certain work had to be done, which was carried out, and the men then considered with the manager it was safe, and went back to work. The inspectors never gave them permission to go back, and they have been working there ever since.
11173. The inspectors have declared the mine safe? I did not know that. How long after?
11174. Are you sure in that particular case the inspectors ordered the men out of the mine? I always understood so.
11175. If the manager had made a statement that he stopped the mine in order to remedy what had taken place, would you be inclined to accept his statement? Yes.
11176. If he did that, the inspectors could not have done it? No; but at all times I would give more consideration and weight to the candid and honest opinion of a manager against an inspector, touching his own colliery.
11177. Is not the inspector appointed to see that the provisions of the Act are carried out? Yes.
11178. Should not deference be paid to the inspector's opinion by managers? So it will be on any grave point.
11179. But you have said you would challenge an inspector's opinion? If I thought there was plenty of air I would challenge his opinion, but if I did not I would not. I would not do it from any bias.
11180. You are furnishing reasons why there should be a stipulated minimum quantity in the Bill; with regard to that large cut-through you have spoken about, do you intend to have all the cut-throughs driven in such a fashion;—the remark you made about this thick pillar would apply to simply making a division? To lay out the mine in a proper manner.
11181. Was it not to make a separate district? No; to make provision for extracting the coal throughout the whole of the property in a safe and secure manner, and to afford the best means of dealing with any explosion that might occur in the inner operations of the workings.
11182. It has not reference to pillars alone? The cut-throughs deal with the system of working, and I contend or think that that must apply to a pair of headings.
11183. If you had a separate district, for instance, in the way you have cited it would be with a view to lessen the effect of an explosion? Yes.
11184. That part would simply be ventilated distinct from the other portion of the mine? No; the ventilation that comes into the whole passes along these airways.

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11185. It would pass into each particular district? Yes.
11186. There would be a division in that case? Yes.
11187. That would be a split of itself? Yes; but I do not want the splits to be limited or specified. They may be less or more according to the circumstances that surround them.
11188. Is there not this danger, especially in the non-gaseous mines, that if you do not stipulate something, there is a danger of managers overcrowding a district, and the latter portion of the men getting nothing but a polluted atmosphere to breathe? How do you do when you have an extensive longwall face which may be a mile from one end to the other?
11189. In that particular case the air comes fresh on to the men, and fresh out? No, it does not; it comes along the main intake and along the main face, and so it does in the bords.
11190. It is confined on the longwall? You do it to the detriment of your ventilation if you carry it out too much. If you over-split you weaken the velocity and lessen the quantity. I am asking that it should be left in the hands of the management rather than in the powers given to the inspector.
11191. I take for granted that one of your objects is to have the longer cut-through? Yes.
11192. You do not want a number of men stipulated to be in a split? No.
11193. You want to increase the number of men in a split? If necessary, certainly, and I might have less than the number in the split. I contend that any Act of Parliament should give full acknowledgment and power to the manager of any mine to use his own discretion as to the best means for carrying on that mine, and the more restrictions you put in the way the more you will destroy the coal industry.
11194. You cannot make a comparison between the conditions in this Colony and those in England? No; you cannot.
11195. Here we have not gas to deal with in a number of our mines? Quite so.
11196. There is an absence of motive power to induce the manager to have sufficient ventilation in his colliery? Every manager knows that the purer the air the better the men can work. I want, if possible, to extract 1s. 6d. for every 1s. I pay, and we know that in really bad air a man does not work well. If he is at all asthmatical he is knocked out of time.
11197. From what you have known of the mines in the past do you think more attention should be given to the question of ventilation in the future? Yes; perhaps there should be, because mines are becoming deeper and more gassy, and, therefore, require more attention. In that respect the mine-owner, mine manager, and miner has no greater enemy than gas.
11198. Gas is sometimes a very good friend for the miner? I know the old expression.
11199. Gas is a good friend? I know that, as you mean it.
11200. *President.*] Would you mind looking at these Rules about ventilation in the laws of British Columbia;—you will notice the wording of the English Act in the first Rule (*see Appendix B*)? [*Witness reads.*] I presume our Act has been taken from this, or they have taken their Act from ours.
11201. You do not agree with the Rules there referring to ventilation? I disagree with the minimum, and that a mine should be divided into limited splits; and I concur with what it says in Rule 1 about an adequate amount of ventilation—that is, unlimited power; a sufficient amount—an adequate amount.

[Witness withdrew.]

WEDNESDAY, 6 NOVEMBER, 1895.

[The Commission met in the Board-room, Chief Secretary's Office, at 2 p.m.]

Present:—

FRANCIS EDWARD ROGERS, Esq., Q.C. (PRESIDENT).

JAMES CURLEY, Esq. | JESSE GREGSON, Esq.

AFTERNOON SITTING.

Robert James Jury sworn and examined:—

- Mr. R. J. Jury.
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11202. *President.*] What is your name? Robert James Jury.
11203. What are you? I am a miner. At the present time I am engaged attending to the brattice in the Stockton Colliery.
11204. How long have you been a miner? About twenty-five years altogether.
11205. I believe you wanted to give some evidence before this Commission? Yes; I expressed a desire to be called! I saw that several witnesses who had previously given evidence before Select Committees had been called by the Commission, and I thought I would like to have the opportunity of doing the same as them, that is correcting themselves where they thought necessary in their former evidence.
11206. What is it you would like to say? There are one or two matters I would like to mention.
11207. Before whom have you given evidence before? Before a Select Committee of the Legislative Assembly, in April, 1894. In my previous evidence, at Question 810, I say, "In an ordinary pit the life of brattice would be from two to three years." Since giving that evidence I have had a good deal of experience in the work of bratticing, and I have also had an opportunity of talking to a great many men engaged in putting up bratticing. I am satisfied that I gave the life of brattice as too long, and if I had said from one to two years it would be more in accordance with the fact. I say still that a great deal depends upon the usage it gets—the care taken in its manipulation.
11208. Assuming it to be cared for, you say it should last from one to two years? Yes.
11209. *Mr. Curley.*] Are you speaking of ordinary canvas brattice? Yes; ordinary canvas brattice. In Question 862 of my former evidence, with regard to the inspection of the faces before the men commence work, I say, "I think it is a wise provision, although as a practical man I did not attach a very great deal of importance to it." I think it is a mistake to be too confident; it is much better to treat all men as requiring looking after.
11210. You believe in the inspection? Yes, thoroughly, whether a man is practical or not. The next question I would like to refer to is No. 905, with reference to a series of questions put by Mr. Cann in regard to the drawing shaft being the upcast. I say there, that in the event of the drawing shaft being the upcast, the main road to the shaft would be loaded with all the impurities of the mine. I made a mistake in that. It does not necessarily follow that because the drawing shaft is the upcast, the main road would be loaded with all the impurities of the mine, because that main road might be a split in itself, and a back airway could reach the shaft, so that the impure air would not need to go all the way by the main travelling road.

11211.

11211. It would be the return airway if it was going back to the upcast shaft, if you made your main hauling shaft the upcast? The road to the hauling shaft might be one of a series of splits, and the body of the return air might be conveyed to the upcast shaft by means of another airway; not the main travelling road.

11212. If you wanted to keep pure air on that road, would it not have to be conducted off the main road, and be brought clear back again? Not necessarily.

11213. What would you do? The impure air that had already ventilated a portion of the mine could be conveyed into the return, and on this main haulage road, the air that was passing to the shaft might only have ventilated a small portion of the mine.

11214. Part of a split? Yes; it is an error that I wanted the opportunity of correcting. The next question I wish to refer to is No. 965,—that is in regard to the examination of the mines periodically by the Government inspectors. I said in my former evidence, that I had a suspicion that the proprietors knew when the inspector was coming round, and that they were prepared for the occasion. I would like to say, although I am still of the opinion that in some cases the proprietors have had a knowledge when the inspector is coming round, that I do not believe the knowledge has been conveyed to them for the purpose of defeating the Coal Mines Regulation Act. It may be on account of the intermittent way the mines work, for the inspectors to get to know when the mine is going to work. Also, with regard to question 981, about the check-weighmen. I may say there is another part of my evidence where I say I do not know of a case where the men have not been able to appoint a man whom they thought fit; but I may say that that was an oversight, because I do remember a case, and I knew of the case at the time; but it had not occurred to my mind.

11215. *President.*] What case do you refer to? It was a case that occurred eighteen months ago at the Burwood Colliery. The colliery changed hands, and the new proprietors had a new lot of men. The new men desired to employ one of the old hands as their check-weighman, and they applied to the manager under the new proprietary, and he refused to allow them to employ this person on the grounds that he was an outsider and not an employee of the colliery. He was previously an employee of the colliery, but was not at that time.

11216. *Mr. Curley.*] Do you think the men should have the right to select their check-weighman from anywhere they please? As the men pay him they should have the right to employ whom they think fit.

11217. *President.*] That is what you said in your evidence before Mr. Fegan's Select Committee? Yes; but I omitted when giving my evidence then, to mention this particular case.

11218. *Mr. Curley.*] Do you think the men should hold the right of meetings? Yes.

11219. Without any interference? Yes, whatever. They should have the right of appointing who they think fit as weighman or check-inspector, because they have to pay these men. Of course, I still say that it is perfectly right if the check-weigher misconducts himself or impedes the working of the mine, he should be liable to be removed. Again, in Question 986, in regard to the thickness of pillars under tidal waters. I am asked if I think it is necessary to have still thicker pillars under tidal waters, and I say "Yes, increased vigilance will be required to be exercised in collieries working under tidal waters." That is not the kind of answer I ought to have given, for I have to admit that at that time I had no knowledge of those collieries that were working under tidal waters.

11220. Where were you working at that time? I was out of employment at that time; but I had been working at the Burwood Colliery, I spoke without having a knowledge of what I was questioned about. It is humiliating to have to say so; but I take the earliest opportunity to say that I was speaking beyond my knowledge at that time.

11221. *President.*] What do you say now? I do not think that increased vigilance is required at the present time, because I believe there is a great deal of vigilance in connection with the Government supervision of these collieries. I think the management and inspectors are very careful.

11222. *Mr. Gregson.*] Do you think everything is done that can be done? I do not know of anything more to be done. I know the working of the Stockton Colliery is very strict to ensure the safety of the men. Every place is driven by line, and they are strict to a few inches in regard to the width of bords and pillars, and a thoroughly good system of timbering is insisted upon.

11223. *President.*] You do not think there is any need for legislation with the way they are worked? I think there is quite enough legislation under the existing Act.

11224. *Mr. Curley.*] Do you know that the present Act does not interfere with pillars? Yes; but I understand the Government leases regulate these matters.

11225. Do you know that for a fact? Yes; I gather it from the evidence of the managers and Government inspectors, which they have given before the Select Committees.

11226. Would you have any objection to what is embodied in the lease being embodied in an Act of Parliament, with regard to the pillars? No, I would not; I think a 6-yard pillar is ample. In the discharge of my duties I have to travel round the pit every day the pit works, and I do not see any indication of the pillars crumbling away, or being subjected to any crush.

11227. Do you know if the mine is going to the dip? There is one portion of the mine going to the dip; but I understand you have had the Stockton Colliery manager through your hands, and I should fancy that is a question you should have put to him. There is one place that has been going to the dip for some little time.

11228. Is that going under the ocean? I believe it is going towards the ocean.

11229. You have some idea; you should have a thorough knowledge of the locality? Yes; on the surface.

11230. How long have you worked at Stockton? A little over twelve months. I would not like to say when I am below where I am by the surface.

11231. You have some idea? I really could not say positively.

11232. I suppose you go down in the cage? Yes.

11233. You know what direction you start from, taking either side of the shaft, and when you land at the bottom you know the points of the compass, north, south, east, and west; and you know the direction towards the ocean? I have only to repeat that I am not sure, and that I do not know positively of any place that is going to the ocean, or in what direction they are going.

11234. You say you have been told so? I have heard of one place; but I would not like to make a statement on what I have heard when I am on my oath.

11235. That particular place you have referred to that is going towards the ocean; is that place dipping? The particular place that I referred to as having heard of is going to the dip. 11236.

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11236. Much? It is not uniform. In some places the dip has been about 2 inches to the yard; then, again, less, and then, perhaps, a little more.

11237. If that has got to go any distance, would you be able to tell what cover you were carrying, if it was going under the ocean? I understand the conditions of the lease are, that they have to bore at certain distances apart to test the roof. I know that that is done, but I cannot say at what distances apart. I have no doubt the Commission has the power to get that information from persons about the colliery who are in a better position to give it than I am. I have been engaged in boring, but I could not say the distance apart of the holes; they usually bore 30 feet into the roof.

11238. Have you ever seen any surface subsidences? No, I have not; but I have read of them in the reports of the inquiries.

11239. You have read the reports? Yes; Mr. M'Auliffe's evidence, and the evidence of Mr. Humble; but I have not seen the subsidences.

11240. Would that lead you to the belief that pillars have not been left of sufficient dimensions, formerly? It is a certainty that if there has been a subsidence there has not been ample support for the roof; but all these things occurred before I went to Stockton. I only know what I have read, and that is public property.

11241. You have read these reports, and have a knowledge from that reading only? Yes.

11242. Apart from what may be in the lease, do you think there should be anything embodied in an Act of Parliament with regard to the size of pillars? That is rather a difficult question, because I would not know what standard to go by. I can quote half a dozen authorities, and they would all differ.

11243. Start from any standard you like; 50 feet of surface, or 100 feet, or anything you please? I am not sufficiently versed in mining to say what the size of the pillars should be. When I was questioned on this matter before I said, "So many managers have seen the folly of leaving insufficient pillars, we need not trouble any more on that score." We are not likely to hear anything more on that score in the future.

11244. Would not that impress upon you the necessity of putting it in a Bill? Scarcely; when I say the matter will right itself, I scarcely see the necessity for including it in a Bill. I have no objection to it going into a Bill; but I do not consider myself an authority to speak on such matters. If I see pillars fretting away or crushing, the impression is that they are not large enough; but there is nothing like that in the Stockton mine.

11245. How is it you are not an authority; have you not had a long mining experience? Yes.

11246. And yet you say you are not an authority. From your long mining experience you have a right to know something about these matters? That is a little flattering; but I must repeat my former statement that I do not consider myself qualified to give an opinion on pillars. I believe we have very little need to trouble on that score, it is quickly righting itself. We are not likely to have so many complaints in the future as we have had in the past. The proprietors and managers have had these matters forced upon them, and I do not think we need worry about these things.

11247. Were you at the Burwood Colliery when any pillars were affected there? You are referring to the creep there. I was not there at that time, but I have travelled that district.

11248. Have you seen the effect of the creep? Yes; I saw what was once the return air-way was nearly closed up, but these have been, and are, grand object lessons, and I do not think we are likely to see a repetition of such mistakes.

11249. Do you think these are matters inspectors should give more attention to than what they have done in the past? Yes; if it is likely to occur again, and I believe the inspectors will, and the same men who made these mistakes years ago, if they err in the future, will err on the side of safety. They have seen the wrong and the trouble of these things, and the matter will, I believe, be all right without Parliamentary interference.

11250. Do you go to every part of the Stockton Colliery occasionally? There are two districts which are examined by firemen in the Stockton mine. Before I was fireman permanently, I used to go round when one or the other fireman would be absent from work, and in that sense I have gone round all of the mine.

11251. What are the local names of the districts? The 48 district, 43 district, and No. 2 district.

11252. As far as you know, what size are the pillars? So far as I have seen, they are all 6-yard pillars, with the exception of some new work being opened out, where I believe the pillars are thicker; but that is only being opened out at the present time. I am not sure what thickness the new pillars are, but they are thicker than the ordinary pillars. There may be some more than 6 yards in those districts that I have mentioned, but I know that they are all standing good, and if there is any sign of crushing, or any props break, it would be my duty to report it, and have the matter rectified at once. If I did not report a matter of that kind I should get a reprimand.

11253. How many deputies have you at Stockton? Three; and the overman makes a circuit of the pit every day.

11254. Does the mine make much water at all in the districts you have referred to? There are wet places in the mine the same as there are at other collieries, and, of course, there are dry places; but, I think, there is ample power to throw a great deal more water up the shaft than what is going away, or is likely to go away. There are some very powerful pumps at the colliery.

11255. Do you consider the water that is made in the mine anything like excessive? Stockton might be called rather a wet pit; but I would not say excessively wet.

11256. Is there much water making where you said the dip work was being carried on? Yes; but not a great deal. All the water gravitates towards the dip workings from the higher parts of the mine, and that would make the district appear much wetter than it really is.

11257. Have you anything to do with the inspection of the dams that were put up some time ago? Yes.

11258. Are these dams inspected at regular intervals? I go there every seven days and make a thorough inspection for gas, and to see if the roof is safe and that the timber is all good. I believe it is the deputies' duty to go there also, and I know the underground manager goes there occasionally. The Government inspectors go there on every visit; but I cannot say how often they come. I go once in every seven days.

11259. Have you ever seen anything in connection with the dams that has caused you to draw the manager's attention to them? No.

11260. Are they standing in a substantial way? Yes.

11261. Are there pipes through them? Yes.

11262. What size? Six inches and 1 inch.

11263.

11263. How many? Two at each dam.

11264. What is the size of the largest pipe? It may be 6 inches; but I know it is not running a quarter full.

11265. Have you seen the connection between the new shaft and the workings? Yes; that is a portion of my district. I have travelled over that part.

11266. Have the men far to go to get to that shaft? I should say that portions of the workings may be 400 yards from the new shaft in a direct road. I am only speaking approximately; it may be either more or less.

11267. Do you know how much rock there was on the bottom of that shaft? No; I do not. The shaft was down and the place holed through before I went up to the new shaft. I only went to the new shaft by way of the road that is driven from the workings called the cross-cut.

11268. Do you know who the sinkers were that sunk that shaft? I do not know them.

11269. Has the shaft been put down since you went there? Yes; it has been bottomed since I went there.

11270. Were they local men? I do not know the men who bottomed that shaft.

11271. Have you noticed how far the tubbing goes down? No; I have not.

11272. Have you gone up the shaft? No; I know people have gone up and down occasionally since the connection has been made, but I have not.

11273. You do not wish to eliminate the word "vigilance" from your former evidence? I said "increased vigilance." I am quite anxious that vigilance should be exercised in any mine, but when I said "increased vigilance" I said what I should not have said.

11274. What should you have said? What I have already said, viz., that I had no practical knowledge of any colliery that was working under tidal waters at that time.

11275. You have a practical knowledge now? Yes.

11276. And vigilance will have to be displayed there at all times? Yes, the same as at every colliery.

11277. Any more so than anywhere else? No, not more so than anywhere else.

11278. Where a colliery is working under tidal waters, you would not say that more vigilance should be displayed than at any other colliery? I think it would suggest itself to most people's minds that there should be a certain amount of vigilance more required.

11279. Does it suggest itself to your mind? Yes.

11280. Do you know if borcholes are kept in advance of the leading places? Yes, in the leading places when opening up new ground.

11281. Do you know the distances? No, I do not.

11282. Is that a matter you control? No.

11283. Who looks after that? That is done in the night shift; it is under the night overman, Mr. McDonald. I would like to refer again to my former evidence. In question 1148 Mr. Nicholson asks me: "Suppose the men knock off at (say) 4 o'clock, and from half-past three to four every miner is firing his shots, what is the condition of the return for travelling in?" In reply I say, "It is totally unfit to be travelled in. The only circumstances under which it would be justifiable to travel in the return airway would be in case of accident." I think I made a mistake in that answer; in fact I am certain I made a mistake. I say "it is totally unfit to travel in"; but, while I am not in favour of making a travelling road a return airway, a mistake is often made in thinking the returns are more foul than they really are. Directly the air comes down the pit it commences to find its way into the return by leakage, and I do not think that the returns are as foul as we very often think them to be.

11284. You said "we"! who do you mean by "we"? I mean miners.

11285. But you are not here to speak for the miners? But I am correcting a mistake. On account of the great quantity of air finding its way into the return the result is that in many cases the air in the return is purer than it is in the face of the workings. That is to say, so much pure air finds its way into the return. Of course I do not wish to be understood to be in favour of men being compelled to travel in the return.

11286. You do not approve of men being compelled to travel in the return? No.

11287. With regard to the air in the return and the air in the face of the workings, do you think that the air should be conducted into the men's places? Well, I should like to see it turned into the bords. I am very anxious to see the distance between the cut-throughs shortened.

11288. You think the distance between the cut-throughs should be shortened? Yes.

11289. But, whether the distance between the cut-throughs is shortened or not, would you have the air taken to the working face? I would turn it into the bords. I attach a great deal more importance to the shorter cut-throughs than taking the air up to the face by brattice.

11290. The shorter cut-through you consider is the completer method? Yes; shortening the distance between the cut-throughs and strictly attending to the stoppings would be a much more effectual method of carrying on the ventilation than to depend on canvas cloth, and let the men work 35 yards away from the cut-through. I am anxious to give the air a turn into the bords, because the current of air going along a heading at right angles to the bord will have a tendency to go past and not into the bord.

11291. Unless it is conducted? Yes, turned or conducted. I do not think it necessary to extend the brattice very far up the bords. I have given a lot of thought to this matter, and have studied it practically in the mine, and I think, leaving the matter of expense out of the question, the most effectual way is to shorten the distance between the cut-throughs, and strictly attend to the stoppings.

11292. Do you brattice any places at Stockton? Yes.

11293. Are they the leading places or the ordinary bords? We brattice a good many of the ordinary bords on account of meeting with faults occasionally, which always makes it difficult to keep the air up to the face.

11294. Is there anything else you wish to refer to? No, there is nothing else to which I wish to refer, unless any of the members of the Commission wish to ask me any questions.

11295. Did you engage during the time the Stockton colliery was not considered to be safe by the inspectors? I engaged twelve months ago last month, but whether that was during the time the colliery was not considered safe or not I do not know. I am not aware whether the inspectors have removed their veto yet.

11296. They have? I was not aware of that.

11297. Were you asked to sign any document exempting the company from any liability? No, I was not; I never signed anything. I was supplied with a copy of the Colliery Rules, and I commenced to work

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- work there as a general shift man. I am anxious to see the standard weight abolished, because I think it is an injustice, and I am anxious that the miners should have the fullest liberty in the choice of their check-weighman and also in the choice of their check-inspectors.
11298. Do you think they would be allowed to hold a meeting for the election of a check-weighman at Stockton? I cannot say. I knew there was some little trouble there some time ago, but whether that would be likely to occur again I do not know—I have not any idea. I know they have a check-weighman at the Stockton Colliery.
11299. Anyway you give it as your opinion that the miners should not be interfered with in these elections? The men should have the fullest liberty to select who they think fit, and it is perfectly right if a man misconducts himself, and by so doing impedes the working of the pit, that the manager should have the power to remove him at once as he has by the Act.
11300. Have you seen the Check-weigher's Act, recently passed in England? No, I have not.
11301. Will you look at it? [*Witness handed Act. See Appendix E.*] Yes.
11302. Do you approve of that? Yes; and I think we are working on similar conditions to those here. Our Coal Mines Act provides for the appointment of a check-weigher, and if any manager places any obstacle in the way he is committing an offence against the Act.
11303. You see the reference in the English Act to the election of a check-weigher? Yes.
11304. Do you approve of that? Yes; I approve of the men having the fullest liberty in the appointment of a check-weigher. I go further than the present Act, which says he must be one of their own number, and say that that limitation is not just. I am of opinion that there should be no limitation to their choice.
11305. In the holding of any meeting for the appointment of these men you do not think they should be interfered with? I do not think they should.
11306. In the same way you think the same liberty should be afforded to the men with regard to a check-inspector? Yes; if the miners wish to avail themselves of the provisions of the Act, either for a check-weigher or check-inspector, they ought not to be interfered with, and any manager who does interfere makes a mistake. With regard to the amendment made by the Legislative Council with reference to paying for large coal only, I am opposed to that. I hope the day will come when men will send all away together, and be paid for both large and small coal, because there is no doubt that there is a trade for both kinds of coal, and for a person to say in any Chamber that the object of the proprietors is to have the small coal thrown back, is not true. I say there is a great demand for small coal at the present time; in fact, I have it on the authority of those engaged in the business of selling that there is a greater demand for the small coal than there is for the large. I suppose it is on account of its cheapness, but I hope the day will come when the miners will fill away all together; of course that will necessitate a re-arrangement of prices, and that will be mutual between the employers and the miners. In all the collieries I have been connected with the managers have been getting out all the small coal they can, and that proves that there is a great demand. To alter the Act and say that nothing shall be paid for but large coal in my opinion is a great wrong.
11307. You say you believe in having shorter cut-throughs? Yes.
11308. What distance would you make them? It would probably result in a compromise; but I should say about 25 yards, and probably the compromise would be between 25 yards and 35 yards, as obtaining at the present time. Whether it results in the yard work being interfered with or not, I hope in the near future to see the cut-throughs shorter.
11309. Do you believe in the air being conducted to the working-face? I believe in the air being turned into the working bords.
11310. In the event of your working at the face, would you not like to have as much ventilation as possible? I am considering what is practicable and what can be brought about, and I believe if the air is simply turned into the bords we would have no complaints whatever, and that the places would be cool and tolerably pure. We should not have any complaints if this was done.
11311. That is with the shorter cut-throughs? Yes; it would not require to be taken very far up into the bords.
11312. Do you think the cut-through should be over by the time the man drives his distance up his bord? Yes; I do not believe in the construction of the Act as how far a man should drive before the air. I believe the 35 yards should include everything, cut-throughs and all.
11313. Do you put the cut-throughs over any quicker in rise places than 35 yards, or do you take them the full distance? There is no fixed rule on account of the number of dykes; but they are not allowed to go further than 35 yards before the air. If any man was found working more than 35 yards before the air I would be severely reprimanded.
11314. You know the construction that has been put upon the Act with regard to the 35 yards? Yes.
11315. It may mean a good deal more if a man has a good thick cut-through? Yes; there is a fault in the wording of the Act.
11316. Will you look at sub-section 4, of section 12, of the present Act, "and no place shall be driven more than 35 yards before the current of air without a cut-through put through or bratticed up within 3 yards of the face of such working place"? Different men put different constructions on things. I believe the 35 yards should include cut-through and everything else.
11317. Do you think the managers have put a wrong construction on that sub-section? Not the managers.
11318. The inspectors? You have hit it.
11319. What inspector? Inspector Humble; that is the way he interprets the Act.
11320. You think that is a wrong construction? It is not a liberal construction. It is not the construction I would like to put on it. I would like to see the Act worded so that a man could not err.
11321. If a man had to conduct the air up to the working face, do you not think he would prefer to put his cut-throughs at a shorter distance in preference to using so much brattice? It would resolve itself into a question of cost, and if a manager found it cheaper to drive the cut-throughs than to canvas up he would probably resort to that course. If he considered efficiency he would drive the cut-throughs in preference to the brattice.
11322. Have you ever found any fire-damp in the Stockton Colliery? No.
11323. *President.*] Have you anything further you wish to say? No; I have nothing further I wish to say, but I am in the hands of the Commission, if they wish to ask me any questions.

[Witness withdrew.]

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- „ 10. Sketch showing Lambton Headings, Wallsend Colliery (Reference: Letter No. 5; Appendix, page 99).
- „ 11. Tracing referred to in Examiner of Coal-fields' Report, 3rd February, 1886 (Reference: Letter, No. 10; Appendix, page 109).
- „ 12. Tracing referred to in Examiner of Coal-fields' Report, 21st February, 1893 (Reference: Appendix, page 159).

ROYAL COMMISSION ON COAL-MINING REGULATION BILL.

APPENDIX.

A.

COAL MINES REGULATION BILL.

SCHEDULE of the Amendments referred to in Message of 6th December, 1894.

- Page 1, clause 1, line 8. Omit "December" insert "March"
Page 1, clause 1, line 8. Omit "four" insert "five"
Page 2, clause 2, line 3. Before "certificate" insert "first-class"
Page 2, clause 2, line 3. Before "service" insert "a certificate of"
Page 2, clause 2, line 3. After "service" insert "as manager"
Page 2, clause 2, line 6. Omit "passing" insert "commencement"
Page 2, clause 2, line 8. Omit "and" insert "or"
Page 2, clause 2, line 9. Omit "each"
Page 2, clause 2, line 10. Omit "ten" insert "five"
Page 2, clause 2, line 12. After "owner" insert "or agent"
Page 2, clause 2, line 26. Omit "ten" insert "thirty"
Page 2, clause 3, line 33. Omit "a duly qualified" insert "an"
Page 2, clause 3, line 34. Omit "in accordance with the provisions of this Act"
Page 2, clause 3, line 36. Omit "after the passing of this Act"
Page 2, clause 3, line 36. Omit "person" insert "under-manager"
Page 2, clause 3, line 37. Omit "and then exercising supervision of a mine"
Page 2, clause 3, line 40. Omit "six" insert "eight"
Page 2, clause 4, line 46. Omit "while so contracting"
Page 2, clause 4, line 46. After "for" insert "getting"
Page 2, clause 4, line 46. After "mineral" insert "in any mine"
Page 2, clause 4, line 48. After "under-manager" insert "of that mine"
Page 2, clause 5, line 53. After "certificate" insert "of competency"
Page 2, clause 5, line 54. Omit "has" insert "shall have"
Page 2, clause 5, line 55. Omit "granting" insert "ascertaining the persons to receive"
Page 2, clause 5, line 56. Omit "and service"
Page 2, clause 5, line 57. Omit "a Board of"
Page 2, clause 5, line 57. After "appointed" insert "by a Board"
Page 2, clause 5. After line 57 insert (a) Three persons being owners or agents of mines in the
"Colony of New South Wales"
Page 3, clause 5, line 2. After "Colony" insert "not being owners, agents, or managers of a mine
"and"
Page 3, clause 6. Omit clause 6 insert new clause 6.
Page 3, clause 7, line 47. Omit "selection of persons to serve as examiners"
Page 3, clause 7, line 51. Omit "One" insert "Two"
Pages 3 and 4, clause 8. Omit clause 8 insert new clause 8.
Pages 4 and 5, clause 9. Omit clause 9.
Page 5, clause 11, 10, line 35. Before "Stipendiary" insert "or"
Page 5, clause 11, 10, line 35. Omit "or other person or persons"
Page 5, clause 11, 10, line 47. Omit "Act" insert "section and in section eleven"
Page 5, clause 11, 10, lines 52 and 53. Omit "or otherwise deal with"
Page 6, clause 11, 10, line 5. Omit "or otherwise deal with"
Page 6, clause 13, 12, line 32. Omit "or otherwise dealt with"
Page 6, clause 13, 12, lines 33 and 34. Omit "or a notification of the order of the Court"
Page 6, clause 13, 12, lines 38 and 39. Omit "or otherwise dealt with"
Page 6, clause 15, 14, line 55. After "for" second occurring insert "or for registration of"
Page 7, clause 17. Omit clause 17.
Page 7, clause 19, 17, line 47. After "inspector" insert "appointed"
Page 7, clause 19, 17, line 47. Omit "passing" insert "commencement"
Page 7, clause 19, 17, line 48. Before "certificate" insert "first class"
Page 7, clause 19, 17, line 49. Omit "or service"
Page 7, clause 19, 17, line 49. Omit "hereinbefore provided in regard to"
Page 7, clause 19, 17, line 49. Omit "s" from "managers"

- Page 7, clause 19. 17, line 49. *After* "managers" *omit* remainder of clause.
- Page 8, clause 21. *Omit* clause 21 *insert* new clause 19.
- Page 9, clause 22. 20, line 18. *Omit* "and enter such report in a book at the mine"
- Page 11, clause 27. 25, lines 3 and 4. *Omit* "notwithstanding anything to the contrary contained in the 'Arbitration Act, 1892,'" *insert* "and except where they are inconsistent with the provisions of this Act the provisions of the 'Arbitration Act, 1892' shall apply to arbitrations under this Act"
- Page 12, clause 27. 25, line 29. *Omit* "or umpire"
- Page 12, clause 27. 25, line 31. *After* "mines" *insert* "and every person who is appointed an umpire under this section shall be a District Court Judge, a Police or Stipendiary Magistrate, or a Barrister-at-Law"
- Page 13, clause 29. 27, line 37. *Omit* "two" *insert* "three"
- Page 14, clause 30. 28, line 6. *Omit* "three" *insert* "six"
- Page 14, clause 30. 28. *Omit* subsection (III)
- Page 14, clause 30. 28, line 46. *Omit* "or tracing"
- Page 14, clause 30. 28, line 48. *Omit* "or tracing"
- Page 14, clause 30. 28, line 50. *Omit* "or tracings"
- Page 14, clause 30. 28, line 54. *Omit* "or tracing"
- Page 14, clause 30. 28, line 58. *After* "Minister" *insert* "as aforesaid"
- Page 15, clause 31. 29, line 6. *Before* "personal" *insert* "serious"
- Page 15, clause 31. 29, line 9. *Omit* "forthwith but not later than" *insert* "within"
- Page 15, clause 32. 30, line 46. *Omit* "forthwith" *insert* "within one month"
- Page 16, clause 34. 32, line 22. *After* "boundaries" *insert* "the whole"
- Page 16, clause 34. 32, line 24. *Omit* "s" from "surfaces"
- Page 16, clause 34. 32, line 32. *Omit* "twenty-nine" *insert* "twenty-eight"
- Page 16, clause 34. 32, line 33. *After* "owner" *insert* "or agent"
- Page 16, clause 34. 32, line 36. *After* "owner" *insert* "or agent"
- Page 16, clause 34. 32, line 43. *After* "owner" *insert* "or agent"
- Page 16, clause 34. 32, line 48. *After* "owner" *insert* "or agent"
- Page 16, clause 35. 33, line 56. *Omit* "prepaid" *insert* "registered"
- Page 17, clause 36. *Omit* clause 36.
- Page 17, clause 37. 34, line 12. *Omit* "thirty-eight" *insert* "thirty-five"
- Page 17, clause 37. 34, line 15. *After* "mine" *insert* "and no boys between the age of fourteen years and eighteen years shall be employed in or allowed to be for the purpose of employment in any mine below ground for more than ten hours on Monday, Tuesday, Wednesday, Thursday, Friday, and six hours on one Saturday and eight hours on the next Saturday"
- "For the purpose of this Act, with respect to the employment of such boys in a mine below ground, the following regulations shall have effect, that is to say:—
- "(i) There shall be allowed an interval of not less than twelve hours between each period of employment.
- "(ii) Each period of employment shall be inclusive of one hour for meals.
- "(iii) A week shall be deemed to begin at midnight on Saturday night and to end at midnight on the succeeding Saturday night."
- Page 17, clause 37. 34, line 33. *After* "boys" *insert* "under the age of eighteen"
- Page 17, clause 37. 34, line 34. *Before* "boys" *insert* "such"
- Page 17, clause 37. 34, line 39. *After* "every" *insert* "such"
- Page 17, clause 38. 35, lines 46 and 47. *Omit* twenty-ninth day of August, one thousand eight hundred and ninety-four" *insert* "commencement of this Act"
- Page 17, clause 38. 35, lines 50 and 51. *Omit* "twenty-ninth day of August, one thousand eight hundred and ninety-four" *insert* "commencement of this Act"
- Page 18, clause 40. 37, line 17. *Omit* "or contiguous"
- Page 18, clause 41. 38, line 28. *Omit* "mineral" *insert* "large coal or shale"
- Page 18, clause 41. 38, line 30. *After* "weight" *insert* "of such large coal or shale"
- Page 18, clause 41. 38, lines 30 to 32. *Omit* "of the mineral contracted to be gotten and unless otherwise mutually agreed upon all the mineral gotten by them" *insert* "such weight being ascertained in such manner as may be agreed upon by the owner, agent, or manager of the mine on the one part, and the persons so employed on the other part, and in the absence of such agreement such coal or shale"
- Page 18, clause 41. 38, line 35. *After* "weighed" *insert* "either at the bottom of the screen or"
- Page 18, clause 41. 38, line 40. *After* "of" *insert* "small coal"
- Page 18, clause 41. 38, lines 40 and 41. *Omit* "other than the mineral contracted to be gotten"
- Page 18, clause 41. 38, lines 41 and 42. *Omit* "the mineral contracted to be gotten" *insert* "such large coal or shale, or in respect of any tubs being improperly filled in those cases where they are filled by the getter of the large coal or shale or his drawer, or by the person immediately employed by him"
- Page 19, clause 41. 38, line 5. *Omit* "That"
- Page 19, clause 41. 38, line 8. *Omit* "passing" *insert* "commencement"
- Page 19, clause 41. 38, line 9. *After* "abolished" *insert* "But nothing herein contained shall be held to affect the power of any owner or manager of a mine to pay miners by the method known as the standard bar system"
- Page 19, clause 41. 38, line 14. *Omit* "twenty" *insert* "thirty"
- Page 19, clause 43. 40, line 41. *Omit* "mineral" *insert* "large coal or shale"
- Page 19, clause 43. 40, line 42. *After* "person" *insert* "who shall be an employee of the colliery"
- Page 19, clause 43. 40, line 44. *After* "for" *insert* "weighing the large coal or shale, and at each place appointed for"
- Page 19, clause 43. 40, line 47. *Omit* "mineral" *insert* "large coal or shale"

Hours of
employment
of boys.

Regulations
as to employ-
ment of boys.

- Page 19, clause 43. 40, line 52. *Omit* "tareing of tubs and trams" *insert* "weights"
- Page 20, clause 43. 40, line 11. *Omit* "mineral" *insert* "large coal or shale"
- Page 20, clause 43. 40, lines 12 and 13. *Omit* "or the tareing of tubs or trams"
- Page 20, clause 43. 40, line 17. *Omit* "the check-weigher" *insert* "he"
- Page 20, clause 43. 40, line 22. *Omit* "he" *insert* "the owner, agent, or manager"
- Page 20, clause 43. 40, line 23. *Omit* "a Court of summary jurisdiction" *insert* "the nearest Court of
"Petty Sessions"
- Page 20, clause 43. 40, line 38. *Omit* "material" *insert* "large coal or shale"
- Page 20, clause 43. 40, line 43. *Omit* "mineral" *insert* "large coal or shale"
- Page 20, clause 43. 40, line 45. *Omit* "or the tare"
- Page 20, clause 43. 40, line 46. *Omit* "and tareing"
- Page 20, clause 44. 41, line 50. *Omit* "mineral" *insert* "large coal or shale"
- Page 21, clause 45. 42, line 5. *Omit* "mineral" *insert* "large coal or shale"
- Page 21, clause 45. 42, line 8. *Omit* "buying and selling or for"
- Page 21, clause 45. 42, lines 17 and 18. *Omit* "or when required by the manager or majority of employers
"so to do"
- Page 21, clause 46. 43, line 49. *Omit* "fifty" *insert* "fifteen"
- Page 21, clause 46. 43, line 50. *Omit* "six" *insert* "four"
- Page 22, clause 48. 45, line 57. *Omit* "fifty" *insert* "fifteen"
- Page 22, clause 48. 45, line 59. *Omit* "first day of October one thousand eight hundred and ninety-four
insert "commencement of this Act"
- Page 23, clause 48. 45, line 4. *Omit* "fifty" *insert* "fifteen"
- Page 23, line 11. *Omit* "Splits" *insert* "Parts"
- Page 23, clause 49. 46. *Omit* subsection (iii)
- Page 23, clause 50. 47, lines 41 to 44. *Omit* "(not in any case less than one hundred and fifty cubic feet
"of pure air per minute for each man and each boy, and two hundred cubic feet for each horse
"employed in the mine)"
- Page 23, clause 50. 47, lines 45 and 46. *Omit* "and shall sweep undiminished along the airways and into
"each working place"
- Page 23, clause 50. 47, line 51. *Omit* "twenty-five" *insert* "thirty-five"
- Page 24, clause 50. 47, lines 2 to 6. *Omit* "and in single headings or where gas is known to be generated
"it shall be bratticed up to within three yards of the face of such working place; and no return
"airways shall be used as travelling roads"
- Page 24, clause 50. 47, line 12. *Omit* "passing" *insert* "commencement"
- Page 24, clause 50. 47, lines 24 and 25. *Omit* "of not less than two years experience in a coal mine"
- Page 24, clause 50. 47, line 30. *Omit* "each working face" *insert* "every part"
- Page 24, clause 50. 47, line 35. *Omit* "and shall mark such working place visited."
- Page 24, clause 50. 47, line 39. *After* "lamp" *insert* "except in the case of any mine in which
"inflammable gas has not been found within the preceding twelve months"
- Page 24, clause 50. 47, lines 58 and 59. *Omit* "unless danger is found to exist"
- Page 25, clause 50. 47, line 25. *Omit* "by such person"
- Page 26, clause 50. 47, line 14. *After* "light" *insert* "except within a completely closed chamber
"attached to the fuse of the shot"
- Page 26, clause 50. 47, line 23. *After* "in" *insert* "cartridges in"
- Page 26, clause 50. 47, line 25. *After* "pounds" *insert* "Provided that on the application of the
"owner, agent, or manager of any mine the Minister may by order exempt such mine
"from so much of this Rule as forbids taking an explosive substance into the mine
"except in cartridges"
- Page 26, clause 50. 47, line 34. *After* "stemmer" *insert* "nor shall coal or coal dust be used for
"tamping"
- Page 26, clause 50. 47, lines 40 to 44. *Omit* "Provided that no person shall return to a place where such
"charge has missed fire until a period of eight hours has elapsed from the lighting of the fuse
"attached to such charge"
- Page 28, clause 50. 47, lines 13 and 14. *Omit* "six feet high three feet wide and four feet deep" *insert*
"of sufficient length and at least three feet in width"
- Page 28, clause 50. 47. *Omit* Rule 19.
- Page 28, clause 50. 47, lines 40 and 41. *Omit* "every shaft in course of sinking shall be kept clear of all
noxious gases by a fan or some other appliance"
- Page 29, clause 50. 47. *Omit* Rule 25 *insert* new Rule 24.
- Page 30, clause 50. 47. *Omit* Rule 34.
- Page 30, clause 50. 47, lines 41 and 42. *Omit* "or any one having the written authority of any inspector
"or person so employed"
- Page 30, clause 50. 47, line 51. *After* "persons" *insert* "not being mining engineers, who are practical
"working miners"
- Pages 31 and 32, clause 50. 47. *Omit* Rules 41, 42, 43, 44, 45, and 46.
- Page 32, clause 51. *Omit* clause 51.
- Page 32, clause 52. 48, line 43. *After* "compliance" *omit* remainder of clause.
- Page 33, clause 54. 50, lines 17 and 18. *Omit* "(where no special rules are in force)"
- Page 33, clause 54. 50, line 24. *After* "printed" *insert* "or written"
- Page 34, clause 59. *Omit* clause 59.
- Page 35, clause 62. 57, line 13. *Omit* "wilfully"
- Page 35, clause 63. 58, line 31. *Omit* "five pounds" *insert* "one pound"
- Page 36, clause 69. 64, line 33. *After* "manager" *insert* "or"
- Page 36, clause 69. 64, line 33. *Omit* "or employee"
- Page 36, clause 69. 64, line 34. *After* "manager" *insert* "or"
- Page 36, clause 69. 64, line 35. *Omit* "or employee"
- Page 36, clause 69. 64, line 38. *After* "manager" *insert* "or"

- Page 36, clause ~~69.~~ **64**, line 38. *Omit* "or employee"
- Page 36, clause ~~69.~~ **64**, line 41. *After* "manager" *insert* "or"
- Page 36, clause ~~69.~~ **64**, line 41. *Omit* "or employee"
- Page 37, clause ~~72.~~ **67**, line 5. *After* "not" *insert* "except with the consent in writing of both parties
"to the case"
- Page 37, clause 76. *Omit* clause 76.
- Page 37, clause ~~77.~~ **71**, line 41. *Omit* "encroached" *insert* "encroaching"
- Page 37, clause ~~77.~~ **71**, lines 42 and 43. *Omit* "the examiner or" *insert* "an"
- Page 38, clause ~~78.~~ **72**. *After* line 25 *insert* "'Large coal' means all coal passing over a three-quarter
"inch screen"
- Page 38, clause ~~78.~~ **72**, line 41. *Omit* "section four hereof" *insert* "**Part II of this Act**"
- Page 38, clause ~~78.~~ **72**, lines 47 and 48. *Omit* "and 'Assistant Under Secretary' mean respectively" *insert*
"means"
- Page 38, clause ~~78.~~ **72**, lines 48 and 49. *Omit* "and Assistant Under Secretary"
- Page 39. *Before* Schedule ~~I~~ **II**, *insert* new Schedule **I**.
- Page 40, Schedule ~~II~~ **III**, line 31. *Omit* "round" *insert* "large"
- Page 40, Schedule ~~II~~ **III**, line 32. *Omit* "Coal (small)"
- Page 40, Schedule ~~II~~ **III**. *After* line 33 *insert* "**Shale used for other purposes**"
-

This PUBLIC BILL originated in the LEGISLATIVE ASSEMBLY, and, having this day passed, is now ready for presentation to the LEGISLATIVE COUNCIL for its concurrence.

*Legislative Assembly Chamber,
Sydney, 12 September, 1894.* }

F. W. WEBB,
Clerk of the Legislative Assembly.

The LEGISLATIVE COUNCIL has this day agreed to this Bill with Amendments.

*Legislative Council Chamber,
Sydney, 6th December, 1894.* }

JOHN J. CALVERT,
Clerk of the Parliaments.

New South Wales.



ANNO QUINQUAGESIMO OCTAVO

VICTORIÆ REGINÆ.

No. .

An Act to make better provision for the Regulation of Coal Mines and Collieries, and for other purposes connected therewith.

WHEREAS it is expedient to make better provision for the regulation and inspection of Coal Mines and Collieries and certain other Mines: Be it therefore enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Legislative Council and Legislative Assembly of New South Wales in Parliament assembled, and by the authority of the same, as follows:—

1. (I) This Act shall come into operation on the first day of ~~December~~ ^{March}, one thousand eight hundred and ninety-four ~~four~~ ^{five} (which date is in this Act referred to as the commencement of this Act), and may be cited as the "Coal Mines Regulation Act, 1894." Preamble. Commencement, short title, and application of Act.
- (II) This Act shall apply to mines of coal and mines of shale.

PART I.

1. *Certificated Managers, Under-Managers, and Engine-drivers.*

2. (I) Every mine shall be under a manager, who shall be responsible for the control, management, and direction of the mine, and the owner or agent of every such mine shall nominate himself or some other person to be the manager of such mine, and shall send written notice to the inspector of the district of the manager's name and address. Appointment of manager of mine.

92—B

(II)

NOTE.—The words to be omitted are ruled through; those to be inserted are printed in black letter.

Coal Mines Regulation.

(II) A person shall not be qualified to be a manager of a mine unless he is for the time being registered as the holder of a first-class certificate of competency or a certificate of service as manager under this Act, or under the Imperial Act fifty and fifty-one Victoria, chapter fifty-eight, or any Act thereby repealed.

(III) If after the passing commencement of this Act any mine is worked for more than fourteen days without there being such a manager for the mine as is required by this section, the owner and or agent of the mine shall each be liable to a fine not exceeding fifty pounds, and to a further fine not exceeding ten five pounds for every day during which the mine is so worked; provided that:—

(a) The owner or agent of the mine shall not be liable to any such fine if he proves that he had taken all reasonable means by the enforcement of this section to prevent the mine being worked in contravention to this section.

(b) If for any reasonable cause there is for the time being no manager of a mine qualified as required by this section, the owner or agent of the mine may appoint any competent person not holding a certificate under this Act to be manager, for a period not exceeding two months or such longer period as may elapse before such person has an opportunity in the district wherein the mine is situate of obtaining by examination a certificate under this Act, and shall send to the inspector of the district a written notice of the manager's name and address, and of the reason for his appointment; and

(c) A mine in which not more than ten thirty persons are employed below ground shall be exempt from the provisions of this section, unless the inspector of the district, by notice in writing served on the owner or agent of the mine, requires that it be under the control of a manager.

3. (I) In every mine required by this Act to be under the control of a certificated manager, daily personal supervision shall be exercised either by the manager or by a ~~duly-qualified~~ ^{Daily supervision of mine by manager or under-manager} an under-manager, ~~in accordance with the provisions of this Act,~~ nominated in writing by the owner or agent of the mine.

(II) ~~After the passing of this Act~~ Every person under-manager so nominated ~~and then exercising supervision of a mine~~ must hold either a first-class or second-class certificate under this Act or under the Imperial Act, fifty and fifty-one Victoria chapter fifty-eight, or any Act thereby repealed, or a certificate of service under section ~~six~~ ^{six} eight of this Act, or under any of the said Imperial Acts, and shall, in the absence of the manager, have the same responsibility, and be subject to the same liabilities as the manager under this Act; but the nomination of an under-manager shall not affect the personal responsibility of the manager under this Act.

4. A contractor ~~while so contracting~~ for getting mineral in any mine, or person employed by such a contractor, is not eligible for the post of manager or under-manager of that mine under this Act. ^{Disqualifications for post of manager or under-manager.}

5. (I) There shall be two descriptions of certificates of competency under this Act—(1) first-class certificates, that is to say, certificates of fitness to be manager; and (2) second-class certificates, that is to say, certificates of fitness to be under-manager; but no person shall be entitled to a certificate of competency under this Act unless he ~~has~~ ^{has} had practical experience in a mine for at least five years. ^{Certificates of competency to managers and under-managers.}

(II) For the purpose of ~~granting~~ ^{ascertaining} the persons to receive certificates of competency ~~and service~~ for the purposes of this Act, ~~a Board of examiners~~ shall be appointed by a Board consisting of— ^{Constitution of Board of Examiners.}

(a) Three persons being owners or agents of mines in the Colony of New South Wales;

(a b)

Coal Mines Regulation.

(a b) Three persons employed or who have been employed in or about any mine in this Colony not being owners, agents, or managers of a mine; and

5 (b c) Three persons practising as mining engineers, or managers of mines in this Colony; and

(e d) One inspector under this Act.

(III) The members of the board shall be appointed and may be removed by the Minister, and shall hold office during his pleasure.

10 6. (I) A certificate of service shall be granted by the Minister to every person who satisfies the examiners either that before the passing of this Act he was exercising, and has since that date exercised, or that he has at any time within five years before the passing of this Act, for a period of not less than twelve months, exercised functions substantially corresponding to those of a manager
Grant of certificates of service in case of certain under-managers.

15 or an under-manager in a mine.

(II) Every such certificate of service shall contain particulars of the name, place, and time of birth, and the length and nature of the previous service of the person to whom the same is delivered; and a certificate of service may be refused to any person
20 who fails to give a full and satisfactory account of the particulars aforesaid, or to pay such registration fee as the Minister may direct, not exceeding that mentioned in the Second Schedule to this Act.

(III) A certificate of service granted under this section shall have the same effect for the purposes of this Act as a certificate
25 of competency granted under this Act.

(IV) A certificate of competency or of service granted under the Imperial Act fifty and fifty-one Victoria, chapter fifty-eight, or under any Act repealed thereby, or any other certificate of competency or service afforded by the examiners, shall be equivalent in all
30 respects to a similar certificate granted under this Act.
Certain certificates equivalent to certificates under this Act.

6. (i) The proceedings of the Board shall be in accordance with the rules contained in Schedule One to this Act.
Proceedings and powers of Board for appointing examiners.

(ii) The Board shall from time to time appoint examiners not being members of the Board, except with the consent of the
35 Minister, to conduct the examinations of applicants for certificates of competency under this Act, and may from time to time make, alter, and revoke rules as to the conduct of such examinations and the qualifications of the applicants so, however, that in every such examination regard shall be had to such knowledge as is necessary
40 for the practical working of mines in New South Wales, and that the examination and qualifications of applicants for second class certificates shall be suitable for practical working miners.

(iii) The Board shall make from time to time to the Minister a report of their proceedings, and of such other matters as
45 the Minister may from time to time require.

7. The Minister may from time to time make, alter, and revoke rules as to selection of persons to serve as examiners, the places and times of examinations of applicants for certificates of competency under this Act, the number and remuneration of the examiners, and
50 the fees to be paid by the applicants, so that the fees do not exceed those specified in Schedule One Two to this Act. Every such rule shall be observed by the Board appointed under this Act.
Rules by Minister as to examinations.

8. Subject to the provisions of section nine of this Act in any mine which is usually entered by means of machinery, or where
55 any shaft, plane, or level is used for the purpose of communication from one part to another part of a mine, and persons are taken up or down or along such shaft, plane, or level, by means of any engine, windlass, or gin, driven or worked by steam or any mechanical power, a competent male person not less than twenty years of age, and being
the

Qualification and attendance of engine-man.

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the holder of a certificate of competency or certificate of service, shall be appointed for the purpose of working the machinery which is employed in lowering and raising persons therein, and shall attend for that purpose during the whole time that any person is below ground in the mine, and such person shall have charge of all ropes, chains, or tackle connected with such machinery. Where any windlass, gin, or machine used for any of the purposes aforesaid, is worked by an animal or by manual labour, the person in charge of such engine, windlass, or gin, or of any part of the machinery, ropes, chains, or tackle connected therewith, must be a competent male person not less than eighteen years of age. Where the machinery is worked by an animal, the person under whose direction the driver of the animal acts, shall for the purposes of this rule be deemed to be the person in charge of the machinery.

15 8. (i) A certificate of service shall be granted by the Minister to every person who satisfies him either that before the commencement of this Act he was acting, and has since that day acted, or that he has at any time within five years before the commencement of this Act for a period of not less than twelve months acted, in the capacity of a 20 manager of a mine or such part of a mine as can under this Act be made a separate mine for the purposes of this Act.

Grant of certificates of service to existing managers.

(Note.—See clause 46 (i) of Bill.)

(ii) A certificate of service shall be granted by the Minister to every person who satisfies him either that before the commencement of this Act he was exercising, and has since that date exercised, or 25 that he has at any time within five years before the commencement of this Act for a period of not less than twelve months exercised, functions substantially corresponding to those of an under-manager in a mine.

Grant of certificates of service in case of certain under-managers.

(iii) Every such certificate of service shall contain particulars 30 of the name, place, and time of birth, and the length and nature of the previous service of the person to whom the same is delivered, and a certificate of service may be refused to any person who fails to give a full and satisfactory account of the particulars aforesaid, or to pay such registration fee as the Minister may direct, not exceeding that 35 mentioned in the Second Schedule to this Act.

(iv) A certificate of service granted under this section to a manager shall have the same effect for the purposes of this Act as a first-class certificate of competency granted under this Act; and a certificate of service granted under this section to an under-manager 40 shall have the same effect for the purposes of this Act as a second-class certificate of competency granted under this Act.

(v) Before granting a certificate of service to a manager or under-manager the Minister shall require the applicant to produce satisfactory evidence of his sobriety and general good conduct.

45 (vi) No certificate of service shall be granted in terms of this section unless it be proved by statutory declaration that during the twelve months aforesaid there has been an average of not less than thirty miners employed below ground under the control and supervision of the applicant for the said certificate.

50 (vii) A certificate of competency or of service granted under the Imperial Act fifty and fifty-one Victoria, chapter fifty-eight, or under any Act repealed thereby, or any other certificate of competency or service approved by the examiners, shall be equivalent in all respects to a similar certificate granted under this Act.

55 9. (i) A certificate of service shall be granted by the Minister to every person who satisfies the examiners either that before the passing of this Act he was exercising, and has since that date exercised, or that he has at any time within five years before the passing of this Act, for a period of not less than twelve months, exercised functions substantially corresponding to those of an engine-driver.

Grant of certificates of service in case of certain engine-drivers.

(ii)

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(II) Every such certificate of service shall contain particulars of the name, place, and time of birth, and the length and nature of the previous service of the person to whom the same is delivered; and a certificate of service may be refused to any person who fails to give a full and satisfactory account of the particulars aforesaid, or to pay such registration fee as the Minister may direct not exceeding that mentioned in the First Schedule to this Act.

(III) The Minister may from time to time appoint a Board to examine candidates for certificates of competency, and may by regulations prescribe the mode of conducting such examinations and granting such certificates, and the conditions under which such certificates or certificates of service shall be held, or may be suspended or cancelled; and may from time to time make, alter, and revoke such regulations as aforesaid.

10. 9. (I) The Minister shall deliver to every applicant who is duly reported by the examiners to have passed the examination satisfactorily, and to have given satisfactory evidence of his sobriety, experience, ability, and general good conduct, such a certificate of competency as the case requires. The certificate shall be in such form as the Minister from time to time directs.

Grant of certificates to applicants on passing examination.

(II) A register of the holders of certificates of competency or service under this Act and under any of the Imperial Acts aforesaid shall be kept by such person and in such manner as the Minister from time to time directs.

11. 10. If at any time representation is made to the Minister by an inspector or otherwise that any manager or under-manager holding a certificate under this Act or under any Imperial Act is by reason of incompetency or gross negligence, unfit to discharge his duties, or has been convicted of an offence against this Act, the Minister may, if he think fit, cause inquiry to be made into the conduct of the manager or under-manager, and with respect to every such inquiry the following provisions shall have effect:—

Inquiry into competency of manager and cancellation of certificate in case of unfitness.

(I) The inquiry shall be public, and shall be held at such place as the Minister may appoint by such District Court Judge, Police Magistrate, or Stipendiary Magistrate, or other person or persons, as may be directed by the Minister, and either alone or with the assistance of any assessor or assessors named by the Minister.

(II) The Minister shall, before the commencement of the inquiry, furnish to the manager or under-manager a statement of the case on which the inquiry is instituted.

(III) Some person appointed by the Minister shall undertake the management of the case.

(IV) The manager or under-manager may attend the inquiry by himself, his counsel, solicitor, or agent, and may, if he thinks fit, be sworn and examined as an ordinary witness in the case.

(V) The person or persons appointed to hold the inquiry, in this Act section and in section eleven referred to as the court, shall, on the conclusion of the inquiry, send to the Minister a report containing a full statement of the case, and the opinion of the court thereon, and such report of, or extracts from the evidence, as the court may think fit.

(VI) The court shall have power to cancel or suspend or otherwise deal with the certificate of the manager or under-manager, if it finds that he is by reason of incompetency or gross negligence, or of his having been convicted of any offence against this Act, unfit to discharge his duty.

(VII) The court may, if it thinks fit, require a manager or under-manager to deliver up his certificate, and if any manager or under-manager fails without sufficient cause to the satisfaction

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tion of the court, to comply with such requisition, he shall be liable to a fine not exceeding one hundred pounds. The court shall hold a certificate so delivered until the conclusion of the investigation, and shall then either restore, cancel, or suspend ~~or otherwise deal with~~ the certificate according to its judgment on the case.

(VIII) The court shall have for the purpose of the inquiry, all the powers of a court of Petty Sessions, and all the powers of an inspector under this Act.

(IX) The court may also, by summons signed by the court, require the attendance of all such persons as it thinks fit to summon and examine for the purpose of the inquiry; and every person so summoned shall be allowed such expenses as would be allowed to a witness attending on subpoena before the Supreme Court; and in case of dispute as to the amount to be allowed, the same shall be referred by the court to the Prothonotary who, on request signed by the court, shall ascertain and certify the proper amount of such expenses.

11. (I) The court may make such order as it thinks fit respecting the costs and expenses of the inquiry, and such order shall, on the application of any party entitled to the benefit thereof, be enforced by any Stipendiary or Police Magistrate or any two Justices of the Peace in Petty Sessions, as if such costs and expenses were a fine imposed by that Court of Petty Sessions.

Costs and expenses of inquiry.

(II) The Minister may, if he thinks fit, pay to the person or persons constituting the court, including any assessors, such remuneration as he may appoint.

(III) Any costs and expenses ordered by the court to be paid by the Minister, and any remuneration paid under this section, shall be paid out of moneys provided by Parliament.

12. (I) Where a certificate of a manager or under-manager is cancelled or suspended ~~or otherwise dealt with~~ in pursuance of this Act, the Minister shall cause the cancellation or suspension ~~or a notification of the order of the court~~ to be recorded in the register of holders of certificates.

Record of cancellation of certificate; restoration in certain cases.

(II) The Minister may at any time, if it is shown to him to be just so to do, renew or restore, on such terms as he thinks fit, any certificate which has been cancelled or suspended ~~or otherwise dealt with~~ in pursuance of this Act, and cause the renewal or restoration to be recorded in the register aforesaid.

13. Whenever any person proves to the satisfaction of the Minister that he has, without fault on his part, lost or been deprived of any certificate granted to him under this Act or under any Imperial Act, the Minister shall, on payment of such fee, if any, as he may direct, but not exceeding the fee specified in Schedule Two to this Act, cause a copy of the certificate to which the applicant appears by the register to be entitled, to be made out and certified by the person who keeps the register, and delivered to the applicant; and any copy which purports to be so made and certified as aforesaid shall have all the effect of the original certificate.

Copy of certificate in case of loss.

14. (I) All expenses incurred by the Minister in carrying into effect the provisions of this Act with respect to certificates of competency and service shall be defrayed out of moneys provided by Parliament.

Expenses in relation to certificates and application of fees.

(II) All fees payable by the applicants for examination for or for registration of, or for a copy of a certificate under this Act shall be paid into the Treasury as the Colonial Treasurer may from time to time direct, and be carried to the Consolidated Revenue Fund.

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16- 15. Every person who commits any of the following offences ; Penalty for forgery of, or false declaration as to certificate.
that is to say:—

- 5 (I) Forges, or counterfeits, or knowingly makes any false statement in any certificate of competency, or of service granted under this Act or the Imperial Act fifty and fifty-one Victoria chapter fifty-eight, or any Act repealed thereby, or any official copy of any such certificate; or
- 10 (II) Knowingly utters or uses any such certificate or copy which has been forged or counterfeited or contains any false statement; or
- 15 (III) For the purpose of obtaining for himself or any other person employment as a certificated manager or under-manager, or the grant, renewal, or restoration of any certificate under this Act or under any of the said Imperial Acts, or a copy thereof, either:—
- (a) Makes or gives any declaration, representation, statement, or evidence which is false in any particular; or
- 20 (b) Knowingly utters, produces, or makes use of any such declaration, representation, statement, or evidence, or any document containing the same,

shall be guilty of a misdemeanour, and be liable on conviction to imprisonment for a term not exceeding two years, with or without hard labour.

25 17. In any mine where a consulting engineer, viewer, managing director, or other person has power to give directions as to the mode of conducting the works of a mine either above or below ground, he shall enter such directions in detail in a book to be kept at the mine for that purpose, but, unless required to be produced in a Court of law, such book shall not be open to inspection by any person other than the Chief Inspector or an Inspector. Directions as to mode of conducting works to be entered in book.

2. Inspection.

35 18. 16. The persons who at the commencement of this Act are acting as inspectors under the Act hereby repealed shall continue to act in the same manner, and generally to be in the same position, as if they had been respectively appointed under this Act. Existing inspectors continued.

40 19. 17. (I) The Minister may from time to time appoint duly qualified persons to be inspectors (under whatever title he may from time to time fix) of mines, and assign them their duties, and may award them such salaries as he may think fit, or as Parliament may approve, and may remove any such inspector. Appointment of inspectors of mines.

(II) Notice of the appointment of every such inspector shall be published in the *Gazette*.

45 (III) Every such inspector is referred to in this Act as an inspector, and the inspector of a district means the inspector who is for the time being assigned to the district or portion of the Colony with reference to which the term is used.

50 Every Inspector appointed under this Act shall, after the passing commencement of this Act hold a first-class certificate of competency or service as hereinbefore provided in regard to Managers, but for the purposes of this Act service as an Inspector of Collieries will be equivalent to service as manager of a mine. Inspectors to hold certificates.

55 20. 18. Any person who practises or acts as or is a partner of any person who practises or acts as a land agent or mining engineer, or as a manager, viewer, agent, or valuer of mines, or arbitrator in any difference arising between owners, agents, or managers of mines, or is otherwise employed in or about any mine, or is a miner's agent or a mine-owner (whether the mine is one to which this Act applies or not) shall Disqualification of persons as inspectors.

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shall not act as an inspector of mines under this Act, and no inspector shall be a partner or have any interest direct or indirect in any mine in the district under his charge.

21. An inspector under this Act shall have power to do all or Powers of inspectors.
5 any of the following things, namely:—

- (I) To make at least once in each month such examination and inquiry as may be necessary to ascertain whether the provisions of this Act relating to matters above ground or below ground are complied with in the case of any mine.
- 10 (II) To enter, inspect, and examine any mine, and every part thereof, at all reasonable times by day and night, but so as not to impede or obstruct the working of the mine except when absolutely necessary.
- 15 (III) To examine into and make inquiry respecting the state and condition of any mine or any part thereof, and the ventilation of the mine, and the sufficiency of the special rules for the time being in force in the mine, and all matters and things connected with or relating to the safety of the persons employed in or about the mine or any mine contiguous thereto, or the care and treatment of the horses and other animals used in the mine.
- 20 (IV) To exercise such other powers as may be necessary for carrying this Act into effect, and shall enter in a book to be provided by the owner or manager a report of any defect, or anything in or about the mine tending to endanger the safety or health of the miners employed therein.
- 25 (v) To require the manager to withdraw the men from the mine if at any time he finds that, by reason of inflammable gases prevailing in any mine or any part thereof, or of any Miners may be withdrawn if inspector finds cause of danger.
30 cause whatever, the mine or the said part is dangerous; and no person shall, except so far as is necessary for exploration or inquiry into the cause of danger or the removal thereof, be readmitted into the mine or such part thereof as was found dangerous, until the same is stated by the Inspector to be safe.
- 35 Every person who wilfully obstructs any inspector in the execution of his duty under this Act, and every owner, agent, and manager of a mine who refuses or neglects to furnish to the inspector the means necessary for making any entry, inspection, examination, or inquiry under this Act, in relation to the mine, shall be guilty of an offence
40 against this Act.

19. An inspector under this Act shall have power to do all or Powers of inspectors.
any of the following things, namely:—

- 45 (i) To make such examination and inquiry as may be necessary to ascertain whether the provisions of this Act relating to matters above ground or below ground are complied with in the case of any mine.
- (ii) To enter, inspect, and examine any mine, and every part thereof, at all reasonable times by day and night, but so as not to impede or obstruct the working of the mine.
- 50 (iii) To examine into and make inquiry respecting the state and condition of any mine or any part thereof, and the ventilation of the mine, and the sufficiency of the special rules for the time being in force in the mine, and all matters and things connected with or relating to the safety of the persons employed in or about the mine or any mine contiguous thereto, or the care and treatment of the horses and other animals used in the mine.
- 55 (iv) To exercise such other powers as may be necessary for carrying this Act into effect.

Every

Coal Mines Regulation.

Every person who wilfully obstructs any inspector in the execution of his duty under this Act, and every owner, agent, and manager of a mine who refuses or neglects to furnish to the inspector the means necessary for making any entry, inspection, examination, or inquiry under this Act, in relation to the mine, shall be guilty of an offence against this Act.

22. 20. (I) If in any respect (which is not provided against by any express provision of this Act or by any special rule) any inspector finds any mine or any part thereof, or any matter, thing, or practice in or connected with any such mine, or with the control, management, or direction thereof by the manager to be dangerous or defective, so as in his opinion to threaten or tend to the bodily injury of any person, he may give notice in writing thereof to the owner, agent, or manager of the mine, and shall state in the notice the particulars in which he considers the mine or any part thereof, or any matter, thing, or practice to be dangerous or defective, and require the same to be remedied, and unless the same be forthwith remedied shall also report the same to the Minister and enter such report in a book at the mine.

Notice by inspector of causes of danger not expressly provided against.

(II) If the owner, agent, or manager of the mine objects to remedy the matter complained of in the notice he may, within ten days after receipt of the notice, send his objection in writing, stating the grounds thereof to the Minister, and thereupon the matter shall be determined by arbitration in manner provided by this Act, and the date of the receipt of the objection shall be deemed to be the date of the reference.

(III) If the owner, agent, or manager fail, when no objection is sent as aforesaid, to comply with the requisition of the notice within ten days after the expiration of the time for objection, or when there has been an arbitration to comply with the award within the time fixed by the award, he shall be guilty of an offence against this Act, and the notice and award shall respectively be deemed to be written notice of the offence: Provided that the court, if satisfied that the owner, agent, or manager has taken active measures for complying with the notice or award, but has not, with reasonable diligence, been able to complete the works, may adjourn any proceedings taken before them for punishing the offence, and, if the works are completed within a reasonable time, no penalty shall be inflicted.

(IV) No person shall be precluded by any agreement from doing, or be liable under any contract to any penalty or forfeiture for doing, such acts as may be necessary in order to comply with the provisions of this section.

23. 21. Every inspector of a district under this Act shall make an annual report of his proceedings during the preceding year to the Minister, which report, when embodied in the Annual Report of the Department of Mines, shall be laid before both Houses of Parliament.

Annual reports of inspectors.

24. 22. Where in any mine an explosion or accident has caused loss of life or personal injury to any person, the Minister may at any time direct an inspector to make a special report with respect to the explosion or accident.

Special reports of inspectors.

25. 23. Where it appears to the Minister that a formal investigation of any explosion or accident and of its causes and circumstances is expedient, the Minister may direct such investigation to be held, and with respect to any such investigation the following provisions shall have effect:—

Formal investigation when directed by the Minister.

(I) The Minister may appoint a competent person to hold the investigation, and may appoint any person or persons possessing legal or special knowledge to act as assessor or assessors in holding the investigation.

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- (II) The person or persons so appointed (hereinafter called the court) shall hold the investigation in open court, in such manner and under such conditions as the court may think most effectual for ascertaining the causes and circumstances of the explosion or accident, and enabling the court to make the report in this section mentioned.
- (III) The court shall have for the purpose of the investigation all the powers of a Court of Petty Sessions when acting as a court in hearing informations for offences against this Act, and all the powers of an inspector under this Act, and in addition the following powers, namely :
- (a) Power to enter and inspect any place or building, the entry or inspection whereof appears to the court requisite for the said purpose.
- (b) Power, by summons signed by the court, to require the attendance of all such persons as it thinks fit to call before it and examine for the said purpose, and for that purpose to require answers or returns to such inquiries as it thinks fit to make.
- (c) Power to require the production of all books, papers, plans, and documents which it considers important for the said purpose.
- (d) Power to administer an oath and require any person examined to make and sign a declaration of the truth of the statements made by him in his examination.
- (IV) Persons attending as witnesses before the court shall be allowed such expenses as would be allowed to witnesses attending before the Supreme Court; and in case of dispute as to the amount to be allowed, the same shall be referred by the court to the Prothonotary, who, on request signed by the court, shall ascertain and certify the proper amount of the expenses.
- (v) The court holding an investigation under this section shall make a report to the Minister, stating the causes of the explosion or accident and its circumstances, and adding any observations which the court thinks right to make.
- (vi) All expenses incurred in and about an investigation under this section (including the remuneration of any person appointed to act as assessor) shall be deemed to be part of the expenses of the Minister in the execution of this Act.
- (vii) Any person who without reasonable excuse (proof whereof shall lie on him) either fails, after having had the expenses (if any) to which he is entitled tendered to him, to comply with any summons or requisition of a court holding an investigation under this section, or prevents or impedes the court in the execution of its duty, shall for every such offence be liable to a fine not exceeding ten pounds, and in the case of a failure to comply with a requisition for making any return or producing any document shall be liable to a fine not exceeding ten pounds for every day that such failure continues.

26- 24. The Minister may cause any special report of an inspector or any report of a court, under this part of this Act, to be made public at such time and in such manner as he may think fit.

Publication of reports.

Arbitration.

*Coal Mines Regulation.**Arbitration.*

27. 25. With respect to arbitrations under this Act, the following provisions shall have effect, notwithstanding anything to the contrary contained in the "~~Arbitration Act, 1892,~~" and except where they are inconsistent with the provisions of this Act the provisions of the "~~Arbitration Act, 1892,~~" shall apply to arbitrations under this Act:—

Provisions as to arbitrations.

- 10 (I) The parties to the arbitration are in this section deemed to be the owner, agent, or manager of the mine on the one hand, and the inspector of mines (on behalf of the Minister) on the other.
- (II) Each of the parties to the arbitration may, within fourteen days after the date of the reference, appoint an arbitrator.
- 15 (III) No person shall act as arbitrator or umpire under this Act who is employed in, or in the management of, or is interested in the mine to which the arbitration relates.
- (IV) The appointment of an arbitrator under this section shall be in writing, and notice of the appointment shall be forthwith sent to the other party to the arbitration, and shall not be revoked without the consent of that party.
- 20 (V) The death, removal, or other change in any of the parties to the arbitration shall not affect the proceedings under this section.
- (VI) If within the said fourteen days either of the parties fails to appoint an arbitrator, the arbitrator appointed by the other party may proceed to hear and determine the matter in difference, and in that case the award of the single arbitrator shall be final.
- 25 (VII) If before an award has been made any arbitrator appointed by either party dies or becomes incapable to act, or for seven days refuses or neglects to act, the party by whom such arbitrator was appointed may appoint some other person to act in his place, and if he fails to do so within seven days after notice in writing from the other party for that purpose, the remaining arbitrator may proceed to hear and determine the matter in difference, and in that case the award of the single arbitrator shall be final.
- 30 (VIII) In either of the foregoing cases where an arbitrator is empowered to act singly on one of the parties failing to appoint, the party so failing may, before the single arbitrator has actually proceeded in the arbitration, appoint an arbitrator, who shall then act as if no failure had occurred.
- 35 (IX) If the arbitrators fail to make their award within twenty-one days after the day on which the last of them was appointed, or within such extended time (if any) as may have been appointed for that purpose by both arbitrators under their hands, the matter in difference shall be determined by the umpire appointed as hereinafter mentioned.
- 40 (X) The arbitrators, before they enter on the matter referred to them, shall appoint, by writing under their hands, an umpire to decide on points on which they may differ.
- 45 (XI) If the umpire dies or becomes incapable of acting before he has made his award, or refuses to make his award within a reasonable time after the matter has been brought within his cognizance, the persons or person who appointed such umpire shall forthwith appoint another umpire in his place.
- 50 (XII) If the arbitrators refuse or fail, or for seven days after the request of either party neglect to appoint an umpire, then, on the application of either party, an umpire may be appointed by
- 55

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by the Chairman of the General or Quarter Sessions of the Peace within the jurisdiction of which the mine or any shaft of the mine is situate.

- 5 (XIII) The decision of every umpire on the matters referred to him shall be final.
- (XIV) If a single arbitrator fails to make his award within twenty-one days after the day on which he was appointed, the party who appointed him may appoint another arbitrator to act in his place.
- 10 (XV) Arrangements shall, whenever practicable, be made for the matter in difference being heard at the same time, before the arbitrators and the umpire.
- (XVI) The arbitrators and the umpire, or any of them, may examine the parties and their witnesses on oath, and may also consult any counsel, engineer, or scientific person whom they may think it expedient to consult.
- 15 (XVII) The payment, if any, to be made to any arbitrator or umpire for his services shall be fixed by the Minister, and, together with the costs of the arbitration and award, shall be paid by the parties, or one of them, according as the award may direct. Such costs may be taxed by the Prothonotary, who, on the written application of either of the parties, shall ascertain and certify the proper amount thereof. The amount, if any, payable by the Minister shall be paid as part of the expenses of inspectors under this Act. The amount, if any, payable by the owner, agent, or manager, may, in the event of non-payment, be recovered in the same manner as fines under this Act.
- 20 (XVIII) Every person who is appointed an arbitrator or umpire under this section shall be a practical mining engineer, or a person accustomed to the working of mines, and every person who is appointed an umpire under this section shall be a District Court Judge, a Police or Stipendiary Magistrate, or a Barrister-at-Law; but when an award has been made under this section the arbitrator or umpire who made it shall be deemed to have been duly qualified as provided by this section.
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Coroners.

- 40 28- 26. With respect to coroners' inquests on the bodies of persons whose death may have been caused by explosions or accidents in or about mines, the following provisions shall have effect:—
- Provisions as to coroners' inquests on deaths from accidents in mines.
- (I) Where a coroner holds an inquest on the body of any person whose death may have been caused by any explosion or accident, of which notice is required by this Act to be given to the inspector of the district, the coroner shall adjourn the inquest, unless an inspector, or some person on behalf of the Minister, is present to watch the proceedings.
- 45
- (II) The coroner, at least four days before holding the adjourned inquest, shall send to the inspector for the district notice in writing of the time and place of holding the adjourned inquest.
- 50
- (III) The coroner, before the adjournment, may take evidence to identify the body, and may order the interment thereof.
- 55
- (IV) If an explosion or accident has not occasioned the death of more than one person, and the coroner has sent to the inspector of the district notice of the time and place of holding the inquest at such time as to reach the inspector not less than twenty-four hours before the time of holding the
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the same, it shall not be imperative on him to adjourn the inquest in pursuance of this section if the majority of the jury think it unnecessary so to adjourn.

5 (v) An inspector shall be at liberty at any such inquest to examine any witness, subject nevertheless to the order of the coroner.

10 (vi) Where evidence is given at an inquest at which an inspector is not present of any neglect as having caused or contributed to the explosion or accident, or of any defect in or about the mine appearing to the coroner or jury to require a remedy, the coroner shall send to the inspector of the district notice in writing of such neglect or defect.

15 (vii) Any person having a personal interest in, or employed in, or in the management of the mine in which the explosion or accident occurred shall not be qualified to serve on the jury empanelled on the inquest; and it shall be the duty of the constable or other officer not to summon any person disqualified under this provision, and it shall be the duty of the coroner not to allow any such person to be sworn or to sit on
20 the jury.

(viii) Any relative of any person whose death may have been caused by the explosion or accident with respect to which the inquest is being held, and the owner, agent, or manager of the mine in which the explosion or accident occurred, and
25 any person appointed by the order in writing of the majority of the workmen employed at the said mine, shall be at liberty to attend and examine any witness, either in person or by his counsel, solicitor, or agent.

Every person who fails to comply with the provisions of this section
30 shall be guilty of an offence against this Act.

3. Returns, Plan, Notices, and Abandonment.

29. 27. (i) On or before the twenty-first day of January in every year, the owner, agent, or manager of every mine shall send to the inspector of the district on behalf of the Minister a correct return, Returns by owner agent, or manager of mine.
35 specifying, with respect to the year ending on the preceding thirty-first day of December, the particulars contained in the form in Schedule Two Three to this Act, or in such other form as may from time to time be prescribed in lieu of that form by the Minister: Provided that in the case of any mine which is not required by this Act to be under
40 the control of a certificated manager, a return shall not be required of the particulars contained in Part B of the said form, unless or until the Minister otherwise prescribes.

(ii) Forms for the purpose of the returns required by this section shall from time to time, on application, be furnished by the
45 inspector on behalf of the Minister.

(iii) The Minister may publish the aggregate results of the returns made under this section with respect to the whole Colony or any particular inspector's district, or any large portion of an inspector's district, and so much of any individual return as does not
50 relate to the quantity of mineral gotten or wrought; but the portion of any individual return relating to the quantity of mineral gotten or wrought shall not be published without the consent of the person making the return, or of the owner of the mine to which it relates; and no person except an inspector, or the Minister, or the Under Secretary
55 shall be entitled, without such consent, to see such portion as aforesaid of any individual return.

(iv)

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(iv) Every owner agent or manager of a mine who fails to comply with this section or makes any return which is to his knowledge false in any particular shall be guilty of an offence against this Act.

30. 28. (i) The owner, agent, or manager of every mine shall keep ^{Plan of mine to be kept at office.} 5 in the office at the mine an accurate plan of the workings of the mine, showing the workings up to a date not more than ~~three~~ six months previously, and the general direction and rate of dip of the strata, together with a section of the strata sunk through, or if that be not reasonably practicable, a statement of the depth of the shaft, with a 10 section of the seam.

(ii) The owner, agent, or manager of the mine shall, on request at any time of an inspector under this Act, produce to him at the office at the mine such plan and section, and shall also on the like request mark on such plan and section the then state of the workings 15 of the mine; and the inspector shall be entitled to examine the plan and section, and for official purposes only to make a copy of any part thereof respectively.

(iii) The plan of the workings shall have delineated on it the position of all shafts and boreholes sunk within the colliery 20 surface boundary, with the depth to and thickness of the coal-seam passed through written alongside any shaft or bore-hole; and in addition to the plan hereinbefore provided for, there shall also be so provided, if required a surface plan on the same scale showing thereon all streets, roads, buildings, creeks, rivers, bays, swamps, navigable 25 waters, and limits of any tidal waters within the said boundary.

(iv) If the owner, agent, or manager of any mine fails to keep, or wilfully refuses to produce or allow to be examined, the plan and section aforesaid, or wilfully withholds any portion thereof, or wilfully refuses on request, to mark thereon the state of the workings 30 of the mine, or conceals any part of those workings, or produces an imperfect or inaccurate plan or section, he shall (unless he shows that he was ignorant of the concealment, imperfection, or inaccuracy) be guilty of an offence against this Act; and further, the inspector may by notice in writing (whether a penalty for the offence has or has not 35 been inflicted) require the owner, agent, or manager to cause an accurate plan and section, showing the particulars hereinbefore required, to be made within a reasonable time at the expense of the owner of the mine. Every such plan must be on a scale of not less than two chains to the inch or on the same scale as the plan for the time being 40 in use at the mine.

(v) If the owner, agent, or manager fails within twenty days after the requisition of the inspector, or within such further time as may be allowed by the Minister, to cause such plan and section to be made as hereby required, he shall be guilty of an offence against 45 this Act.

(vi) Every copy ~~or tracing~~, as aforesaid, shall be deposited in the principal office of the Department of Mines and Agriculture, and, except as evidence in a Court, no copy ~~or tracing~~ thereof shall be furnished nor information in relation thereto given, nor shall such 50 plans ~~or tracings~~ be open to inspection unless the Minister shall order that any owner or lessee of the land or of the surface thereof, or the officer of any municipality whose rights or interests may be affected by the working of the mine be permitted to see such portion of any plan ~~or tracing~~ as affects the right or interest of such owner, lessee, 55 or municipality.

(vii) If any officer shall furnish any copy, tracing, or information, or shall allow any person to inspect any such plan or tracing, unless directed by the Minister as aforesaid, he shall be guilty of an offence against this Act.

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31- 29. Where in or about any mine, whether above or below ground, either:— Notice to be given of accidents in mines.

- 5 (I) Loss of life or any personal injury whatever to any person employed in or about the mine occurs by reason of any explosion of gas, or any explosive, or of any steam boiler; or loss of life or any serious personal injury to any person employed in or about the mine occurs by reason of any accident whatever, the owner, agent, or manager of the mine shall, ~~forthwith but not later than~~ within twenty-four hours next after the explosion or accident, send notice in writing of the explosion or accident and of the loss of life or personal injury occasioned thereby to the inspector of the district on behalf of the Minister, and shall specify in the notice the character of the explosion or accident, and the number of persons killed or injured respectively.
- 10
- 15 (II) Where loss of life or serious personal injury has immediately resulted from an explosion or accident, the place where the explosion or accident occurred shall be left as it was immediately after the explosion or accident, until the expiration of at least three days after the sending of such notice as aforesaid of such explosion or accident, or until the visit of the place by an inspector, whichever first happens, unless compliance with this enactment would tend to increase or continue a danger, or would impede the working of the mine.
- 20
- 25 (III) Where any personal injury, of which notice is required to be sent under this section, results in the death of the person injured, notice in writing of the death shall be sent to the inspector of the district on behalf of the Minister within twenty-four hours after such death comes to the knowledge of the owner, agent, or manager.
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Every owner, agent, or manager who fails to act in compliance with this section shall be guilty of an offence against this Act.

32- 30. In any of the following cases, namely:—

- 35 (I) Where any working is commenced for the purpose of opening a new shaft for or a seam of any mine. Notice to be given of opening and abandonment of mine.
- (II) Where a shaft or seam of any mine is abandoned, or the working thereof discontinued.
- (III) Where the working of a shaft or a seam of any mine is recommenced after any abandonment or discontinuance for a period exceeding two months; or
- 40 (IV) Where any change occurs in the name of any mine, or in the name of the owner, agent, or manager of any mine to which this Act applies, or in the principal officers of any incorporated company which is the owner of a mine;
- 45 the owner, agent, or manager of the mine shall give notice thereof to the inspector of the district ~~forthwith~~ within one month after the commencement, abandonment, discontinuance, recommencement, or change; and if such notice is not given, the owner, agent, or manager shall be guilty of an offence against this Act.

50 33- 31. (I) Where any mine is abandoned or the working thereof discontinued, at whatever time the abandonment or discontinuance occurred, the owner thereof and every other person interested in the minerals of the mine shall cause the top of every shaft and every side entrance from the surface to be and to be kept securely fenced for the Fencing in case of abandoned mine.

55 prevention of accidents: Provided that,—

- (I) Subject to any contract to the contrary, the owner of the mine shall, as between himself and any other person interested in the minerals of the mine, be liable to carry into effect this

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this section, and to pay any costs, charges, and expenses incurred by any other person interested in the minerals of the mine in carrying this section into effect.

5 (II) Nothing in this section shall exempt any person from any liability under any other Act or otherwise.

(II) If any person fails to act in conformity with this section, he shall be guilty of an offence against this Act.

10 (III) No person shall be precluded by any agreement from doing, or be liable under any contract to any damages, penalty, or forfeiture for doing such acts as may be necessary in order to comply with the provisions of this section.

(IV) If any occupier of land or other person wilfully obstructs the owner of a mine or other person interested as aforesaid in doing any such acts, he shall be guilty of an offence against this Act.

15 (V) Any shaft or side entrance which is not fenced as required by this section, and is within fifty yards of any highway, road, footpath, or place of public resort, or is in open or unenclosed land, shall be deemed to be a public nuisance.

20 34. 32. (I) Where any mine or seam is abandoned, the owner of the mine or seam at the time of its abandonment shall, within three months after the abandonment, send to the Minister an accurate plan showing the boundaries, the whole of the workings of the mine or seam up to the time of the abandonment, and the position of the workings with regard to the surfaces, and the general direction and rate of dip
25 of the strata, together with a section of the strata sunk through, or if that is not reasonably practicable, a statement of the depth of the shaft, with a section of the seam. Every such plan must be on a scale of not less than two chains to the inch, or on the same scale as the plan used at the mine at the time of its abandonment.

Plan of abandoned mine or seam to be sent to Minister.

30 (II) The plan and section shall be preserved under the care of the Minister; but no person, except as provided in section ~~twenty-nine~~ **twenty-eight**, other than an inspector under this Act, shall be entitled, without the consent of the owner or agent of the mine or seam, to see the plan when so sent until after the expiration of ten
35 years from the time of the abandonment.

(III) The owner or agent aforesaid shall also, within three months of the abandonment of the mine or seam, send to the inspector of the district, on behalf of the Minister, a correct return specifying, with respect to the period which has elapsed since the expiration of the
40 year covered by the last annual return made under this Act, the particulars required in that return, and the provisions of this Act with respect to the said annual return shall apply to the return so sent.

(IV) If the owner or agent of a mine or seam fails to comply with this section he shall be guilty of an offence against this
45 Act, and be liable to a fine not exceeding thirty pounds.

(V) A complaint or information of an offence under this section may be made or laid at any time within six months after abandonment of the mine or seam, or after service on the owner or agent aforesaid of a notice to comply with the requirements of this
50 section, whichever last happens.

35. 33. All notices under this Act shall (unless expressly required to be in print) be in either writing or print (including lithograph), or partly in writing and partly in print (including lithograph), and all notices and documents required by this Act to be served or sent by or to
55 an inspector may be either delivered personally, or served and sent by post by a prepaid registered letter; and if served or sent by post, shall be deemed to have been served and received respectively at the time when the letter containing the same would be delivered in the ordinary course of post; and in proving such service or sending, it shall be sufficient
60 to prove that the letter containing the notice was properly addressed and put into the post.

Service of notices.

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4. ~~Employment of Male Persons.~~

36. No person shall, except in case of emergency or when life or property are in danger, be employed below ground in any mine for more than eight hours on Monday, Tuesday, Wednesday, Thursday, and Friday, and for more than six hours on each alternate Saturday: And no person so employed below ground shall be employed in drawing or hewing coal on the pay Saturday, save and excepting the drawing of small coal necessary for the ventilation of the mine during the succeeding fortnight; and any contravention of this section by any person whomsoever shall be deemed an offence against this Act.

Employment of Boys and Females.

37. 34. (I) Subject to the provisions of section ~~thirty-eight~~ **thirty-five** of this Act (dealing with the employment of boys), no boy under the age of fourteen years and no female shall be employed in or about a mine. And no boys between the age of fourteen years and eighteen years shall be employed in or allowed to be, for the purpose of employment, in any mine below ground for more than ten hours on Monday, Tuesday, Wednesday, Thursday, Friday, and six hours on one Saturday and eight hours on the next Saturday.

20 For the purpose of this Act, with respect to the employment of such boys in a mine below ground, the following regulations shall have effect, that is to say:—

(i) There shall be allowed an interval of not less than twelve hours between each period of employment.

25 (ii) Each period of employment shall be inclusive of one hour for meals.

(iii) A week shall be deemed to begin at midnight on Saturday night, and to end at midnight on the succeeding Saturday night.

30 (II) The owner, agent, or manager of every mine shall keep in the office at the mine a register, and shall cause to be entered in that register, in such form as the Minister may from time to time prescribe or sanction, the name, age, residence, and date of first employment of all boys under the age of eighteen employed in the mine below ground, and of all such boys employed above ground in connection with the mine; and shall on request, produce the register to any inspector under this Act, and to any officer of the Department of Public Instruction, at the mine, at all reasonable times, and shall allow any such inspector or officer to inspect and copy the same.

40 (III) The immediate employer of every such boy, other than the owner, agent, or manager of the mine, before he causes the boy to be below ground in any mine, shall report to the manager of the mine, or to some person appointed by that manager, that he is about to employ the boy in the mine.

38. 35. The provisions of this Act shall not—

45 (I) Prevent a boy under the age of fourteen years who, before the ~~twenty-ninth day of August, one thousand eight hundred and ninety-four,~~ commencement of this Act, is lawfully employed in any mine below ground from continuing to be employed in a mine; nor

50 (II) Prevent a boy, who before the ~~twenty-ninth day of August, one thousand eight hundred and ninety-four,~~ commencement of this Act, is lawfully employed above ground in connection with any mine from continuing to be employed above ground in connection with a mine; nor

55 (III) Prevent a competent male person above the age of eighteen years who, before the commencement of this Act, is lawfully employed in working the machinery used for lowering and raising persons in a mine from continuing to be so employed.

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39. 36. If any person contravenes or fails to comply with or permits any person to contravene or fail to comply with any provision of this Act with respect to the employment of boys or females, or to the register of boys, or to reporting the intended employment of boys, he shall be guilty of an offence against this Act; and in the event of any such contravention or non-compliance by any person whomsoever, the owner, agent, and manager of the mine shall each be guilty of an offence against this Act, unless he proves that he had taken all reasonable means, by publishing and to the best of his power enforcing the provisions of this Act, to prevent the contravention or non-compliance.

Penalty for employment of persons in contravention of Act.

Wages.

40. 37. (I) No wages shall be paid to any person employed in or about any mine at or within any public-house, beer-shop, or place for the sale of any spirits, beer, wine, cider, or other spirituous or fermented liquor, or other house of entertainment, or any office, garden, or place belonging or contiguous thereto or occupied therewith.

Prohibition of payment of wages at public-houses, &c.

(II) Every person who contravenes or fails to comply with or permits any person to contravene or fail to comply with this section shall be guilty of an offence against this Act; and in the event of any such contravention or non-compliance by any person whomsoever, the owner, agent, and manager of the mine shall each be guilty of an offence against this Act, unless he proves that he had taken all reasonable means, by publishing and to the best of his power enforcing the provisions of this section, to prevent the contravention or non-compliance.

41. 38. (I) Where the amount of wages paid to any of the persons employed in a mine depends on the amount of mineral large coal or shale gotten by them, those persons shall be paid according to the actual weight of such large coal or shale gotten by them, of the mineral contracted to be gotten, and unless otherwise mutually agreed upon all the mineral gotten by them such weight being ascertained in such manner as may be agreed upon by the owner, agent, or manager of the mine on the one part, and the persons so employed on the other part, and in the absence of such agreement such coal or shale shall be truly weighed either at the bottom of the screen or at a place as near to the pit mouth as is reasonably practicable: Provided that nothing in this section shall preclude the owner, agent, or manager of the mine from agreeing with the persons employed in the mine that deductions shall be made in respect of small coal, stones, or substances other than the mineral contracted to be gotten, which shall be sent out of the mine with the mineral contracted to be gotten, such large coal or shale, or in respect of any tubs being improperly filled in those cases where they are filled by the getter of the large coal or shale, or his drawer, or by the person immediately employed by him, such deductions being determined in such special mode as may be agreed upon between the owner, agent, or manager of the mine on the one hand, and the persons employed in the mine on the other; or by some person appointed in that behalf by the owner, agent, or manager, or (if any check weigher is stationed for this purpose as hereinafter mentioned) by such person and such check weigher, or in case of difference by a third person to be mutually agreed on by the owner, agent, or manager of the mine on the one hand, and the persons employed in the mine on the other, or in default of agreement appointed by a Chairman of a Court of Quarter Sessions within the jurisdiction of which any shaft of the mine is situate.

Payment of persons employed in mines by weight.

(II) If any person contravenes or fails to comply with, or permits any person to contravene or fail to comply with this section, he shall be guilty of an offence against this Act; and in the event of any such contravention or non-compliance by any person whomsoever, the owner, agent, and manager of the mine shall each be guilty of an offence

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offence against this Act, unless he proves that he had taken all reasonable means by publishing and to the best of his power enforcing the provisions of this section to prevent the contravention or non-compliance.

5 (III) That Nothing in this Act shall be held to authorise or give any power to any owner or manager of a mine to pay miners by the method known as the standard weight system, and from and after the passing commencement of this Act that system shall be and is hereby abolished. But nothing herein contained shall be held to affect
10 the power of any owner or manager of a mine to pay miners by the method known as the standard bar system.

(IV) Where it is proved to the satisfaction of the Minister, in the case of any mine or class of mines employing not more than
15 twenty thirty persons under ground, to be expedient that the persons employed therein should, upon the joint representation of the owner or owners of any such mine or class of mines and the said persons, be paid by any method other than that provided by this Act, such
Minister may, if he think fit, by order allow the same either without conditions or during the time and on the conditions specified in the order.

20 42. 39. Whenever any sum of money not exceeding fifty pounds shall be claimed to be due to any person on account of any kind of labour performed at any colliery in charge of owner or agent it shall be lawful for any Justice or Clerk of Petty Sessions, upon complaint made to him touching or concerning the non-payment of any such sum, to
25 summon such owner or agent to appear before any two Justices at the nearest Petty Sessions, and the Justices there assembled may examine the parties and their respective witnesses touching the complaint, and may inspect any agreement or duplicate copy thereof if produced, and may make an order for the payment by such owner or agent of any
30 sum not exceeding fifty pounds, as shall appear to such Justices lawfully due, together with all costs incurred and damage sustained by the complainant in prosecuting such claim, and in case of refusal or non-payment of any sum so ordered to be paid by such owner or agent, then such Justices shall issue their warrant to levy the same by
35 distress and sale of all or a sufficient part of the goods, chattels, colliery produce, plant, rolling-stock, horses, and machinery of or belonging to the owner of such colliery: Provided always that no person making default in payment under this section shall be liable to imprisonment, any law to the contrary notwithstanding.

40 43. 40. (I) The persons who are employed in a mine, and are paid according to the weight of the mineral large coal or shale gotten by them, may, at their own cost, station a person who shall be an employee of the colliery (in this Act referred to as "a check weigher") at each place appointed for weighing the large coal or shale, and at each place
45 appointed for determining the deductions, in order that he may, on behalf of the persons by whom he is so stationed, take a correct account of the weight of the mineral, large coal or shale, or determine correctly the deductions, as the case may be.

(II) A check weigher shall have every facility afforded to
50 him for enabling him to fulfil the duties for which he is stationed, including facilities for examining and testing the weighing machine, and checking the ~~taring of tubs and trams weights~~ where necessary; and if at any mine proper facilities are not afforded to a check weigher as required by this section, the owner, agent, and manager of the mine
55 shall each be guilty of an offence against this Act, unless he proves that he had taken all reasonable means to enforce to the best of his power the requirements of this section.

(III) A check weigher shall not be authorised in any way to impede or interrupt the working of the mine, or to interfere with the
60 weighing, or with any of the workmen, or with the management of the
the

Agent may be summoned for wages.

Appointment on part of men, and removal of check weigher.

Coal Mines Regulation.

the mine ; but shall be authorised only to take such account or determine such deductions as aforesaid, and the absence of a check weigher from the place at which he is stationed shall not be a reason for interrupting or delaying the weighing or the determination of deductions at such place respectively, but the same shall be done or made by the person appointed in that behalf by the owner, agent, or manager, unless the absent check weigher had reasonable ground to suppose that the weighing or the determination of the deductions, as the case may be, would not be proceeded with : Provided always that nothing in this section shall prevent a check weigher giving to any workman an account of the ~~mineral~~ large coal or shale gotten by him, or information with respect to the weighing or the weighing machine, ~~or the taring of the tubs or trams,~~ or with respect to the deductions, or any other matter within the scope of his duties as check weigher, so always, nevertheless, that the working of the mine be not interrupted or impeded.

(iv) If the owner, agent, or manager of the mine desires the removal of a check weigher on the ground that ~~the check weigher~~ he has impeded or interrupted the working of the mine, or interfered with the weighing or with any of the workmen, or with the management of the mine, or has at the mine, to the detriment of the owner, agent, or manager, done anything beyond taking such account, determining such deductions, or giving such information as aforesaid, ~~he the owner, agent, or manager may complain to a court of summary jurisdiction~~ the nearest Court of Petty Sessions who, if of opinion that the owner, agent, or manager shows sufficient *prima facie* ground for the removal of the check weigher, shall call on the check weigher to show cause against his removal.

(v) On the hearing* of the case the Court shall hear the parties, and if they think that at the hearing sufficient ground is shown by the owner, agent, or manager to justify the removal of the check weigher, shall make a summary order for his removal, and the check weigher shall thereupon be removed, but without prejudice to the stationing of another check weigher in his place.

(vi) The Court may in every case make such order as to the costs of the proceedings as the Court may think just.

(vii) If, in pursuance of any order of exemption made by the Minister, the persons employed in a mine are paid by the measure or gauge of the ~~material~~ large coal or shale gotten by them, the provisions of this Act shall apply in like manner as if the term "weighing" included measuring and gauging, and the terms relating to weighing shall be construed accordingly.

(viii) If the person appointed by the owner, agent, or manager to weigh the ~~mineral~~ large coal or shale impedes or interrupts the check weigher in the proper discharge of his duties, or improperly interferes with or alters the weighing machine ~~or the tare~~ in order to prevent a correct account being taken of the weighing ~~and taring~~, he shall be guilty of an offence against this Act.

44. 41. (i) Where a check weigher has been appointed by the majority, ascertained by ballot, of the persons employed in a mine who are paid according to the weight of the ~~mineral~~ large coal or shale gotten by them, and has acted as such, he may recover from any person for the time being employed at such mine and so paid, his proportion of the check weigher's wages or recompense, notwithstanding that any of the persons by whom the check weigher was appointed may have left the mine or others have entered the same since the check weigher's appointment, any rule of law or equity to the contrary notwithstanding.

(ii) It shall be lawful for the owner or manager of any mine, where the majority of the before-mentioned persons, ascertained as aforesaid, so agree, to retain the agreed contribution of the persons so employed and paid as aforesaid for the check weigher, and to pay and account for the same to the check weigher.

Remuneration of
check weigher.

Coal Mines Regulation.

45- 42. (I) The "Weights and Measures Act," sixteenth Victoria number thirty-four, and any Act relating to weights and measures, shall apply to all weights, balances, scales, steelyards, and weighing machines used at any mine for determining the wages payable to any person employed in the mine according to the weight of the mineral large coal or shale gotten by him, in like manner as it applies to weights, balances, scales, steelyards, and weighing machines used for buying and selling, or for trade.

Application of 16
Vict. No. 34, to
weights, &c., used in
mines.

(II) An inspector of weights and measures appointed under the said Act shall once at least in every six months inspect and examine in manner directed by the said Act the weights, balances, scales, steelyards, and weighing machines used or in the possession of any person for use as aforesaid at any mine within his district; and shall also make such inspection and examination at any other time in any case where he has reasonable cause to believe that there is in use at the mine any false or unjust weight, balance, scale, steelyard, or weighing machine. ~~or when required by the manager or majority of employers so to do.~~

(III) The inspector shall also inspect and examine the measures and gauges in use at the mines within his district; but nothing in this section shall prevent or interfere with the use of the measures or gauges ordinarily used at the mine.

(IV) An inspector may, for the purposes of this section, without any authorisation from a Justice of the Peace, exercise at or in any mine, as respects all weights, measures, scales, balances, steelyards, and weighing machines used or in the possession of any person for use at or in that mine, all such powers as he could exercise, if authorised in writing by a Justice of the Peace, under the "Weights and Measures Act," with respect to any such weights, measures, scales, balances, steelyards, and weighing machines as therein mentioned; and all the provisions of sections seventeen and eighteen of that Act, including the liability to penalties, shall apply to such inspection.

(V) The inspector of weights and measures shall not, in fulfilling the duties required of him under this section, impede or obstruct the working of the mine.

Single Shafts.

46- 43. (I) After the commencement of this Act the owner, agent, or manager of a mine shall not employ any person in the mine, or permit any person to be in the mine for the purpose of employment therein, unless the following conditions respecting shafts or outlets are complied with, that is to say,—

Prohibition of single
shafts.

(a) There must be at least two shafts or outlets, with which every seam for the time being at work in the mine shall have a communication, so that such shafts or outlets shall afford separate means of ingress and egress available to the persons employed in every such seam, whether the shafts or outlets belong to the same mine or to more than one mine.

(b) Such shafts or outlets must not at any point be nearer to one another than ~~fifty~~ fifteen yards, and there shall be between such two shafts or outlets a communication not less than ~~six~~ four feet wide and six feet high, and in the case of communications made after the commencement of this Act between shafts or outlets, not less than six feet high.

(c) Proper apparatus for raising and lowering persons at each such shaft or outlet shall be kept on the works belonging to the mine, and such apparatus if not in actual use at the shafts or outlets shall be constantly available for use.

(II)

Coal Mines Regulation.

(II) Every owner, agent, and manager of a mine who acts in contravention of or fails to comply with this section shall be guilty of an offence against this Act.

(III) The Supreme Court, whether any other proceedings have or have not been taken, may, on the application of the Attorney-General, prohibit by injunction the working of any mine in which any person is employed, or is permitted to be for the purpose of employment in contravention of this section, and may award such costs in the matter of the injunction as the Court thinks just; but this provision shall be without prejudice to any other remedy permitted by law for enforcing the provisions of this Act.

(IV) Written notice of the intention to apply for such injunction in respect of any mine shall be given to the owner, agent, or manager of the mine not less than ten days before the application is made.

15 47. 44. No person shall be precluded by any agreement from doing such acts as may be necessary for providing a second shaft or outlet to a mine, where the same is required by this Act, or be liable under any contract to any penalty or forfeiture for doing such acts as may be necessary in order to comply with the provisions of this Act with respect to shafts or outlets. Agreements not to preclude compliance with Act.

20 48. 45. The foregoing provisions of this Act with respect to shafts or outlets shall not apply— Exceptions from provisions as to shafts.

(I) In the case of a new mine being opened—

- 25 (a) to any working for the purpose of making a communication between two or more shafts;
- (b) to any working for the purpose of searching for or proving minerals;

so long as not more than twenty persons are employed below ground at any one time in the whole of the different seams in connection with a single shaft or outlet: nor

30 (II) To any proved mine so long as it is exempted by order of the Minister on the ground either—

- 35 (a) that the quantity of mineral proved is not sufficient to repay the outlay which would be occasioned by sinking or making a second shaft or outlet, or by establishing communication with a second shaft or outlet, in any case where such communication existed and has become unavailable; or

- 40 (b) that the workings in any seam of the mine have reached the boundary of the property or the extremity of the mineral field of which that seam is a part, and that it is expedient to work away the pillars already formed in course of the ordinary working, notwithstanding that one of the shafts or outlets may be cut off by so working away the pillars of that seam;

45 and so long as not more than twenty persons are employed below ground at any one time in the whole of the different seams in connection with a single shaft or outlet; nor

(III) To any mine—

- 50 (a) while a shaft is being sunk, or an outlet being made; or
- (b) one of the shafts or outlets of which has become, by reason of some accident, unavailable for the use of the persons employed in the mine;

55 so long as the mine is exempted by order of the Minister, and as the conditions (if any) annexed to the order of exemption are duly observed.

The provision in this Act requiring the two shafts or outlets of a mine to be separated by a distance of not less than ~~five~~ fifteen yards shall not apply to any mine which is provided with two shafts sunk before ~~the first day of October, one thousand eight hundred and ninety-four,~~ commencement

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commencement of this Act, but at that time separated by a distance of less than ten feet, or commenced to be sunk before the commencement of this Act, but separated by a distance of more than ten feet and less than fifty fifteen yards. The foregoing provisions of 5 this Act as to the dimensions of the communication between two shafts or outlets shall not apply to any mine or class of mines so long as the same is exempted therefrom by order of the Minister by reason of the thinness of the seams or other exigencies affecting that mine or class of mines, and so long as the conditions (if any) 10 annexed to the order of exemption are duly observed.

6. *Division of Mine into Splits Parts.*

49. 46. (I) Where two or more parts of a mine are worked separately, the owner, agent, or manager of the mine shall give notice in writing to that effect to the inspector of the district, and thereupon each such 15 part shall, for all purposes of this Act, be deemed to be a separate mine. Division of mine into splits parts.

(II) If the Minister is of opinion that the division of a mine in pursuance of this section tends to lead to evasion of the provisions of this Act, or otherwise to prevent the carrying of this Act 20 into effect, he may object to the division by notice served on the owner, agent, or manager of the mine; and the owner, agent, or manager, if he declines to acquiesce in such objection, may, within twenty days after receipt of the notice, send a notice to the inspector of the district, stating that he declines so to acquiesce, and thereupon the matter shall 25 be determined by arbitration in manner provided by this Act; and the date of the receipt of the last-mentioned notice shall be deemed to be the date of the reference.

(III) Within six months after the commencement of this Act, every mine, unless worked on the long-wall system, shall be 30 divided into districts or splits of not more than sixty men exclusive of wheelers and horses; and each district shall be supplied with a separate current of fresh air, which shall be taken to within fifteen yards of each working face by brattice or otherwise where gas does not exist, and to within three yards of the working face where gas 35 does exist.

PART II.

7. *Rules.**General Rules.*

50. 47. The following general rules shall be observed, so far as is 40 reasonably practicable, in every mine:— General rules.

Rule 1. An adequate amount of ventilation (not in any case less 45 than one hundred and fifty cubic feet of pure air per minute for each man and each boy, and two hundred cubic feet for each horse employed in the mine) shall be constantly produced in every mine, and shall sweep undiminished along the airways and into each working place to dilute and render harmless noxious gases to such an extent that the working places of the shafts, levels, stables, and workings of the mine, and the travelling roads to and from those working places shall 50 be in a fit state for working and passing therein. And no place shall be driven more than twenty-five thirty-five yards exclusive

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exclusive of the cut-through away from the current of the air without a cut-through being put through. ~~and in single~~ headings, or where gas is known to be generated, it shall be brattice^d up to within three yards of the face of such working place: And no return airways shall be used as travelling roads. In the case of mines required by this Act to be under the control of a certificated manager, the quantity of air in the respective splits or currents shall at least once in every month be measured and entered in a book to be kept for the purpose at the mine.

Rule 2. Where a fire is used for ventilation in any mine newly opened after the passing commencement of this Act, the return air, unless it be so diluted as not to be inflammable, shall be carried off clear of the fire by means of a dumb drift or air-way. Ventilation by fire

Rule 3. Where a mechanical contrivance for ventilation is introduced into any mine after the commencement of this Act, it shall be in such position and placed under such conditions as will tend to insure its being uninjured by an explosion. Ventilation by machinery.

Rule 4. A station or stations shall be appointed at the entrance to the mine, or to different parts of the mine, as the case may require, and the following provisions shall have effect:— Stations and inspection of condition as to ventilation, &c.

(I) As to inspection before commencing work:—

A competent person or competent persons ~~of not less than two years experience in a coal mine,~~ appointed by the owner, agent, or manager for the purpose, not being contractors for getting minerals in the mine shall, within such time immediately before the commencement of each shift, as shall be fixed by special rules made under this Act, inspect each working face every part of the mine situate beyond the station or each of the stations, and in which workmen are to work or pass during that shift, and shall ascertain the condition thereof so far as the presence of gas, ventilation, roof, and sides, and general safety are concerned, and shall mark such working place visited.

No workman shall pass beyond any such station until the part of the mine beyond that station has been so examined and stated by such competent person to be safe.

The inspection shall be made with a locked safety lamp, except in the case of any mine in which inflammable gas has not been found within the preceding twelve months.

A report specifying where noxious or inflammable gas, if any, was found present, the condition of the ventilation, and what defects, if any, in roofs or sides, and what if any other source of danger were or was observed, shall be recorded without delay in a book to be kept at the mine for the purpose, and accessible to the workmen, and such report shall be signed by, and so far as the same does not consist of printed matter shall be in the handwriting of the person who made the inspection.

For the purpose of the foregoing provisions of this rule, two or more shifts succeeding one another without any interval are to be deemed to be one shift.

(II) As to inspection during shifts:—

A similar inspection shall be made in the course of each shift of all parts of the mine in which workmen are to work or pass during that shift, but it shall not be necessary to record a report of the same in a book: ~~unless danger is found to exist~~ Provided that in the case of a mine worked continuously

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continuously throughout the twenty-four hours by a succession of shifts, the report of one of such inspections shall be recorded in manner above required.

- 5 *Rule 5.* A competent person or competent persons, appointed by the owner, agent, or manager for the purpose, shall, once at least in every twenty-four hours, examine the state of the external parts of the machinery, the state of the guides and conductors in the shafts, and the state of the head gear, ropes, chains, and other similar appliances of the mine which are in actual use both above ground and below ground, and shall once at least in every week examine the state of the shafts by which persons ascend or descend; and shall make a true report of the result of such examination, and every such report shall be recorded without delay in a book to be kept at the mine for the purpose, and shall be signed by the person who made the inspection. Inspection of machinery, &c., above and below ground.
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- 15
- 20 *Rule 6.* Every entrance to any place which is not in actual use or course of working and extension shall be properly fenced across the whole width of the entrance, so as to prevent persons inadvertently entering the same. Fencing of entrances.
- 25 *Rule 7.* If at any time it is found by the person for the time being in charge of the mine, or any part thereof, that by reason of inflammable gases prevailing in the mine, or that part thereof, or of any cause whatever, the mine or that part is dangerous, every workman shall be ~~by such person~~ withdrawn from the mine or part so found dangerous, and a competent person appointed for the purpose shall inspect the mine or part so found dangerous, and if the danger arises from inflammable gas, shall inspect the mine or part with a locked safety lamp; and in every case shall make a true report of the condition of the mine or part; and a workman shall not, except in so far as is necessary for inquiring into the cause of danger or for the removal thereof, or for exploration, be readmitted into the mine, or part so found dangerous, until the same is stated by the person appointed as aforesaid not to be dangerous. Every such report shall be recorded in a book which shall be kept accessible to workmen at the mine for the purpose, and shall be signed by the person who made the inspection. Withdrawal of workmen in case of danger.
- 30
- 35
- 40 *Rule 8.* No lamp or light other than a locked safety lamp shall be allowed or used,— Use of safety lamps in certain places.
- 45 (a) In any place in a mine in which there is likely to be any such quantity of inflammable gas as to render the use of naked lights dangerous; or
- (b) In any working approaching near a place in which there is likely to be an accumulation of inflammable gas.
- And when it is necessary to work the coal in any part of a ventilating district with safety lamps, it shall not be allowable to work the coal with naked lights in another part of the same ventilating district situated between the place where such lamps are being used and the return air-way.
- 50 *Rule 9.* Wherever safety lamps are used, they shall be so constructed that they may be safely carried against the air current ordinarily prevailing in that part of the mine in which the lamps are for the time being in use, even though such current should be inflammable. Construction of safety lamps.
- 55 *Rule 10.* In any mine or part of a mine in which safety lamps are required by this Act, or by the special rules made in pursuance of this Act to be used,— Examination of safety lamps.
- 60 (1) A competent person appointed by the owner, agent, or manager for the purpose shall, either at the surface or at the appointed lamp station, examine every safety lamp immediately

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immediately before it is taken into the workings for use, and ascertain it to be in safe working order and securely locked; and such lamps shall not be used until they have been so examined and found in safe working order and securely locked.

(II) A safety lamp shall not be unlocked except either at the appointed lamp station or for the purpose of firing a shot, in conformity with the provisions hereinafter contained.

(III) A person, unless he has been appointed either for the purpose of examining safety lamps, or for the purpose of firing shots, shall not have in his possession any contrivance for opening the lock of any safety lamp.

(IV) A person shall not have in his possession any lucifer match or apparatus of any kind for striking a light except within a completely closed chamber attached to the fuse of the shot.

Rule 11. Where safety lamps are required to be used, the position of the lamp stations for lighting or relighting the lamps shall not be in the return air. Lamp stations.

Rule 12. Any explosive substance shall only be used in the mine below ground as follows:— Use of explosives below ground.

(a) It shall not be stored in the mine.

(b) It shall not be taken into the mine, except in cartridges in a secure case or canister containing not more than five pounds: Provided that on the application of the owner, agent, or manager of any mine the Minister may, by order, exempt such mine from so much of this rule as forbids taking an explosive substance into the mine except in cartridges.

(c) A workman shall not have in use at one time in any one place more than one of such cases or canisters.

(d) In the process of charging or stemming for blasting, a person shall not use or have in his possession any iron or steel pricker, scraper, charger, tamping rod, or stemmer, nor shall coal or coal-dust be used for tamping.

(e) No explosive shall be forcibly pressed into a hole of insufficient size, and when a hole has been charged, the explosive shall not be unrammed; and no hole shall be bored for a charge at a distance of less than six inches from any hole where the charge has missed fire. ~~Provided that no person shall return to a place where such charge has missed fire until a period of eight hours has elapsed from the lighting of the fuse attached to such charge.~~

(f) In any place in which the use of a locked safety lamp is for the time being required by or in pursuance of this Act, or which is dry and dusty, no shot shall be fired except by, or under the direction of, a competent person appointed by the owner, agent, or manager of the mine; and such person shall not fire the shot or allow it to be fired until he has examined both the place itself where the shot is to be fired and all contiguous accessible places of the same seam within a radius of twenty yards, and has found such place safe for firing.

(g) If in any mine, at either of the inspections under rule four recorded last before a shot is to be fired, inflammable gas has been reported to be present in the ventilating district in which the shot is to be fired, the shot shall not be fired,—

(i) Unless a competent person, appointed as aforesaid, has examined the place where gas has been so reported to be

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- be present, and has found that such gas has been cleared away, and that there is not at or near such place sufficient gas issuing or accumulated to render it unsafe to fire the shot; or
- 5 (II) Unless the explosive employed in firing the shot is so used with water or other contrivance as to prevent it from inflaming gas, or is of such a nature that it cannot inflame gas.
- 10 (h) If the place where a shot is to be fired is dry and dusty, then the shot shall not be fired unless one of the following conditions is observed, that is to say:—
- (i) Unless the place of firing and all contiguous accessible places within a radius of twenty yards therefrom are at the time of firing in a wet state from thorough watering or other treatment equivalent to watering, in all parts where dust is lodged, whether roof, floor, or sides; or
- 15 (II) In the case of places in which watering would injure the roof or floor, unless the explosive is so used with water or other contrivance as to prevent it from inflaming gas or dust, or is of such a nature that it cannot inflame gas or dust.
- 20 (i) If such dry and dusty place is part of a main haulage road, or is a place contiguous thereto, and showing dust adhering to the roof and sides, no shot shall be fired there unless—
- 25 (i) Both the conditions mentioned in sub-head (h) have been observed; or
- (II) Unless such one of the conditions mentioned in sub-head (h) as may be applicable to the particular place has been observed, and moreover all workmen have been removed from the seam in which the shot is to be fired, and from all seams communicating with the shaft on the same level, except the men engaged in firing the shot, and such other persons, not exceeding ten, as are necessarily employed in attending to the ventilating furnaces, steam-boilers, engines, machinery, winding apparatus signals, or horses, or in inspecting the mine:
- 30 (k) In this Act “ventilating district” means such part of a seam as has an independent intake commencing from a main intake air-course, and an independent return air-way terminating at a main return air-course; and “main haulage road” means a road which has been, or for the time being is, in use for moving trams by steam or other mechanical power.
- 35 (l) Where a seam of a mine is not divided into separate ventilating districts the provisions in this Act relating to ventilating districts shall be read as though the word “seam” were substituted for the words “ventilating district.”
- 40
- 45 *Rule 13.* Where a place is likely to contain a dangerous accumulation of water, the working approaching that place shall not at any point within forty yards of that place exceed eight feet in width, and there shall be constantly kept at a sufficient distance, not being less than five yards in advance, at least one bore-hole, near the centre of the working, and sufficient flank bore-holes on each side.
- 50 *Rule 14.* Every underground plane on which persons travel, which is self-acting or worked by an engine, windlass, or gin, shall be provided (if exceeding thirty yards in length) with some proper means of communicating distinct and definite
- 55 Water and bore-holes.
- Signalling and man-holes for travelling planes worked by machinery.

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- definite signals between the stopping places and the ends of the plane, and shall be provided in every case with sufficient man-holes for places of refuge, at intervals of not more than twenty yards, and of not less than six feet high, three feet wide, and four feet deep, or if there is not room for a person to stand between the side of a tub and the side of the plane, then (unless the tubs are moved by an endless chain or rope) at intervals of not more than ten yards.
- 5
- 10 *Rule 15.* Every road on which persons travel underground where the load is drawn by a horse or other animal shall be provided, at intervals of not more than fifty yards, with sufficient man-holes, or with places of refuge, and every such place of refuge shall be ~~six feet high, three feet wide, and four feet deep~~ of sufficient length, and at least three feet in width between the waggons running on the road and the side of such road. There shall be at least two proper travelling ways into every steam-engine room and boiler gallery. Man-holes for other travelling roads.
- 15
- 20 *Rule 16.* Every man-hole and every place of refuge shall be constantly kept clear, and no person shall place anything in any such man-hole or place of refuge. Man-holes to be kept clear.
- 25 *Rule 17.* Every travelling road on which a horse or other draught animal is used under-ground shall be of sufficient dimensions to allow the horse or other animal to pass without rubbing against the roof or timbering. Dimensions of travelling roads.
- 30 *Rule 18.* The top of every shaft which for the time being is out of use, or used only as an air-shaft, shall be and shall be kept securely fenced. Fencing of shafts.
- 35 *Rule 19.* Every shaft in course of sinking shall be provided with a trolley to run over the pit's mouth and receive the load when brought to the surface. Such trolley to be large enough to ~~cover the opening at the pit-top.~~ Trolley over pit mouth.
- 40 *Rule 20.* 19. The top and all entrances between the top and bottom, including the sump, if any, of every working, ventilating, or pumping shaft shall be properly fenced, but this shall not be taken to forbid the temporary removal of the fence for the purpose of repairs or other operations, if proper precautions are used. Fencing of entrances to shafts.
- 45 *Rule 21.* 20. Where the natural strata are not safe, every working or pumping shaft shall be securely cased, lined, or otherwise made secure. ~~Every shaft in course of sinking shall be kept clear of all noxious gases by a fan or some other appliance.~~ Securing of shafts. Sinking pit to be cleared of gas.
- 50 *Rule 22.* 21. The roof and sides of every travelling road and working place shall be made secure, and a person shall not, unless appointed for the purpose of exploring or repairing, travel or work in any such travelling road or working place which is not made so secure. Securing of roofs and sides.
- 55 *Rule 23.* 22. Where the timbering of the working places is done by the workmen employed therein, suitable timber shall be provided at the working place, gate end, pass bye, siding, or other similar place in the mine convenient to the workmen, and the distance between the sprags or holing props where they are required shall not exceed six feet or such less distance as may be ordered by the owner, agent, or manager. Timbering.
- 55 *Rule 24.* 23. Where there is a downcast and furnace shaft to the same seam, and both such shafts are provided with apparatus in use for raising and lowering persons, every person employed in the mine shall, on giving reasonable notice, have the option of using the downcast shaft. Option of using downcast shaft.

Rule

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- Rule 25.** The coal shall not be wrought under any proclaimed or Coal not to be wrought under roads
made road without the sanction, in writing, of the Minister,
but headings may be driven under any such road for the
purpose of connecting the workings, or of working the coal
on either side thereof, but all such headings shall be in such
positions, of such dimensions, and so supported as the
Inspector shall, by writing under his hand, direct.
- Rule 24.** In any mine which is usually entered by means of Attendance of
machinery a competent male person not less than twenty-two engineman.
years of age shall be appointed for the purpose of working
the machinery which is employed in lowering and raising
persons therein, and shall attend for that purpose during the
whole time that any person is below ground in the mine.
- Where any shaft, plane, or level is used for the purpose
of communication from one part to another part of a mine,
and persons are taken up or down or along such shaft, plane,
or level by means of any engine, windlass, or gin driven or
worked by steam or any mechanical power, or by an animal,
or by manual labour, the person in charge of such engine,
windlass, or gin, or of any part of the machinery, ropes,
chains, or tackle connected therewith must be a competent
male person not less than eighteen years of age.
- Where the machinery is worked by an animal, the
person under whose direction the driver of the animal acts
shall for the purpose of this rule be deemed to be the person
in charge of the machinery.
- Rule 26.** **25.** Every working shaft used for the purpose of drawing Means of signalling for working shafts.
minerals or for the lowering or raising of persons shall,
if exceeding fifty yards in depth, and not exempted in
writing by the inspector of the district, be provided with
guides and some proper means of communicating distinct and
definite signals from the bottom of the shaft, and from every
entrance for the time being in use between the surface and
the bottom of the shaft to the surface, and from the surface
to the bottom of the shaft and to every entrance for the time
being in use between the surface, and the bottom of the shaft.
- Rule 27.** **26.** If in any mine the winding apparatus is not provided Overwinding.
with some automatic contrivance to prevent overwinding,
then the cage when men are being raised shall not be wound
up at a speed exceeding three miles an hour, after the cage
has reached a point in the shaft to be fixed by the special rules.
- Rule 28.** **27.** A sufficient cover overhead shall be used for every cage Cover overhead.
or tub employed in lowering or raising persons in any
working shaft, except where the cage or tub is worked by a
windlass, or where persons are employed at work in the shaft,
or where a written exemption is given by the inspector of
the district.
- Rule 29.** **28.** A single-linked chain shall not be used for lowering or Chains.
raising persons in any working shaft or plane, except for the
short coupling chain attached to the cage or tub.
- Rule 30.** **29.** There shall be on the drum of every machine used for Prevention of rope slipping on drum.
lowering or raising persons, such flanges or horns, and also,
if the drum is conical, such other appliances as may be
sufficient to prevent the rope from slipping.
- Rule 31.** **30.** There shall be attached to every machine worked by Break and indicator.
steam, water, or mechanical power, and used for lowering or
raising persons, an adequate break or breaks and a proper
indicator (in addition to any mark on the rope) showing to
the

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the person who works the machine the position of the cage or tub in the shaft. If the drum is not on the crank shaft there shall be an adequate break on the drum shaft.

Rule 32. **31.** Every fly-wheel and all exposed and dangerous parts of the machinery used in or about the mine shall be and shall be kept securely fenced. Fencing machinery.

Rule 33. **32.** Each steam boiler, whether separate or one of a range, shall have attached to it a proper safety-valve and also a proper steam-gauge and water-gauge to show respectively the pressure of steam and the height of water in each boiler. Safety-valves and gauges for boilers.

Rule 34. At any mine where a boiler is used for generating steam, the owner or manager shall at least once in every six months cause every such boiler to be thoroughly examined and tested by a competent person, who shall, immediately after the completion of such examination and test, enter in a book to be kept at the mine for that purpose a full and true report of the result of such examination and test, and of the state of every boiler so examined and tested, and every such report shall be signed by the person making it, and shall bear date of the day of entry, and a copy of such report shall be forthwith sent to the Inspector. Examination of boilers.

Rule 35. **33.** A barometer and thermometer shall be placed above ground in a conspicuous position near the entrance to the mine. Barometer, &c.

Rule 36. **34.** Where persons are employed underground ambulances or stretchers, with splints and bandages, shall be kept at the mine ready for immediate use in case of accident. Stretchers.

Rule 37. **35.** No person shall wilfully damage, or without proper authority remove or render useless, any fence, fencing, manhole, place of refuge, casing, lining, guide, means of signalling, signal, cover, chain, flange, horn, break, indicator, steam-gauge, water-gauge, safety-valve, or other appliance or thing provided in any mine in compliance with this Act. Wilful damage.

Rule 38. **36.** Every person shall observe such directions with respect to working as may be given to him with a view to comply with this Act or the special rules in force in the mine. Observance of directions.

Rule 39. **37.** The books mentioned in these rules shall be provided by the owner, agent, or manager, and the books, or a correct copy thereof, shall be kept at the office at the mine, and any inspector under this Act, and any person employed in the mine or any one having the written authority of any inspector or person so employed, may at all reasonable times inspect and take copies of and extracts from any such books; but nothing in these rules shall be construed to impose the obligation of keeping any such book or a copy thereof for more than twelve months after the book has ceased to be used for entries therein under this Act. Any report by this Act required to be recorded in a book may be partly in print (including lithograph) and partly in writing. Books and copies thereof.

Rule 40. **38.** The persons employed in a mine may from time to time appoint two of their number or any two persons not being mining engineers who are practical working miners to inspect the mine at their own cost, and the persons so appointed shall be allowed once at least in every month, accompanied, if the owner, agent, or manager of the mine thinks fit, by himself or one or more officers of the mine, to go to every part of the mine, and to inspect the shafts, levels, planes, working places, return air-ways, ventilating apparatus, old workings, and machinery. Every facility shall be afforded by Periodical inspection on behalf of workmen.

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- by the owner, agent, and manager, and all persons in the mine for the purpose of the inspection, and the persons appointed shall forthwith make a true report of the result of the inspection, and that report shall be recorded in a book to be kept at the mine for the purpose, and shall be signed by the persons who made the inspection, and if the report states the existence or apprehended existence of any danger, the owner, agent, or manager shall forthwith cause a true copy of the report to be sent to the inspector of the district.
- 5
- 10 **Rule 41.** No person not now employed as a coal getter shall be allowed to work alone as a coal getter in the face of the workings until he has had two years' experience of such work under the supervision of skilled workmen, or unless he shall have been previously employed for two years in or about the face of the workings of a mine. Person not to be employed in coal getting without experience.
- 15 **Rule 42.** Where the thickness of cover over the coal seam does not exceed eight hundred feet. Width of pillars and position under ocean.
- In the case of working coal by the pillar and stall system under river or tidal or ocean waters the workings shall be laid off systematically and carefully, and the size of the pillars shall be such as will afford ample support, after exposure to the crumbling effect of the air over many years, and shall not be less than twice the width of the bords or coal wrought out between such pillars. The bords on one side of the headings, levels, or cross-cuts, shall, unless prevented by rolls or faults, be driven opposite the bord pillars on the other side of the heading, level, or cross-cut. The minimum width of the pillars of coal shall be eight yards, and the maximum width of the bords or stalls six yards. And in no case shall the pillars under ocean or tidal waters be removed.
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- 25
- 30 **Rule 43.** Every underground main road in a mine, which road is used for the purpose of haulage or for persons travelling therein, shall not exceed sixteen feet in width. And on each side of such road, other than a cross-drift or headway driven across bords in direction of the cleat or on the end, a barrier of coal or stone shall be left of not less than fourteen yards wide. No heading or bord through the barrier of coal shall exceed three yards wide, and such heading or bord shall not, without the express sanction as aforesaid, be less than ten yards apart: Provided that if any cross-drift or headway as aforesaid, or any heading on each side of which no barrier of coal shall have been left be at any time converted into or used as a main road sufficient support shall forthwith be constructed on each side thereof. Barriers of coal.
- 35
- 40
- 45 **Rule 44.** In the case of working coal under tidal waters or rivers, from one road of every pair of "winning off" or leading headings or levels (which shall not except for sidings exceed eight feet in width), and from the face of every bord a bore-hole shall be kept going not less than twelve feet in advance, for the purpose of foretelling the presence of any fissure, open joint, fault, or otherwise, and in the case of working under the ocean or tidal waters every "winning off" or leading headings or levels shall be driven at least one hundred yards in advance of the working bords, and shall not exceed eight feet in width except for sidings. Width of winning headings under tidal waters, &c.
- 50
- 55 **Rule 45.** Boreholes for the purpose of proving the thickness of the alluvial deposit shall be put down by the owner or manager on all lands fronting the ocean, tidal waters, or rivers where the thickness of the strata and deposits which overlie the
- Thickness of strata near ocean, &c., to be ascertained by boring

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- the coal worked or about to be worked is less than two hundred feet. Such boreholes, at distances not exceeding one hundred yards apart, shall be put down from the surface through the alluvial deposit to the rock, and to the rise of the coal seam worked. An account of the strata and deposits so bored through shall be furnished by the owner or manager to the Inspector when the boring has reached the rock.
- 5
- Rule 46.* In mines not under river or ocean or tidal waters worked on the pillar and stall system, where it is intended to remove the pillars, the stalls or bords shall not exceed in width eight yards, and the pillars shall not be less than eight yards wide. Where it is not proposed to remove the pillars they shall be of such dimensions as shall be necessary to support the roof. In mines worked on the long-wall system substantial supports shall be erected sufficient to protect the workmen. In mines worked on the Welsh bords or double-stall systems good, substantial, and sufficient pack walls shall be built, and a sufficient number of props set on each side of the pack walls.
- 10
- 15
- 20
51. If any owner or manager object to any of the following general rules, namely, general rule numbers forty-two, forty-three, forty-four, forty-five, and forty-six, being enforced or applied to a coal mine or colliery, he may give notice thereof to the Minister setting out his objections and the reasons therefor, and upon receipt of such notice
- 25
- the Minister may allow or disallow such objections or any of them. If the Minister allow such objections or any of them, he may order that the coal mine or colliery be exempt from the operation of any such rule or rules, or he may order that, so far as such coal mine or colliery is concerned, the provisions of any such general rule may be modified or
- 30
- varied. If the Minister disallow the objections, and the owner or manager do not withdraw such objections, the matter shall be referred to arbitration, and the arbitrators may make any order which under this section the Minister could make.
- 35
52. 48. Every person who contravenes or does not comply with any of the general rules in this Act shall be guilty of an offence against this Act; and in the event of any contravention of or non-compliance with any of the said general rules in the case of any mine to which this Act applies, by any person whomsoever, the owner, agent, and manager shall each be guilty of an offence against this Act, unless he
- 40
- proves that he had taken all reasonable means, by publishing and to the best of his power enforcing the said rules as regulations for the working of the mine, to prevent such contravention or non-compliance: ~~Provided that nothing contained in the general rules in regard to barriers of coal, or the size of bords, stalls, or pillars, shall~~
- 45
- be construed to affect or apply to any underground works constructed or completed before this Act comes into operation, nor prevent the removal of pillars of coal (in mines not under the ocean or river or tidal waters) which shall, prior to this Act coming into operation, have been left of a less size or thickness than herein prescribed, provided
- 50
- that in the removal of such pillars all necessary precautions be taken to prevent injury to the miners.

Size of pillars in mines not under ocean, &c.

Objection to general rule.

Penalty on non-compliance with rules.

Special Rules.

53. 49. (1) There shall be established in every mine such rules (referred to in this Act as special rules) for the conduct and guidance
- 55
- of the persons acting in the management of such mine or employed in or about the mine as, under the particular state and circumstances of such

Special rules for every mine.

Coal Mines Regulation.

such mine, may appear best calculated to prevent dangerous accidents, and to provide for the safety, convenience, and proper discipline of the persons employed in or about the mine.

(II) Such special rules, when established, shall be signed in duplicate by the inspector who is inspector of the district at the time the rules are established, and shall be observed in and about every such mine (including any extension thereof) in the same manner as if they were enacted in this Act.

(III) If any person who is bound to observe the special rules established for any mine, acts in contravention of or fails to comply with any of them, he shall be guilty of an offence against this Act, and also the owner, agent, and manager of such mine shall each be guilty of an offence against this Act, unless he proves that he had taken all reasonable means, by publishing and to the best of his power enforcing the rules as regulations for the working of the mine, so as to prevent such contravention or non-compliance.

54. 50. (1) The owner, agent, or manager of every mine (~~where no special rules are in force~~) Establishment of new special rules. shall frame and transmit to the inspector of the district, for approval by the Minister, special rules for the mine within three months after the commencement of this Act, or within three months after the commencement (if subsequent to the commencement of this Act) of any working for the purpose of opening a new mine or of renewing the working of an old mine.

(II) The proposed special rules together with a printed or written notice specifying that any objection to the rules on the ground of anything contained therein or omitted therefrom may be sent by any of the persons employed in the mine to the inspector of the district, at his address, stated in the notice, shall, during not less than two weeks before the rules are transmitted to the inspector, be posted up in like manner as is provided in this Act respecting the publication of special rules for the information of persons employed in the mine; and a certificate that the rules and notice have been so posted up shall be sent to the inspector with two copies of the rules signed by the person sending the same.

(III) If the rules are not objected to by the Minister within forty days after their receipt by the inspector, they shall be established.

55. 51. (1) If the Minister is of opinion that the proposed special rules so transmitted, or any of them, do not sufficiently provide for the prevention of dangerous accidents in the mine, or for the safety or convenience of the persons employed in or about the mine, or are unreasonable, he may, within forty days after the rules are received by the inspector, object to the rules, and propose to the owner, agent, or manager, in writing, any modifications in the rules by way either of omission, alteration, substitution, or addition. The Minister may object to special rules.

(II) If the owner, agent, or manager does not, within twenty days after the modifications proposed by the Minister are received by him, object in writing to them, the proposed special rules, with those modifications, shall be established.

(III) If the owner, agent, or manager sends his objection in writing within the said twenty days to the Minister, the matter shall be referred to arbitration under this Act, and the date of the receipt of the objection by the Minister shall be deemed to be the date of the reference, and the rules shall be established as settled by an award on arbitration.

56. 52. (1) After special rules are established under this Act in any mine, the owner, agent, or manager of the mine may, from time to time, propose in writing to the inspector of the district, for the approval of the Minister, any amendment of the rules or any new special rules; Amendment of special rules.

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and the provisions of this Act with respect to the original special rules shall apply to all such amendments and new rules in like manner, as nearly as may be, as they apply to the original rules.

(II) The Minister may from time to time propose in writing to the owner, agent, or manager of the mine any new special rules, or any amendment of the special rules; and the provisions of this Act with respect to a proposal of the Minister for modifying the special rules transmitted by the owner, agent, or manager of a mine shall apply to all such new special rules and amendments in like manner, as nearly as may be, as they apply to the proposal.

57- 53. If the owner, agent, or manager of any mine makes any false statement with respect to the posting up of the rules and notices, he shall be guilty of an offence against this Act; and if special rules for any mine are not transmitted within the time limited by this Act to the inspector for the approval of the Minister, the owner, agent, and manager of such mine shall each be guilty of an offence against this Act, unless he proves that he had taken all reasonable means, by enforcing to the best of his power the provisions of this Act, to secure the transmission of the rules.

False statements, and neglect to transmit special rules.

58- 54. An inspector under this Act shall, when required, certify a copy which is shown to his satisfaction to be a true copy of any special rules which, for the time being, are established under this Act in any mine, and a copy so certified shall be evidence (but not to the exclusion of other proof) of such special rules, and of the fact that they are duly established under this Act and have been signed by the inspector.

Certified copy of special rules to be evidence.

59. The Governor, with the advice of the Executive Council, may make and publish in the *Gazette* a set or sets of special rules, and thereafter the rules so made and published shall be deemed the special rules of every mine to which this Act applies and in respect of which no special rules shall be in force: Provided that upon special rules being established for any mine, the special rules made by the Governor as aforesaid shall cease to apply to such mine.

Special rules made by the Governor.

60- 55. The special rules which at the commencement of this Act are in force under the Act hereby repealed in any mine shall continue to be the special rules in such mine until special rules are established under this Act for such mine, and while they so continue shall be of the same force as if they were established under this Act.

Existing special rules continued.

Publication of abstract of Act and of Special Rules.

61- 56. For the purpose of making known the provisions of this Act and the special rules to all persons employed in and about each mine, an abstract of this Act supplied, on the application of the owner, agent, or manager of the mine, by the inspector of the district on behalf of the Minister, and a correct copy of all the special rules shall be published as follows:—

Publication of abstract of Act and copy of special rules.

(I) The owner, agent, or manager of the mine shall cause the abstract and copy of the rules, with the name of the mine and the name and address of the inspector of the district, and the name of the owner or agent and of the manager appended thereto, to be posted up, in legible characters, in some conspicuous place at or near the mine, where they may be conveniently read by the persons employed; and so often as the same become defaced, obliterated, or destroyed, shall cause them to be renewed with all reasonable despatch.

(II) The owner, agent, or manager shall supply a printed copy of the abstract and the special rules gratis to each person employed

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employed in or about the mine who applies for a copy at the office at which the persons immediately employed by the owner, agent, or manager are paid.

5 (III) Every copy of the special rules shall be kept distinct from any rules which depend only on the contract between the employer and employed.

In the event of any non-compliance with the provisions of this section by any person whomsoever, the owner, agent, and manager shall each be guilty of an offence against this Act; but the owner, agent, or
10 manager of such mine shall not be deemed guilty if he proves that he had taken all reasonable means, by enforcing, to the best of his power, the observance of this section to prevent such non-compliance.

62. 57. Every person who wilfully pulls down, injures, or defaces
15 any abstract, notice, proposed special rules, or special rules, when posted up in pursuance of the provisions of this Act, or any notice posted up in pursuance of the special rules, shall be guilty of an offence against this Act. Pulling down or defacing notices

PART III.

Supplemental.

20

Legal Proceedings.

63. 58. (I) Every person employed in or about a mine other than
an owner, agent, or manager, who is guilty of any act or omission,
which in the case of an owner, agent, or manager would be an
offence against this Act, shall be deemed to be guilty of an offence
25 against this Act. Penalty for offence against Act.

(II) Every person who is guilty of an offence against this Act for which a penalty is not expressly prescribed shall be liable to a fine not exceeding, if he is an owner, agent, or manager, or under manager, twenty pounds, and if he is any other person, two pounds
30 for each offence; and if an inspector has given written notice of any such offence, to a further fine not exceeding ~~five pounds~~ one pound for every day after such notice that such offence continues to be committed.

64. 59. Where a person who is an owner, agent, manager, or under
manager of, or a person employed in or about a mine is guilty of any
35 offence against this Act which, in the opinion of the court that tries the case, is one which was reasonably calculated to endanger the the safety of the persons employed in or about the mine, or to cause serious personal injury to any of such persons, or to cause a dangerous accident, and was committed wilfully by the personal act, personal
40 default, or personal negligence of the person accused, such person shall be liable, if the court is of opinion that a fine will not meet the circumstances of the case, to imprisonment with or without hard labour for a period not exceeding three months. Imprisonment for wilful neglect endangering life or limb.

65. 60. (I) All offences under this Act not declared to be mis-
45 demeanours, and all fines under this Act, and all moneys and costs by this Act directed to be recovered as fines, may be prosecuted and recovered before a Stipendiary or Police Magistrate or any two Justices of the Peace in Petty Sessions. Summary proceedings for offences, fines, &c.

(II) Proceedings for the removal of a check weigher shall
50 be deemed to be a matter on which Justices in Petty Sessions have authority by law to make an order; and summary orders under this Act may be made on complaint before Justices in Petty Sessions.

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66. 61. In every part of the Colony the following provisions shall have effect:—

General provisions as to summary proceedings.

(i) Any complaint or information made or laid in pursuance of this Act shall (save as otherwise expressly provided by this Act) be made or laid within three months from the time when the matter of the complaint or information arose.

(ii) Any person charged with any offence under this Act may, if he thinks fit, be sworn and examined as an ordinary witness in the case.

(iii) The court shall, if required by either party, cause minutes of the evidence to be taken and preserved.

67. 62. If any person feels aggrieved by any conviction made by Justices in Petty Sessions on determining any information under this Act by which conviction, imprisonment, or a fine amounting to or exceeding one half the maximum fine is adjudged, he may appeal therefrom to a Court of Quarter Sessions in manner provided by section three of the Act of Council fifth William the Fourth, number twenty-two.

Appeal to Quarter Sessions.

68. 63. If it appears that a boy was employed on the representation of his parent or guardian that he was of the age at which his employment would not be in contravention of this Act, and under the belief in good faith that he was of that age, or that a person has worked alone as a coal-getter on his representation that he has had two years' experience of such work under the supervision of skilled workmen, or that he has been previously employed for two years in or about the face of the workings of a mine, and under the belief in good faith that he has had such experience or has been so previously employed, the owner, agent, or manager of the mine and employer shall be exempted from any penalty, and the parent or guardian or the person who has so worked alone, as the case may be, shall for the misrepresentation be deemed guilty of an offence against this Act.

Liability for misrepresentation as to age, &c.

69. 64. No prosecution shall be instituted against the owner, agent, manager, or under-manager or employee of a mine for any offence under this Act, not committed personally by such owner, agent, manager, or under-manager, or employee which can be prosecuted before Justices in Petty Sessions, except by an inspector or with the consent in writing of the Minister; and in the case of any offence of which the owner, agent, manager, or under-manager or employee of a mine is not guilty if he proves that he had taken all reasonable means to prevent the commission thereof, an inspector shall not institute any prosecution against such owner, agent, manager, or under-manager or employee if satisfied that he had taken such reasonable means as aforesaid. No prosecution shall be instituted against a coroner for any offence under this Act, except with the consent in writing of the Minister.

Prosecution of owners, agents, managers, &c.

70. 65. Where the owner, agent, or manager of a mine has taken proceedings under this Act against any person employed in or about a mine in respect of an offence committed under this Act, he shall within twenty-one days after the hearing of the case, report the result thereof to the inspector of the district.

Report of result of proceedings against workmen.

71. 66. (i) Nothing in this Act shall prevent any person from being indicted or liable under any other Act or otherwise to any other or higher penalty or punishment than is provided for any offence by this Act, so, however, that no person be punished twice for the same offence.

Saving for proceedings under other Acts.

(ii) If the Justices before whom a person is charged with an offence under this Act, think that proceedings ought to be taken against such person for such offence under any other Act or otherwise, they may adjourn the case to enable such proceedings to be taken.

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72- 67. A person who is the owner, agent, or manager of any mine, or a miner or miner's agent, or the father, son, or brother, or father-in-law, son-in-law, or brother-in-law, of such owner, agent, or manager, or of a miner or miner's agent, or who is a director of a company being the owner of a mine, shall not, **except with the consent in writing of both parties to the case**, sit in Petty Sessions or adjudicate in respect of any offence under this Act.

Owner of mine, &c., not to act as Justice, &c., in proceedings under this Act.

73- 68. Where a fine is imposed under this Act for neglecting to send a notice of any explosion or accident, or for any offence against this Act which has occasioned loss of life or personal injury, the Minister may (if he thinks fit) direct such fine to be paid to or distributed among the persons injured, and the relatives of any persons whose death may have been occasioned by the explosion, accident, or offence, or among some of them: Provided that:—

Application of fines.

15 (I) Such persons did not in his opinion occasion or contribute to occasion the explosion or accident, and did not commit and were not parties to committing the offence;

20 (II) The fact of the payment or distribution shall not in any way affect or be receivable as evidence in any legal proceeding relative to or consequential on the explosion, accident, or offence.

Save as aforesaid all fines recovered under this Act shall be paid into the Treasury and carried to the Consolidated Revenue Fund.

Miscellaneous.

25 74- 69. If any question arises, otherwise than in legal proceedings, whether a mine is a mine to which this Act applies, the question shall be referred to the Minister, whose decision thereon shall be final.

Decision of question whether a mine is under this Act.

30 75- 70. Any order of or exemption granted by the Minister under this Act may be made, and from time to time revoked or altered by the Minister, either unconditionally or subject to such conditions as he may see fit, and shall be signed by the Minister, or Under Secretary.

Powers of Minister as to making and revoking orders.

35 76. The special rules or special sinking rules which at the commencement of this Act are in force in any mine under any Act hereby repealed shall continue to be the special rules in such mine until superseded by rules established under this Act.

Continuance of existing special rules.

40 77- 71. Upon the affidavit of any person taken before any Justice of the Peace or Commissioner of the Supreme Court for taking affidavits claiming to be legally or equitably interested in any mine or in any land adjoining or near to any other mine, that the owner of such last-mentioned mine is or is by the person making such affidavit believed to be encroached upon such first-mentioned mine or land, the Minister may, by writing under his hand, authorise the ~~examiner~~ or an inspector, together with a mining surveyor or experienced miner, to enter upon such last-mentioned mine or land for the purpose of

45 ascertaining whether any such encroachment has been made, and if so the extent thereof. But before granting such authority the Minister shall require the person making or lodging the affidavit to deposit such a sum of money not exceeding one hundred pounds as shall be necessary to cover the cost of such inspection. The persons so

50 authorised may thereupon enter on the mine or land described in such order and descend any shaft or enter any mine, and for such purpose use the engines and other machinery ordinarily employed for that purpose by the persons whose shaft or mine shall be descended or entered, and make such plans and sections of the mine or land entered upon and

55 of any drives or other works therein as shall be necessary for the purpose aforesaid; and the owner or agent of the mine to be entered upon shall render all necessary assistance to the person so authorised.

Entry on adjoining mine, &c., to ascertain whether owner, &c., is encroaching.

What may be done under such authority.

And

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And every such examiner, inspector, or surveyor, or miner shall before entering on such mine or land make a statutory declaration before any person authorised to take the same that he will not (except as a witness in a Court of Justice) without the consent in writing of the owner of the mine or land to be entered upon, divulge or cause to be divulged to any person whomsoever any information obtained upon or by such entry save only as to whether such owner is encroaching on such first-mentioned mine or land; and every person who shall act contrary to such declaration, and any owner or agent who shall refuse such assistance as shall be necessary to enable the persons authorised by the Minister to descend the shaft or enter and examine the mine, shall forfeit and pay a sum not exceeding ten pounds: Provided always that the Minister may out of the sum deposited as aforesaid defray the cost of such inspection, and if such owner or agent render such assistance as shall be necessary for the purposes aforesaid, and if there be no encroachment, may out of such sum award to such owner compensation for any loss or expense to which he may be put by reason of such inspection.

Prior statutory
declaration required.

Penalty.

78. 72. In this Act, unless the context otherwise requires :—
- “Mine” includes every shaft in the course of being sunk, and every level and inclined plane in the course of being driven, and all the shafts, levels, planes, works, tramways, and sidings, both below ground and above ground, in and adjacent to and belonging to the mine.
- “Shaft” includes pit.
- “Large coal” means all coal passing over a three-quarter inch screen.
- “Plan” includes a correct copy or tracing of any original plan.
- “Owner,” when used in relation to any mine, means any person or body corporate who is the immediate proprietor or lessee, or occupier of any mine, or of any part thereof, and does not include a person or body corporate who merely receives a royalty, rent, or fine from a mine, or is merely the proprietor of a mine, subject to any lease, grant, or license for the working thereof, or is merely the owner of the soil, and not interested in the minerals of the mine; but any contractor for the working of any mine, or any part thereof, shall be subject to this Act in like manner as if he were an owner, but so as not to exempt the owner from any liability.
- “Inspector”—An Inspector of Colliceries referred to in or appointed under section four hereof **Part II of this Act.**
- “Agent,” when used in relation to any mine, means, any person appointed as the representative of the owner in respect of any mine, or of any part thereof, and as such superior to a manager appointed in pursuance of this Act.
- “The Minister” means the Secretary for Mines.
- “Under Secretary” and “Assistant Under Secretary”—mean respectively means the Under Secretary and Assistant Under-Secretary of the Department of Mines.
- “The Treasury” means the Colonial Treasury.
- “Boy” means a male under the age of sixteen years.

Interpretation of
terms.

Transitory Provisions and Repeal.

79. 73. All orders made by the Minister under the Act repealed by this Act, which are in force immediately before the commencement of this Act, shall be deemed to have been made under this Act.

Existing orders
continued.

80. 74. Any enactment or document referring to the Act repealed by this Act, or to any enactment thereof, shall be construed to refer to this Act, and to the corresponding enactments thereof.

Construction of
references to repealed
Act.

Coal Mines Regulation.

§1. 75. The Act thirty-ninth Victoria number thirty-one is hereby ^{Repeal of Act.} repealed: Provided that this repeal shall not affect any exemption granted, or other thing done or suffered before the commencement of this Act; and all offences committed and penalties incurred and proceedings commenced before the commencement of this Act may be punished, recovered, continued, and completed in the same manner as if this Act had not passed.

SCHEDULES.

SCHEDULE I.

Section 6.

10 Proceedings of Board for Examinations.

1. The Board shall meet for the despatch of business, and shall from time to time make such regulations with respect to the summoning, notice, place, management, and adjournment of such meetings, and generally with respect to the transaction and management of business, including the quorum at meetings of the Board, as they think fit, subject to the following conditions:—

- 15 (a) An extraordinary meeting may be held at any time on the written requisition of three members of the Board addressed to the Chairman.
- (b) The quorum to be fixed by the Board shall consist of not less than three members.
- 20 (c) Every question shall be decided by a majority of votes of the members present and voting on that question.
- (d) The names of the members present as well as those voting upon each question shall be recorded.
- 25 (e) No business shall be transacted unless notice in writing of such business has been sent to every member of the Board seven days at least before the meeting.

2. The Board shall from time to time appoint some person to be Chairman and one other person to be Vice-Chairman.

3. If at any meeting the Chairman is not present at the time appointed for holding the same, the Vice-Chairman shall be the Chairman of the meeting; and if neither the Chairman nor Vice-Chairman shall be present, then the members present shall choose some one of their number to be Chairman of such meeting.

4. In case of an equality of votes at any meeting, the Chairman for the time being of such meeting shall have a second or casting vote.

5. The appointment of an examiner may be made by a minute of the Board signed by the Chairman.

6. The Board shall keep minutes of their proceedings, which may be inspected or copied by the Minister or any person authorised by him to inspect or copy the same.

SCHEDULE II.

Sections 19 and 24

Table of Maximum Fees to be paid in respect of Certificates.

		First-class Certificate.			£	s.	d.
45	By an applicant for examination ... ..	...	...	...	2	0	0
	For copy of certificate ... ..	...	...	...	0	5	0
		Second-class Certificate.			£	s.	d.
45	By an applicant for examination ... ..	...	...	...	1	0	0
	For copy of certificate ... ..	...	...	...	0	2	6

SCHEDULE III.

Section 27.

50 "COAL MINES REGULATION ACT OF 1894."

Form of Return.

This form to be correctly filled up by the owner, agent, or manager, and sent to the inspector of the district, on behalf of the Minister, on or before twenty-first January every year.

55 PART A.
Year ending 31 December, 18 .

- Name of mine
- Situation of mine
- County
- 60 Name of owner (Company)
- Name of manager
- Name of under manager
- Postal address

RETURN

NEW SOUTH WALES.

Legislative Council.

MINUTES OF EVIDENCE

TAKEN BEFORE

THE SELECT COMMITTEE

ON THE

COAL-MINES REGULATION BILL.

WEDNESDAY, 18 OCTOBER, 1893.

Present:—

HON. A. H. JACOB IN THE CHAIR.

HON. E. VICKERY,		HON. W. LAIDLEY,
HON. W. H. PIGOTT,	|	HON. H. E. KATER,
	HON. A. H. JACOB.	

James R. M. Robertson, Esq., M.D., called in, sworn, and examined:—

1. *Chairman.*] Do you wish to give any further evidence? Nothing more than to insist upon the objections to the general features of the Bill to which I have referred already in my evidence, especially with reference to the sanitary clauses, the ventilation clauses, and all the consequential clauses, limiting the number of men and providing for the modes of working.
2. And you confirm all your evidence? Yes; I confirm all my evidence, and for the sake of conciseness I have written down the general features which I wish particularly to insist upon.
3. Then you hand in that document? Yes.

J. R. M.
Robertson,
Esq., M.D.
18 Oct., 1893

COAL MINES BILL.

As submitted to the Select Committee of the Legislative Council, this Bill contains many objectionable features.

It contains clauses that will impose costly and embarrassing conditions upon owners that will increase the difficulty of conducting mines; some that will increase the danger of the operations, while no real advantage to the employees will be obtained.

The provision to commit one industry to a legal eight-hours' day is an experimental piece of legislation uncalled for and unnecessary. If persisted in it will lead to serious consequences to an industry at present on the threshold of collapse.

Some of the clauses are complex—ambiguous, and give unheard of administrative if not managerial functions upon irresponsible inspectors, who may not possess or have given evidence of their aptitude as such. Others are extremely dangerous, in so far as they prescribe details and a *modus operandi* on the most important matters connected with mining, and anticipate conditions that may not and actually do not exist, and that, being unknown, cannot be foreseen; others practically prevent managers from taking advantage of scientific discovery during the currency of the Act.

The general tenor and arrangement of the proposed Bill give indisputable evidence of the defective knowledge of the theory and practice of mining of those who advised or drafted the Bill. The state of their mining knowledge is much behind modern practice.

Without redeeming features in the way of providing substantial benefits not already possessed by employees, the proposed Bill abounds with irritating details, restrictive clauses that are unlikely to prove practicable, and would have an injurious effect upon management.

Respecting the sanitary clauses. Those dealing with the ventilation of mines are particularly unfortunate, and subversive alike of good management and of safety. They do not bear the impress of scientific attainments.

J. R. M.
Robertson,
Esq., M.D.
18 Oct., 1898.

As I have explained, the blot of the existing Act (and it is perpetuated in the proposed measure) is the fatal absurdity of (1st) interpreting the meaning of the words "adequate" as applied to ventilation; (2nd), of limiting the number of men to be employed in a district; (3rd), in specifying the distance apart of cut-throughs, or in any way referring to our method of working to the exclusion of all others.

With respect to the 1st. An adequate amount of ventilation is said to mean 100 cubic feet per man per minute, but inasmuch as the atmosphere and the condition of a mine is never and can never be stable or constant, but ever varying, and as safety is attainable in no two or even the same mine by the same volume of ventilation, the maximum of insecurity, it will be perceived, may be assured to workmen who pin their faith on this unwise provision.

In one mine or part of a mine 100 cubic feet may be adequate, while in another 1,000 cubic feet might be insufficient. Such limitations and provisions are neither conducive to good management or safety. So long as 100 cubic feet is the law, no more can be demanded.

With regard to the 2nd,—limiting the number of men in a district or in a split of air,—there is nothing so well known or is better appreciated by a good manager as the extreme danger of inordinately splitting, dividing, weakening in force and efficiency, or attenuating a current of air, and in no way can ineffective ventilation be better ensured than by splitting air currents to death, as would be the case under the proposed and to a slightly less extent under the present Act.

If the intention is, as I am certain it is, to provide a current of air adequate in amount "to dilute and render harmless noxious gases," this laudable intention is frustrated by the interpreting clause or words referred to. Moreover, the unnecessary expense and physical resistance introduced by compulsory bratticing, thereby increasing the frictional resistance by increasing the rubbing surface and confining the current, and consequently the extra power required to produce the same amount of current that existed without bratticing (which retards, but does not increase the air current), might be so great and costly and so tardy of application that in event of a sudden burst of gas occurring it might be impossible to clear it out. These two provisions, I assure you, interpose insuperable obstacles to the proper ventilation of a mine.

If, on the other hand, the intention is to ensure at all times a strong, full, resistless, sufficient or adequate volume of air sufficient to clear away any gas, and for every requirement of workmen, what more can men desire? And if so, the limiting provisions should be erased, and adopt in their entirety the words of the English Act bearing upon the subject.

Furthermore, if the object is to encourage progress and the introduction of scientific and economical winning of our national resources in coal—that are none too abundant—all reference to "cut-throughs" or details as to procedure which pre-suppose only one method of working, or conditions that may not supervene and cannot be anticipated, should be erased.

By adopting the words of the English Act bearing upon these important provisions, I feel convinced you will confer a boon upon miners, and upon owners and managers, who would then vie with each other in introducing systems varied to suit the actual conditions that exist creditable to themselves and satisfactory to all connected with mining.

The whole of these repressive and irritating limitations are solely necessary by the unfortunate reference to what is meant by the words "adequate ventilation," and they afford an object lesson of the futility and danger of hastily acceding to the representations of workmen who, as a class, are not conversant with the nice and inexorable laws that regulate and control ventilation.

It must not be forgotten that the words referred to occurring in the English Act is the outcome of years of patient investigation and deliberation by the keenest forensic and mining intellects of the age. It was not, as is the case with the proposed Act, the outcome of hasty and amateur legislation, but is the product of long sustained investigation and inquiry, from representatives representing all shades of opinion and classes connected with mining in a densely populated and highly educated country that produces 190,000,000 tons of coal, irrespective of other stratified minerals, per annum, and under conditions the most varying and dangerous known.

The wording of the English Act is in no sense restrictive or harassing, it encourages but does not repress improvements, and is in no sense revolutionary or experimental, and it adequately provides for the safety of workmen. Under it a class of inspectors are appointed, of high scientific and scholastic attainments, who are not vested with the extraordinary powers attempted under the proposed bill.

The English Act differs from that proposed in being clearly and grammatically expressed. The phraseology is perfect. Its arrangement can scarce be improved, and its clauses are devoid of any captious or ambiguous interpolations such as deform some of the clauses of the measure under discussion.

As it is at present it conveys equivocal but no real advantages to workmen, while owners will be discouraged or ruined. It is unsuited to our requirements and is uncomplimentary to our condition, betraying a painful disregard for the requirements of methodical or skillful mining.

There is really no necessity for any interference with the present law, or for a new Mining Bill.

As it stands it is a menace to an important industry that is at present sorely beset and is daily being reduced to the verge of ruination.

In my opinion, if persisted in, it requires direction clauses deleted, others revised and altered—every word weighed so as to avoid harassing a section of the community at the expense of another equally desirable and necessary. The Bill requires arrangement and classification to be acceptable.

I repeat the objection I formerly urged in respect to the sections not now referred to. This is especially requisite with reference to the general rules, Part II, and to a less extent Part III, legal procedure.

The object of all classes should at the present critical juncture be to encourage not to hamper or harass coal mining, or to impose burdens upon owners that are uncalled for and cannot be borne. I take it that every possible avenue which can employ labour should be encouraged, not closed by forcing a crude Bill upon an unwilling section that carries no benefits to those who urge it on.

It may be out of place, but in my opinion it would have been more creditable to the humanitarian impulses of the House of Assembly, who have shown such alacrity to interfere with coal mining, had they extended their benevolent regard to the condition of the large number of miners employed in metalliferous mines, and where in the majority of cases safety and sanitary provisions are either unheeded or unknown.

The

ON THE COAL-MINES REGULATION BILL.

The ludicrous feature is, however, presented of an overdesire to legislate on coal-mining and utterly neglect to extend to the larger number of workers engaged in or at metalliferous mines any of those legislative advantages that our coal-miners have so long enjoyed. Workmen engaged in or at metalliferous mines are apparently unworthy of the notice or solicitude of philanthropists or social reformers.

J. R. M.
Roberts, Esq., M.D.

18 Oct., 1893.

Wages.

Clause 6. Where the amount of wages paid to any of the persons employed in a mine depends on the amount of mineral gotten by them, those persons shall be paid according to the actual weight gotten by them of the mineral extracted to be gotten, and unless otherwise mutually agreed upon the mineral gotten by them shall be truly weighed or averaged, as the custom may be, at a place as near to the pit or tunnel mouth as is reasonably practicable :

Provided that nothing in this section shall preclude the owner, agent, or manager of the mine from agreeing with the persons employed in the mine that deductions shall be made in respect of small coal, stones, or substances other than the part of the mineral extracted to be gotten, or in respect of any tubs, skips, baskets, being improperly filled in those cases where they are filled by the getter of the mineral, or his wheeler or substitute, or by a person immediately employed by him, such deductions being determined, &c., &c., &c.

Subsection (III). Any employee who fails to comply with the orders of the manager in respect of the safe loading or height of skips filled with mineral or other substances shall be guilty of an offence against this Act.

Mr. William Turnbull called in, sworn, and examined:—

4. *Chairman.*] Where do you live? At Newcastle.
5. What are you? A mining engineer.
6. *Mr. Vickery.*] Where are you employed now? At the A. A. Company's mine.
7. You have been manager there for a number of years? I have been there eighteen years and a half.
8. Prior to that had you not great experience in England? I was with the Hetton Coal Company for nine years, and I was under the Marquis of Londonderry Seaham Colliery for nine years. Those are about the largest collieries that there are in the North of England.
9. You have been manager of those collieries? Yes.
10. Are you experienced in the science of the ventilation of mines? That is a thing which I have taken a great interest in. For eleven years I was left at liberty and I used to do a lot of laying out of plans for ventilation; I did a great deal for America.
11. *Chairman.*] Have you read the Bill? Some of it.
12. Not the whole of it? I did not go through the whole of it; it is a disgraceful thing. I have a sketch of a colliery here from which I can explain what is required for ventilation.
13. It is a disgraceful Bill? Yes.
14. That is your opinion of the Bill? Yes, and must be the opinion of anyone who understands the ventilation of mines.
15. Do you allude specially to the provisions as to ventilation? Yes.
16. Why is it a disgraceful Bill? It would make it impossible for anyone to ventilate a pit.
17. It could not be done in accordance with the provisions of the Bill? No.
18. *Mr. Laidley.*] What effect would the Bill have as regards the expense of ventilation? It would cost the A. A. Company 6d. to 7d. a ton more for brattice work under this Bill.
19. And you consider that the present ventilation is sufficient? Quite sufficient.
20. Do your people ever complain of the want of ventilation of the mines? It is some years since I had any complaint.
21. Do you hear any complaints in the district as to ventilation? Yes, but not so much now.
22. Under this Bill ventilation would be impossible in many cases? If there was gas in a mine and I was bound to work under this Bill, I should say, "No, I will not do it." I would not attempt it because it would be impossible to do it.
23. *Chairman.*] You could not conform to the requirements of the Bill with regard to ventilation? Nothing like it.
24. What plan is that that you have with you? It represents the system of ventilation in the Sea-pit of the A. A. Company. On the eastern boundary it is all solid coal. In that part of the mine there would be ordinarily 600 feet of air per minute, but if gas was discovered there would have to be 8,000 or 10,000 feet of air per minute.
25. *Mr. Laidley.*] Is there any gas in that part of the mine now? No; take another place in the mine, under the Ocean, on the north-eastern side of the line, I should have to supply 9,000 or 10,000 feet of air per minute if there was any gas. The air is carried in by the blue lines on the plan and the red lines show the return air course. Suppose I give the men a full quantity of air; when I come to the heading at the end of the blue line going south-east, I should only want 200 feet of air. If there is an outburst of gas you must have 8,000 or 10,000 feet of air per minute. If I were left at liberty I should carry the air in the opposite way, and I should put all the pressure on the place where the red and blue lines meet.
26. What we understand is that the provision made for the supply of air under the Bill is more than adequate in some places and not sufficient in others? Yes.
27. *Chairman.*] What is it that is more desirable than the provisions of the Bill? You must have a pressure of air wherever there is gas.
28. *Mr. Laidley.*] Where there is gas you want a large quantity of air? Yes.
29. *Chairman.*] Are any of the provisions of the Bill opposed to what you are advocating? The Bill says that there must be 150 feet of air per minute for each man and 200 feet for each horse.
30. *Mr. Laidley.*] What the Committee are to understand is that the Bill lays down that a certain quantity of air must be supplied under any circumstances? Yes.
31. Do you say that the quantity of air provided for in the Bill is more than is necessary for safe ventilation? I can give the men more ventilation; they would get more with fewer splits.
32. They are asking for more splits? You are bound to have splits. There are eight splits shown in the plan of the A. A. Company's mine.
33. *Mr. Vickery.*] You disapprove of the practice of dividing a mine into splits? Certainly. Many a time I have not been guided by the existing Act.

Mr. W.
Turnbull.

18 Oct., 1893.

- Mr. W. Turnbull.
18 Oct., 1893.
34. *Chairman.*] Why? I have had black damp in the mine, and I had to supply more than the prescribed quantity of air.
35. *Mr. Vickery.*] Do you mean that by splitting up the air you will lessen its effectiveness? Certainly.
36. But when there is no danger you concentrate the air in one place? Yes.
37. *Chairman.*] Does not the Act provide for that? No.
38. *Mr. Laidley.*] The present Act says that the mine should have a sufficient quantity of air? I think it says that there must be not less than 100 feet per man and horse.
39. But is it not a fact that the quantity of air is in a great measure regulated by the mining inspector? If he is called upon by the men he will come, and if the manager can prove that he has a sufficient quantity of air travelling through the mine he is satisfied.
40. Under this Bill that could not be done, as it states the exact quantity of air required? They do the same under the present Act, but under the Bill there will be more splits. I am working with eight splits, but under the Bill I shall have to have sixteen splits.
41. Would it not be better for the miners generally to work under the existing Act than under this Bill? Certainly.
42. Better for the men? Yes, and more satisfactory to all concerned.
43. *Chairman.*] Do you consider that the provisions of the existing Act with regard to ventilation are better than those of the new Bill? They are, for this reason: Under the existing Act you can put seventy-five men and horses into one split, but under the Bill you could only put sixty men in, and that would necessitate more splits.
44. Would that lead to more expense? It must.
45. *Mr. Laidley.*] Where you get many splits is there less air? It is bound to be so.

[*The Hon. W. H. Pigott took the Chair.*]

46. *Mr. Vickery.*] Does not bratticing lessen the current of air by friction? Yes, a great deal. There are thirty-three bords on one part of the plan before me. If I had to brattice all those places I should have to have a door to every bord. Under this Bill I should have to have thirty-three doors in that split.
47. And that would add 6d. a ton to the cost of the coal, would it not? It would add 6d. or 7d. a ton to the cost of the coal.
48. Therefore you entirely disapprove of the provisions with regard to bratticing? Yes.
49. As regards the ventilation I think I understood you to say that you disapprove of any hard and fast amount of air being provided for in the Bill as dangerous? Yes.
50. Do you think that the Bill should not provide for an adequate amount of ventilation? Certainly, it must do that.
51. But you do not want the manager to be hampered by any particular amount of ventilation being prescribed? No.
52. You disagree altogether with the practice of dividing a mine into splits? You must have some splits, but you ought not to have so many as the Bill would make necessary.
53. *Mr. Laidley.*] Would it be possible for many of the mines in Newcastle and elsewhere to be worked under this new Bill? I do not think it would. Your cover depends greatly on the pressure you have on. I have seen where there was a current of 7,000 or 8,000 cubic feet of air per minute an outburst of gas that travelled back upon the fresh air 600 yards. That is at the Hetton Colliery. In the Seaham Colliery we were working under the sea and there was a fault, and 10 yards of solid coal were burst out by the rush of water and gas.
54. *Mr. Vickery.*] What you mean is that there should be sufficient ventilation to drive all the gas out? Yes; when I went down the pit I had to shut every place and put the pressure of air on the place where the coal was burst out. If we had been working under the provisions of a Bill like this we could not have done it.
55. *Mr. Laidley.*] I understood you to say that you would not have any fixed amount of air provided for in the Bill, but would simply require that there should be sufficient? Yes; and let each manager form his own opinion. The deeper we go in mining the more gas we shall get. At Newcastle many a thousand do not know about that and do not think of it.
56. How do you get ventilation under the sea? By fans. I have a fan that can drive 400,000 cubic feet of air per minute. The manager is to be punished by fines. He may be fined £50 and have his certificate withdrawn. I caught a miner not long since with his door left open.
57. *Chairman.*] What was that for? To get the fresh air himself and shut off ventilation from the other men. What could I do. I dismissed him; that was all that I could do. Under the English Act I could have taken him to Court.
58. Then that is an omission from this Bill? Yes. I worked under an Act at home and we had to try our own cases, and I had seven cases a day.
59. *Mr. Vickery.*] Do you approve generally of the provisions of the present English Mining Act? Yes, right through. As I told Mr. Smith at Newcastle, "Let us have the English Act, and I shall be satisfied."

WEDNESDAY, 25 OCTOBER, 1893.

Present:—

HON. W. H. PIGOTT IN THE CHAIR.

HON. W. LAIDLEY,	|	HON. A. H. JACOB,
HON. E. VICKERY,	|	HON. E. COMBES,
HON. H. E. KATER.		

Mr. William Turnbull further examined:—

- Mr. W. Turnbull.
25 Oct., 1893.
60. *Chairman.*] You are prepared with a statement of your views in regard to the Coal-mines Regulation Bill? Yes; I hand in the following statement as my evidence:—"The following are my remarks on automatic contrivance to prevent overwinding, clause 10 sub-clause D of Coal-mines Regulation Bill:—I am opposed to this clause, if by it each colliery must provide an automatic brake to prevent overwinding, because of the great expense that each colliery would be put to in this district in providing the necessary appliance and fitting it up, necessitating, no doubt, in some cases the adoption of new machinery and engines

engines, and perhaps stopping the works for many weeks while the alterations were being effected. At our No. 2 pit we have a Walker's detaching-hook fitted to each of the winding-ropes, and when these hooks were first put on, I gave them a trial with two full skips in the cage—the cage, chains, and full skips weighing about 4 tons—and the result of the trial was most satisfactory, the hook detaching the rope and suspending the cage above the pit-top. On another occasion the engine-driver at this pit was engaged at the fly-wheel moving the engine over the dead point or centre, and in going back to his reversing lever his foot slipped and he fell, but before he could regain his feet and grasp the lever of the engine the empty cage was taken up toward the pulley-wheel, where the rope was detached by the patent detaching-hook and the cage left suspended, while the rope was taken over the pulley-wheel. I have also patent detaching-hooks fitted to the winding-ropes at Hamilton pit and at New Winning pit, and I am sure that these hooks will answer the purpose of preventing overwinding equally as well as the automatic brake and at far less cost. These hooks could be attached to the winding-ropes at any of the collieries without necessitating any stoppage of work or alteration to the machinery. At our New Winning Colliery the winding engines there were fitted out with automatic steam-brake and cut-off gear when being built. This is an arrangement by which, in the event of the cage being taken beyond a certain point above the catches, steam is turned on to a donkey-engine in the engine-house, which applies the brakes and cuts off the steam from the engine in one simultaneous movement. After the engines were fitted up at this pit I gave this automatic gear a thorough trial and found it to answer satisfactorily. On one occasion two skips of coal were put into the cage at the bottom of the pit—the full skips, cage, &c., weighing about 4 tons. The engines were started and the cages travelled at the rate of about $11\frac{1}{2}$ miles per hour. I then called the engineman out of the engine-house away from the reversing lever altogether, and allowed the automatic gear to stop the engines, which it did after they had gone only 6 or 7 feet beyond the point where the brakes were first applied. This automatic gear is tested every day the pit works to see that it is in perfect working order. No men are drawn at this pit except the hooker-on and overman. The miners and others travel to and from their work through a tunnel which connects the surface with the underground workings. The shaft is 284 feet deep, and it takes the engine 17 seconds to make a winding.

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Turnbull.
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"*Working under Roads—Rule 29.*—I am opposed to this rule becoming law, for, in the case of the A. A. Company, where there are so many roads on the estate, it would mean cutting off a very large area of their coal land. I should like to know if in the event of any street being, say, two chains wide, how much coal would have to be left intact at each side of it. If much coal or any coal is to be left on each side of a street like this, there would be very little coal for the company to work out between it and the next street, and in fact what little there was would not pay to be worked, and therefore this rule would act very severely on any coal company situated like the A. A. Company. In our New Winning Colliery the workings extend under a large number of streets, but the bords are only driven 6 yards wide, leaving a pillar of coal between them of 12 yards in thickness. Cut-throughs are driven in every alternate pillar for ventilation purposes. By driving the cut-throughs like this I secure greater strength in the pillars than by cutting through every one of them. The headings are turned away at distances of about 70 yards apart, and driven from 8 to 10 feet wide. The above method of working I consider sufficiently secure for driving under streets or roads, but I might also add that where tender coal or faults are met with larger pillars are left in to support the roof, and especially is this done where buildings or roads are over the tender or faulty area.

"*Present Coal-mines Regulation Act.*—I should be quite satisfied with the present Coal-mines Regulation Act if the provisions in reference to ventilation were made the same as those in the English Act."

We have used the detaching hooks for a long time. I tried experiments with these things at home for years.

61. Have you always found that you worked satisfactorily? The detaching-hook does.

62. *Mr. Combes.*] Have you ever had any accidents from overwinding? No; but we have had men overwound. There are lots of different contrivances, but I have always found Walker's detaching-hook the best.

63. *Mr. Laidley.*] Do you think that the present Bill is workable in connection with the mines at Newcastle or in the south? Oh, no.

64. Would it greatly increase the cost of getting the coal? It would increase the cost of getting the coal by a great deal.

65. By how much per ton? At some collieries over a shilling a ton.

66. Do you think that there are many collieries which would be compelled to shut up if the Bill came into operation? They would be bound to shut up if this Bill passed; some are on the point of shutting up already.

67. You think that if the Bill were passed it would be the means of shutting up some of the collieries? Yes.

68. *Mr. Combes.*] Do you not think that the increased cost of getting the coal will result in the reduction of the men's wages? The men will not have it.

69. *Mr. Laidley.*] Would it not eventually mean a reduction of wages? Certainly; there would have to be a reduction or the collieries would have to shut up.

70. *Mr. Combes.*] You feel quite certain about that? I am quite certain about it. There are collieries closing now, the expense of working being too much with the present price of coal.

71. If this Bill is passed other mines will have to close? Yes.

72. *Mr. Jacob.*] The statement which you have handed in is your evidence? Yes.

Mr. George Henderson called in, sworn, and examined:—

73. *Chairman.*] What are you? I am a miners' secretary at the present time.

74. For the southern miners? Yes.

75. Do you desire to give evidence with regard to the Coal-mines Regulation Bill, now before Parliament? Yes.

76. Will you give your views as concisely as possible on the subject? I simply come to inform you that it is the desire of the southern miners that a compulsory eight hours' clause should be embodied in the Bill, and

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Henderson.
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Mr. G.
Henderson.
25. Oct., 1893.

and I may also state that, in the opinion of the Illawarra miners, the present Bill, framed as it is with the compulsory eight hours' clause, provision for ventilation, and an amendment regarding the appointment of inspectors, would suit very well.

77. *Mr. Jacob.*] You mean the Bill before the Committee? Yes, I mean the Coal-mines Regulation Bill. Rule 5 says:—"A competent person or competent persons appointed by the owner, agent, or manager, for the purpose, shall once at least in every twenty-four hours examine the state of the external parts of the machinery, the state of the guides and conductors in the shafts, and the state of the head gear, ropes," and so on. Of course, the miners are generally of opinion that the appointment of such person should not be left altogether in the hands of the manager, or of the agent, but that these appointments should be made from some other source, or at least, if the appointments are not made from some other source, that they should be sanctioned by some other authority after proper examination of the party in whose hands those duties are to be placed.

78. *Chairman.*] What source could you name? Say a committee.

79. A committee appointed by whom? By the law of the land, of course.

80. *Mr. Combes.*] By the Government? Yes. In the same way as the committee is appointed to administer the arbitration law.

81. *Chairman.*] How could a board of examiners or a committee examine the machinery every twenty-four hours? I say that the committee should examine the person to whom those duties are to be entrusted, in order that they may know whether he is a thoroughly qualified man.

82. What you mean is that no person should be appointed under that rule unless he is approved of by a board of examiners to be appointed by the Government? Just so.

83. *Mr. Vickery.*] And paid by the Government? I do not see that they could very well be paid by the Government, being workmen of the company.

84. *Mr. Combes.*] You speak of competent persons;—do you consider the superintendent of the mine a competent person? He ought to be.

85. But you would not be satisfied with his seeing that the machinery was in proper order? I do not know that the colliery manager would be a competent person to do that.

86. Do any accidents that have happened make you think that there should be another person whom you would call a competent person, not the manager of the mine? I have not seen any accidents, but I have heard of a great deal.

87. *Mr. Jacob.*] Is it the law now that a competent person shall be appointed by the manager or agent to perform the duties specified in the rule? It is.

88. A competent person is appointed? Yes.

89. Has that worked injuriously? Not that I know of.

90. *Chairman.*] Do you desire to give further evidence? I have no desire to give any more general evidence.

91. *Mr. Laidley.*] Do you approve of the Bill? Yes; with the amendments which I have suggested.

92. *Chairman.*] We are to understand that you, on behalf of the miners, approve of the Bill generally, except that you want a compulsory eight hours' clause, further provisions for ventilation, and rule 5 altered? Yes. Generally speaking we approve of the Bill, except the weighing clause; that clause is not sufficiently definite for us. We want that clause to provide that men who are paid by the weight of the mineral got shall have that mineral weighed. If it is not weighed the weight is only approximately ascertained. That is the rule now. The men are supposed to be paid by weight but practically they are not.

93. *Mr. Jacob.*] Have you the clause before you to which you are alluding? Yes; it says "where the amount of wages paid to any of the persons employed in a mine depends on the amount of mineral gotten by them, those persons shall be paid according to the actual weight gotten by them of the mineral contracted to be gotten, and unless otherwise mutually agreed upon all the mineral gotten by them shall be truly weighed at a place as reasonably near to the pit mouth as is practicable."

94. Is that not definite enough for your views? It is, if it were carried out.

95. *Mr. Combes.*] You want every skip weighed? Yes.

96. And you do not want anything deducted for bands? Oh! I do not mean that. When I say coal I mean coal. I do not mean that a man should receive pay for stone when he ought to be filling coal. We want to have the coal weighed, but it is not weighed at the present time.

97. *Mr. Jacob.*] You want the whole of the coal gotten to be weighed? That is the idea.

98. *Mr. Vickery.*] At most mines do they not weigh as many skips as there is time to weigh? In some they do not.

99. As a general rule there are two weighmen appointed, one on behalf of the men and the other on behalf of the owners? Yes.

100. They take a skip and weigh it as it comes up, but that does not prevent other skips going down over the screens, and an average is made? That is what they are doing, but it is not satisfactory.

101. Would it not take three or four times as much time to weigh every skip? In some cases four times the number could be weighed that is weighed at the present time.

102. *Mr. Laidley.*] Do I understand you to say that you would weigh every skip;—would that not lessen the quantity of coal put out every day? Not necessarily.

103. Would it not increase the cost per ton by necessitating the employment of more men? Not necessarily.

104. Not if every skip was weighed? It simply means that a weighing apparatus must be placed there for the purpose. At the present time there is no such thing.

105. I think I heard you say something about eight hours? There is a clause in the Bill, which says "no person shall, except in case of emergency or when life or property are in danger, work below ground in any mine for more than eight hours (inclusive of one break of twenty minutes for the purpose of obtaining food) on Monday, Tuesday, Wednesday, Thursday, and Friday, and for more than six hours on each alternate Saturday." That means, that twenty minutes is to be taken out of the eight hours for food? Yes.

106. Will not the production of coal be reduced materially during the day;—if the time was reduced to seven hours and forty minutes, would that not reduce the output? I do not think it would reduce it very much.

107. How could it be otherwise;—under the miners' rules you only put out so much per day per man? That is not the case that I am aware of.

108. *Chairman.*] Are we to understand that what you desire is that the men shall spend only eight hours in the mine? Yes; eight hours in the mine.

109. And that there shall be twenty minutes taken off that eight hours at the meal time? Yes.

110. And that the time occupied in going into and coming out the mine shall be included in that eight hours? Yes.

111. So that the miners will only work six and a half hours? Eight hours. That is eight hours from the tunnel mouth to the tunnel mouth.

112. *Mr. Laidley.*] And you do not think that that would reduce the production of the mine? I do not think that it will.

113. *Chairman.*] How long in some mines will it take from the time they enter the tunnel mouth till they get to their work? There are some mines where it would take twenty minutes, and some where it would possibly take more than that to get into the face of the mine. Perhaps half an hour.

114. In a case where it would take a miner half an hour to get from his work to the tunnel mouth and half an hour to get back again, and with twenty minutes off the eight hours as well, the men would only work five hours and twenty minutes? They would be eight hours in the mine.

115. Is this not the fact that provision is made that a man is only to be eight hours below ground in any mine, and that is to include one break of twenty minutes? Yes.

116. And you desire in addition to that that there be added to the break of twenty minutes the time occupied in entering and leaving the mine? Eight hours is to be a day's work.

117. Is not what you desire this, that the men shall be eight hours below ground? Yes.

118. Less twenty minutes for obtaining food and less the time occupied in going into and coming out of the mine, which in some cases may take an hour? No; in some cases half an hour.

119. Does not that mean that in such a case as that the man would only work six hours and forty minutes? Yes; at the face.

120. Do you think that would tend to develop the mines or to restrict them? I do not suppose it would do either, they will remain in their normal condition.

121. *Mr. Laidley.*] Has not the present Act worked equitably between miners and owners, have there been any complaints? I have heard any amount of complaints myself.

122. You fully approve of the provision with regard to the hours of employment? Yes.

123. Even that Saturday off every fortnight? Yes.

124. Do the men lose their pay for that Saturday? They are only paid for the time they work.

125. Would the men have to be paid for eight hours if they took so much time in going in and out of the mine? They are only paid for the results of their own labour.

126. *Mr. Combes.*] What about the wheelers and others;—they are paid by the day, are they not? There is a number of men who would be working at the tunnel mouth, and they would work fully eight hours with the exception of the twenty minutes.

127. *Mr. Laidley.*] In the ventilation clause there are provisions about compulsory bratticing;—do you approve of that? Yes.

128. Why? Because it is necessary to carry the pure air round to all the men working in the mine.

[*The Hon. A. H. Jacob took the Chair.*]

129. *Mr. Laidley.*] The Bill provides that there shall be not less than 150 cubic feet of air, and if the men receive a sufficient amount of air is that not sufficient without this bratticing? It is sufficient if it is given to them.

130. There are inspectors? Yes; but it is absolutely impossible to give a man sufficient air in the face of a mine without bratticing.

131. If the Bill provides that the owner of a colliery shall give a sufficient amount of air, what more is necessary? There is nothing more required; we want that to be done.

132. *Chairman.*] Do you think that there should be a hard and fast rule in the Bill, or would you leave it to the judgment of the inspector as to whether there is sufficient air or not;—do you want to have it defined in the Bill? I certainly think it ought to be defined in the Bill.

133. *Mr. Laidley.*] I presume that you quite understand that if this Bill came into force it would increase the burdens of the colliery proprietors—that it would increase the expense of working the mines very considerably? I suppose it would a little.

134. By how much a ton, do you think, if all these clauses were carried out? I have not attempted to estimate that.

135. Do you not think it would be the means of shutting up many of the mines, considering the present rate of wages? No, I do not think so.

136. *Mr. Vickery.*] I wish to ask whether you consider that the provision with regard to 150 cubic feet per minute should be retained in the Bill? I think it should be retained.

137. Have you anything further to say about ventilation;—what improvement would you suggest? I simply suggest the idea of having air conveyed to the men by the aid of brattices, that is not in the Bill.

138. Yes, it is in the Bill, but where should the brattice commence; rule 1 says, "It shall be bratticed up to within 3 yards of such working face;"—you mean from the cut through? Yes; from the main current of air wherever it may be.

139. *Mr. Kater.*] With regard to the 150 cubic feet of air which the Bill says shall be supplied, what is the usual allowance in most mines? I know one mine in our district where there is over 300 feet of air per man.

140. Tell me of one where there is less than 150 feet? I know another where there is less than 150 cubic feet.

141. How much less? Possibly in some cases 60 cubic feet less. That is the Woonona Mine.

142. And in these cases who decides the number of cubic feet that shall be carried up to the face? The chock inspectors decide it.

143. With whom does it rest to decide how much air shall be supplied to each man? The inspector for the district.

144. In the case of the Woonona Mine, the inspector said it should be 60 feet less than the minimum quantity fixed by the Bill? No; no one said that.

145. Did the miners complain of that? They complained to the public.

Mr. G.
Henderson.
25 Oct., 1893.

- Mr. G. Henderson.
25 Oct., 1893.
146. Have they anyone to complain to which would necessitate the owner of the mine increasing the quantity of air supplied? Yes; they complained and had it remedied.
147. To whom? To the inspector of the district.
148. The miners appoint check inspectors? Yes; to go round and measure the air.
149. Have you considered the difference that there is between mines—some requiring more ventilation than others? Yes; some want 300 cubic feet of air, whilst others require only 150 cubic feet.
150. You would require a minimum of 150 cubic feet? Yes; I think that is little enough.
151. *Chairman.*] Would it be impossible and impracticable to get 150 cubic feet of air on the face? It is possible and practicable.
152. *Mr. Combes.*] How would you do it? By bratticing.

WEDNESDAY, 1 NOVEMBER, 1893.

Present:—

HON. A. H. JACOB IN THE CHAIR.

HON. W. LAIDLEY,	|	HON. J. HOSKINS,
HON. E. COMBES,	|	HON. E. VICKERY.

Mr. Adam Cook called in, sworn, and examined:—

- Mr. A. Cook.
1 Nov., 1893.
153. *Chairman.*] What are you? A miner.
154. Where do you live? At Wallsend.
155. Have you come to give evidence with regard to the Coal-mines Regulation Bill? Yes; there are a few matters on which I should like to give my opinion.
156. *Mr. Vickery.*] Have you read the Bill through? Yes; once or twice.
157. *Chairman.*] Will you let us have your views upon the Bill? I may say that upon the whole the miners of the northern district are satisfied with the Bill as it has passed the Legislative Assembly, and would be very well pleased to see it become law as it stands. They are very anxious that the second clause, which provides for the eight hours' should become law.
158. Just as it is there? Yes; there is a strong desire to have the eight hours principle legalised. Strong representations have been made to Members of the Assembly on the subject, and for a number of years, at their annual demonstration, the miners have passed resolutions affirming the necessity of embodying that principle in a Bill of this kind. Another matter to which I would refer is the abolition of the standard weight. That has been a grievance in the northern districts for a number of years. I believe it only exists in three or four collieries at the present time; I think at about four collieries. At the colliery at which I am at present employed, the Co-operative Colliery, the standard weight was abolished about eighteen months ago. It had been in existence a great number of years previous to that. I reckon that it was nothing short of robbery the way in which the men were treated in regard to the standard weight. At the colliery at which I was working all over 13½ cwt. was not paid for, although 15 or 16 cwt. may have been in the skip.
159. *Mr. Combes.*] That was the weight of the whole skip? Yes.
160. It was not all coal? Yes; but there is a certain proportion of small coal in each skip that the miners are not paid for.
161. There were some bands? No; the miners were ordered to take the bands out. They are very severely punished if they do not do that. The miners are very severely punished if there is a small quantity of dirt in the skip.
162. Do you approve of the provisions of the Bill with regard to the standard weight? Yes; at the same time I admit of the necessity for protecting machinery and rolling-stock. The miners are not opposed to a standard height. It is easier to fill to a certain height than it is to a certain weight. The weight depends on the nature of the coal. Some coal may be of a more dense nature, and other coal may be more friable.
163. *Mr. Vickery.*] Are you opposed to limiting the weight, and not opposed to limiting the height? I am not opposed to limiting the height; that is necessary for the protection of the machinery.
164. You are opposed to limiting the weight? I am.
165. *Mr. Combes.*] I suppose that at most of the collieries, with the workings of which you are cognizant, a certain number of skips are weighed? Yes; they call it striking an average. That is the custom of most of the collieries in the northern district; they do not weigh every skip.
166. Do you not consider that fair? It is the custom of most of the collieries, and provision is made in this Bill for an agreement to be arrived at between the proprietors and the men as to weighing. I think that is a very fair provision.
167. *Mr. Laidley.*] The second clause says: "No person shall, except in case of emergency or when life or property is in danger, work below ground in any mine for more than eight hours (inclusive of one break of twenty minutes for the purpose of obtaining food), on Monday, Tuesday, Wednesday, Thursday, and Friday, and for more than six hours on each alternate Saturday." By that clause there is twenty minutes allowed for obtaining food, and that must come off the eight hours? Yes.
168. Would that not lessen the production of the coal? I do not see that it will. That is an objection that has always been raised in years gone by when the hours of work have been reduced, but the output is greater now, under the eight-hour system, than before the hours were reduced.
169. Do you not think, where there is a large output, taking off twenty minutes will reduce the output materially? Most decidedly, but the proprietors can make arrangements to bring the output up to the former standard without any additional expense to themselves. I do not think that there is any mine in the northern district engaged at present to its fullest capacity, and when trade is slack we find the proprietors cavilling the men out. If there is any extra demand, what is to prevent the proprietors from engaging additional men? The miners are paid by the ton and the wheelers by the score. They are paid by results.
170. Do you not think it would be against the miners' interests to have more men put into the mine? Not if the men are getting as much as they can do.
171. What does the Union permit you to do now? There is no restriction as to the amount of coal they may send out.

Mr. A. Cook.

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172. There used to be? Not since I went into the northern district.
173. Then you do not think that the reduction of the hours will make any difference in the production of coal? No, none but what can be easily overcome without any additional expense by the proprietors.
174. How would you do with the top men? I do not think the Bill says anything about the top men.
175. No; but they are subject to the Miners' Act; they are day men? The men employed on the top are sometimes paid by the ton and sometimes paid by the score.
176. A great many of them are day-wage men, I think? Yes.
177. You do not think that a reduction of the hours would make any reduction of the output? None but what can be easily overcome by the proprietors without additional expense.
178. In what way? As I have already explained, the miners are paid by the ton and the wheelers by the score. They could, therefore, put on more men in order to maintain the output.
179. Do you not think it would cause the employers to employ more men on the top if the men worked a certain number of hours? No; I do not think that would be necessary. Extra miners might be employed to bring the output up to the previous standard, but there would be no necessity to put extra men on at the top. There would be no more coal coming out of the mine, but there might be a few more men getting the coal.
180. You do not think that the restriction put on the hours of work will make any difference in the production of coal in the Newcastle district? No; I do not think it will.
181. It means, then, if you work four or five hours a day the difficulty can be got over by putting on more men? It is possible to carry an argument of that kind to an absurd conclusion.
182. *Mr. Combes.*] In addition to this twenty minutes, there is the time occupied by the men in getting down to their bords? That is outside the eight hours. According to the provisions of the Bill the miners may be eight hours at the face of the mine. It is very seldom that it takes the miners more than ten minutes to get their meals. There is no inducement for a miner to lie about at meal times. He generally has plenty of work, and the more quickly he swallows his tucker and gets to work the better it will be for himself.
183. It might take half an hour to get to the face, and if a man is to be only eight hours under ground and it takes him half an hour to go to the face and half an hour to return, that would take off one hour and twenty minutes? I should like to point out that under this clause the miners would be eight hours at the face. It might take a miner half an hour to go to his particular working place, and half an hour to return. In that case he would be something like nine hours underground.
184. *Chairman.*] That is your view of the working of the clause? I think it means eight hours' work.
185. *Mr. Laidley.*] As a rule, how many hours are they in the mine? I think about eight hours at the face. Nothing beyond what is asked in the clause.
186. *Mr. Hoskins.*] Your interpretation of the eight hours' provision is that it means eight hours working at the face, irrespective of the time it takes to go to and from it? Yes; according to this clause the miner would be working seven hours and forty minutes. There would be twenty minutes allowed for meals, and whatever time was occupied in travelling to and from the face would be outside that altogether.
187. *Chairman.*] Will you proceed with the next point? In connection with the abolition of the standard weight I may say that I do not think the miners have any particular desire to fill the skips in such a manner as was insinuated by Dr. Robertson. The miners in the northern districts on several occasions have tried to get that evil remedied, and they have proposed to fill the skips level full, or a couple of inches above the wood, but the managers threatened to stop the collieries altogether if they did that, showing conclusively that there is a strong desire on the part of the managers that the men should pile up the skips.
188. *Mr. Combes.*] Has that been done at your colliery? Yes; they used to build the skips up about 18 inches. In fact, I have seen them piled up about a couple of feet; but since the present manager took charge we have not had much difficulty in getting the standard weight abolished, and now the men only fill the skip a certain height. If a man goes over that height he loses his skip.
189. *Mr. Hoskins.*] What colliery is that? The Co-operative Colliery at Wallsend.
190. *Chairman.*] What is the next point to which you would draw attention? The provision with regard to bratticing, and the division of the mine into splits. I can give my opinion with regard to that and the subject of ventilation generally. I am thoroughly in favour of the clause as it stands, with the exception of the provision with regard to bratticing up each bord. I think 150 cubic feet of air per man and 200 cubic feet for each horse quite little enough, but still I do not see the necessity for bratticing up each bord to within 15 yards of the face. But I am a thorough believer in having shorter cut-throughs. Cut-throughs are places that are driven across the pillars for ventilation. The present Act provides that there shall be a cut-through at every 35 yards. This Bill provides that there shall be one at every 25 yards. I am a thorough believer, and the majority of the miners are also, in reducing the distance between the cut-throughs. It should be 25 yards instead of 35 yards, and 150 cubic feet should be the minimum quantity per man.
191. *Mr. Laidley.*] Would not that very much increase the cost of getting the coal? I think it would be a great benefit to the proprietors of the mine as well as to the miners.
192. Would it not greatly increase the cost? Not a great deal. I can show that it would be a benefit to the proprietors as well as to the miners. Very often the miners have to work 48 yards in front of a current of air. Supposing you put a cut through at every 35 yards; then to drive another 2 yards to get the necessary width, that makes 37 yards, and sometimes the length of the cut through is 8 yards; that makes 45 yards in which the men are working in front of the current of air. In most cases it is impossible to get the coal without using powder, and the places are always filled with powder smoke, so that it becomes an impossibility for the men to fill clean coal. Most of the managers in the northern district are pretty firm on this point, and talk about the men filling absolutely clean coal under circumstances which render it utterly impossible, especially if you consider the number of bands in the coal. In some places they have the two ordinary kinds of bands, also kerosene and a terrible amount of brass, clay bands, and other impurities, and when the places are completely filled with smoke the men cannot fill clean coal. I have known men to be stopped for a week, and in some cases for a fortnight, for sending 4 or 5 lb. of band in the skip. They are severely punished for this. Dr. Robertson's evidence would give you the impression that, through the leniency of the managers, the men are allowed to fill 14 lb. or 15 lb. of dirt in each skip, but that is not my experience. The managers are very careful about it, and they

Mr. A. Cook. they punish a man severely for it. There are only two or three dirt scales in the northern district, and the manager has a right to punish a man if he finds $\frac{1}{2}$ lb. of dirt in his skip, and he may give the same amount of punishment to a man with $\frac{1}{2}$ lb. of dirt in his skip that he would to a man who had a cwt. of dirt in his skip. It depends on his temper.

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193. *Chairman.*] You have used the expression "punish" very often;—how do they punish a man? They prevent him from coming to work for a day or two or more. If a man sends up dirt in his skip the manager will say, "You need not come to work again till I send for you."

194. *Mr. Laidley.*] Do you not think that the miners, by not clearing out the bands, have caused a great loss of trade to the Co-operative Pit? No; but they have been blamed for it.

195. You have spoken about the bratticing, would not that cause an increased cost per ton for getting the coal? I was going to point out that there would be this advantage in having shorter cut-throughs. The place would be kept freer of smoke and impurities and the men would be in a position to fill cleaner coal.

196. Do you not think that this extra bratticing, which is provided for in the Bill, would involve a cost of so much more per ton? Yes; but I am not prepared to back up that idea. I am in favour of shorter cut-throughs.

197. For every cut-through you have to turn off? Yes; but that does not cost any more to the proprietors.

198. Taking the Bill as a whole, the provision with regard to bratticing and the shortening of the hours, do you not think it will increase the cost to the owners per ton for getting the coal? I do not see why it should. In connection with the shorter cut-through, I may point out that it will be an advantage to the proprietors. The pillars in these bords have been made at certain distances, and it is the custom to take out the pillars afterwards, and to do that a cut-through is driven across the centre of each pillar. If the cut-throughs were 25 yards apart there would be no necessity for that extra cut-through. Putting one thing against the other, I do not think that any additional expense would be involved in getting the coal.

199. And you do not think that, under the provisions of this Bill, the cost of getting coal would be any greater than it is now? No; I do not think it would be any greater.

200. If this Bill were in force to-morrow, what would it cost the proprietors per ton extra? If the output were reduced, I think it is quite within the power of the proprietors to make it up without any extra expense. Extra miners could be employed, and extra wheelers, and these men are paid by results. As regards the ventilation clauses, I have already pointed out that if you place the men in a position to fill cleaner coal, that will be to the benefit of the proprietors, and the necessity to split the pillars in order to take them out will be obviated by having a cut-through at every 25 yards instead of at every 35 yards.

201. You do not think that if the Bill were in force it would cost the colliery proprietors any more to get the coal? No; under proper management and supervision I do not think it would.

202. Does not the present Act work well with us at the present in the north? There is lots of grumbling about ventilation and one thing and another. I do not think we should be insisting on alterations if we were satisfied with the present Act.

203. *Mr. Hoskins.*] Why are you dissatisfied? Owing to the lack of ventilation for one thing, and we want the eight hours legalised. We never had any trouble with the proprietors as regards the eight hours, but we want it placed beyond the power of the proprietors or anyone else to interfere with it. We recognise that we only hold it on sufferance at the present time.

204. Then the only objection which the miners have to the present law is that it does not provide for adequate ventilation and does not legalise the eight hours? Those are two of the principal objections.

205. *Mr. Laidley.*] Do you not think the interests of the colliery proprietors and those of the miners are identical? They ought to be.

206. Presuming that the Bill came into force to-morrow and that it cost so much more per ton to get the coal? I do not admit that.

207. If it did, do you not think that would recoil on the wages? I am not prepared to admit that. Dr. Robertson said it would increase the cost of getting the coal by 10d. per ton; but I think that is an absurdity. I do not see where the extra expense is going to come in.

208. *Mr. Hoskins.*] Do you or do you not consider that if, consequent upon the alterations you suggest, the cost of getting the coal was increased, that would act prejudicially to the interests of the Newcastle district? I believe it would if that were the case.

209. *Chairman.*] You do not admit that that would be the case? Certainly not. I do not believe that, under proper management, the cost of getting the coal would be increased one iota.

210. *Mr. Laidley.*] You are Secretary of the Miners' Union? No; I am President.

211. *Mr. Combes.*] Do you work as a minor? Yes; I have worked at the Co-operative Colliery for the last eleven years.

212. *Chairman.*] What is the next matter to which you wish to refer? I would refer to the provisions with regard to explosives. Sub-clause E of clause 12 says, "Provided that no person shall return to a place where such charge has missed fire until eight hours has elapsed from the time of lighting such fuse." I am not altogether a believer in that. I think that a provision such as that is right enough if applied to a fuse only, but in the majority of cases in the northern district the fuse is not used. What we call a squib is used, powder being wrapped in a paper and put into a hole. Perhaps, owing to some small obstacle in the hole, the shot may not go off, but I reckon that there is no danger after ten or fifteen minutes has elapsed. I think that to prevent a man from going back to the place for eight hours because a squib has not gone off would be unwise.

213. Would the squib be held to be a fuse? No.

214. But the word fuse is used in the Bill? It depends on what interpretation would be put upon the clause.

215. You think that a squib might be held to be a fuse? It might be. Where squibs are used a man might be allowed to go back in ten or fifteen minutes. It is a simple process, and there is less smoke in connection with squibs. They do not interfere so much with the ventilation. It is absolutely necessary to use a fuse where the mine is wet. There is a clause about the appointment of a check weighman. I think it is only right that if the miners having to pay a check weighman, they should appoint the man they think best fitted for the position, even though he is not employed in the mine. I believe that the employers object to the appointment of anyone not employed in the mine, but I can see no good grounds for such objection.

216. *Chairman.*] You approve of the provision in the Bill that the man appointed may be an outsider? *Mr. A. Cook.*
Yes.

217. You think that as he is paid by the miners he ought to be appointed by the miners? Yes; and I think they have a right to appoint whom they like. But I may say that there has been no friction for a great number of years between the miners and the proprietors in the northern district, as far as check weighmen are concerned.

218. Apart from all you said with regard to the fuse and other matters, you are satisfied with the Bill as a whole? Yes; and I believe it meets with the thorough approval of the miners in the northern district.

219. And you speak on their behalf? Yes.

220. *Mr. Hoskins.*] How long have you been mining? For thirty years.

221. During the whole of that time have you been employed in this Colony? No; I have been between fourteen and fifteen years in this Colony.

222. Where were you before that? In Scotland.

223. Do you happen to know the number of persons engaged in coal-mining in the United Kingdom? I could not say. There was a quarter of a million on strike a few weeks ago.

224. There are about a million persons in England connected with coal-mining;—are you acquainted with the provisions of the English Coal-mines Regulation Act? I have not made it a particular study, but I know something about it.

225. Have you heard of any general feeling of dissatisfaction with the English Coal-mines Regulation Act? That I could not say. I believe there has been an agitation in England for a number of years to get the eight hours legalised, an agitation not confined to miners.

226. You have never heard any special objection urged against the English Coal-mines Regulation Act? Probably I have, but I am not able to say at present.

227. Do you not think that if an Act of Parliament, and a very stringent Act it is, but not one that does not cripple the industry, meets with general approval in Great Britain from both the employers and the miners, would not that Act be quite sufficient to regulate the coal-mines in this Colony? No; there is a clause in the English Act with regard to ventilation that I do not believe in, and the majority of the miners do not believe in it. There is no minimum specified in the English Act. I think it is absolutely necessary to have a minimum amount of air specified in the Act. I do not think it is reasonable to leave it in the hands of the manager or inspector. If recognised authorities say that 150 cubic feet of air is necessary that quantity at the very least ought to be assured to the men.

228. You have never heard from the Coal-miners' Unions, and they are very numerous in Great Britain, or from the coal-fields' representatives in the Imperial Parliament any strong objections to the Coal-mines Regulation Act? I do not know whether they are satisfied with it or not.

229. You have not heard of any petitions being sent to the Imperial Parliament asking for the repeal of the Act? I am not prepared to give an opinion upon it at all.

230. If the Coal-mines Regulation Act gives satisfaction in England, do you not think that such an Act would be sufficient in this Colony? I am not aware that the miners in England are satisfied with the Act.

231. Did you ever hear of any dissatisfaction, except as regards the eight hours question? Yes; there is dissatisfaction with regard to the ventilation of the mines too.

232. I ask whether, from your knowledge, there is any general objection urged against the provisions of the English Act for the regulation of coal-mines? I cannot say anything about it from my own knowledge. I think they ought not to be satisfied with an Act which does not legalise the eight hours, and which does not give a minimum amount of air. I am not prepared to discuss the English measure, or what the English miners think about it. What we want here is what we consider fair and reasonable, and ought to be embodied in the Bill.

233. Has it ever occurred to you that if you increased the cost of getting the coal, the miners, the coal owners, and the Colony generally would be placed at a disadvantage as regards the selling of the coal? That is beyond question. If anything is done to increase the cost of getting the coal it is bound to handicap the trade, but I am not prepared to admit that anything of the kind will take place.

234. Are you aware that under the English Act the inspector of the district has to be satisfied that adequate ventilation is provided without any particular quantity being specified? Yes; I believe that that is the case.

235. Do you not think that that would suffice here, or do you not think that the inspectors are to be trusted as much here as in England? That is a responsibility which I do not think it is fair to place on the shoulders of an inspector at all. The authorities say that a certain quantity of air is necessary for sanitary purposes, and the miners ought to be assured of at least that quantity, and I think that 150 feet is a fair minimum.

236. *Chairman.*] You think it should be specified in the Act instead of being left to the inspector? Certainly.

237. *Mr. Hoskins.*] What do you anticipate will be the gain to the miners by legalising the eight hours, seeing that eight hours is a day's labour in the district now? At present we have it only on sufferance. In the past we have had no difficulty about it, but I would place it beyond the power of any man to interfere with the eight hours.

[*The Hon. E. Combes took the Chair.*]

238. *Mr. Hoskins.*] Are you not aware that there is a large number of miners in Durham, Northumberland, and other parts of England who are very much opposed to legislation to fix the hours of labour for coal-miners? Yes; I believe that in the majority of cases in the northern counties the miners work only six hours a day, and the reason why they object to legalising the eight hours is that they are afraid that they would be compelled to work longer than they do at present.

239. Then, I gather from your evidence, that if the provisions with regard to ventilation and the hours of labour and as to bratticing were all enforced, nevertheless the price of coal would not be increased? I believe that the Bill would be satisfactory to the northern miners without the provisions for bratticing. I would not insist on that. I go for the cut-through at every 25 yards, and they should have the air conveyed along the headings nearest the working faces.

240. The only reason why you approve of the Bill is that you are in favour of eight hours being provided for by Act of Parliament? We wish to make it the law of the land.

241. For no other reason than that? We want to make it a certainty along with other amendments of varying importance already referred to.

- Mr. A. Cook. 242. Are there not a number of people who think that by making eight hours a day's work there would be employment provided for a larger number of people? No; the length of time which they work now is only eight hours.
- Nov., 1893.
243. *Chairman.*] You must be aware that one mine requires more ventilation than another; 150 cubic feet of air might be sufficient in the case of one mine whilst 1,000 cubic feet of air would not be enough in another;—do you not think it would be better to leave the matter in the hands of an inspector and let him say how much air shall be supplied? In mines where there is gas it will be absolutely necessary for each working place to be bratticed up to within 3 yards of the face. It will be impossible to work the mine unless this is done.
244. You have no suggestion to make with regard to ventilation except as regards bratticing? No; I will not insist on the bratticing.
245. Had it not better be left to an inspector to say, if he finds a mine dangerous, "I must have a brattice put here, or have another furnace put in"? The Government Inspectors will have that power, even under this Bill. We only ask that a minimum quantity of air should be specified. If, in the opinion of the inspector, more is required, more will have to be supplied.
246. Are you aware of the minimum specified by the English Act? There is no minimum in the English Act. It says that an adequate amount of air shall be supplied.
247. You do not think that sufficient? I think we ought to be assured of at least 150 cubic feet of air per man. Some people seem to think that we have no danger from gas, but we generally find out, when lives have been sacrificed that we have gas in the mines. Persons have been severely injured in some of the mines in the northern district, and there was a great loss of life at Bulli some years ago through an explosion of gas.
248. You are aware that very different opinions are held about the Bulli accident? It is believed that it was an explosion of gas, from which, I think, there can be no reasonable room for doubt.

WEDNESDAY, 15 NOVEMBER, 1893.

Present:—

HON. W. H. PIGOTT IN THE CHAIR.

HON. E. VICKERY,		HON. E. COMBES,
HON. W. LAIDLEY,	|	HON. H. E. KATER,
	HON. A. H. JACOB.	

Mr. Alexander Ross, junior, called in, sworn and examined:—

- Mr. A. Ross, junr. 249. *Chairman.*] What are you? Colliery manager for the Newcastle Wallsend Company.
- 15 Nov., 1893.
250. Have you read and considered the Bill which is now before us for the regulation of coal-mines? Yes.
251. Will you shortly state what your opinion is with regard to the Bill? I may state at the outset that I was examined in 1890 on the then Bill brought in by the Government. I still hold the opinion which I then expressed, that the collieries will be far better if we had the English Act in its entirety, with the exception of a few minor details, to suit the working of our colonial collieries. I was pleased to see that the Government, when they introduced their Bill, embodied in it most of the clauses of the English Act, but before it left the Assembly clauses were inserted which have destroyed the efficacy of the measure.
252. Have those clauses improved the Bill? No; they have destroyed the efficacy of the Bill generally in my opinion.
253. Can you particularise those clauses? I would first refer to clause 2. That has reference to the hours of employment. I am opposed to making eight hours a day's labour by law, because in cases of emergency, which do happen in the best regulated collieries, this compulsion would be found to work very harshly indeed.
254. *Mr. Laidley.*] It is eight hours with twenty minutes off? That stoppage of twenty minutes to the Wallsend colliery, which is the largest in the Colony and has put out the largest quantity of coal in the eight hours, would represent an additional expense in getting the coal from 4d. to 6d. a ton.
255. *Chairman.*] On the whole output for the year? On the whole output.
256. What is the average output per day? About 2,600 tons.
257. Suppose this provision as to the eight hours was in force, would it be beneficial to the workmen themselves? I do not see that it would. The arrangement existing between the miners and the mine-owners is such that eight hours per day are considered the drawing hours in the northern district.
258. But that is by a voluntary arrangement? That is an amicable arrangement between the two parties.
259. If it were made compulsory, would it be beneficial? No, it would be injurious.
260. Speaking generally, what effect would the introduction of the compulsory eight hours have upon the working of the mine? We have sometimes to retain men in the collieries, and boys to drive, if we have great falls. That is to ensure the working of the mine on the following morning. If the Bill is carried as proposed we shall not be able to keep men to do that. Fresh gangs will have to be employed, and that would involve additional expense, whereas if we have not a defined rule we could keep our shift men one or two hours to do what is wanted.
261. Then it would not be beneficial to the miners? No, nor to the mine-owners. The miners could not go to work the next morning if the mine was not repaired that night.
262. *Mr. Vickery.*] It is the usage of the district to work eight hours a day? Yes.
263. It is only exceptional to deviate from that? Yes. I have heard that it has been said that the managers in the north keep their boys at work more than eight hours a day. I have been a manager in the northern district for a period of sixteen years, and I know that since the arrangement came into force no manager keeps his boys working in the mine more than eight hours, except under very extraordinary circumstances.
264. *Chairman.*] So you are of opinion that the clause making eight hours compulsory is unnecessary? I think so.
265. *Mr. Combes.*] You say that it would increase the cost of getting the coal by 4d. per ton? Yes; it would add 4d. per ton to the 2,600 tons of coal which we draw during the eight hours.

266. *Mr. Kater.*] Do you draw 2,600 tons of coal every day? That is the average day of eight hours.
267. *Mr. Laidley.*] That loss is caused by the twenty minutes being taken off? Yes.
268. *Mr. Kater.*] Is that a matter of guess, or of absolute calculation? A matter of calculation.
269. *Mr. Vickery.*] That is a loss of £43 Gs. per day? Yes.
270. *Chairman.*] Have you anything else to say about clause 2? Clause 2 says that the men shall work six hours on each alternate Saturday. That I cannot understand. I may also say that I have 600 miners, 117 shaftmen, and fifty odd boys, and I have never heard this compulsory eight-hour system asked for.
271. Have you had any conversation with them about it? Yes, at times,
272. What opinion have they expressed about it? They say, "What is the eight hours needed for? We have our understanding with the proprietors, and they have never sought to transgress. We are rarely asked to work more than eight hours a day."
273. So, from your conversation with this large body of men, you are of opinion that the workmen do not desire a compulsory eight-hour system? I would not say that, but I have never heard of any complaint, because the proprietors have never sought to make the men work more than eight hours. Some miners work six hours, and some work seven; very rarely do any of them work eight hours. They go into the mines in the morning, and come out when they like. The latter part of clause 2 says, "And no person so employed below ground shall draw or hew coal on the pay Saturday." I think that is a very arbitrary provision. It might happen that we should want a few tons of coal drawn out. We might want to make a new flat, and want to draw coal to make additional places in the mine, but if this clause were passed we should be prevented from drawing any coal.
274. *Mr. Laidley.*] Have you heard any miners express their views upon the eight-hour question? I have had private conversations with them.
275. Do you think they approve of it? They would approve of it as a body.
276. *Chairman.*] You say that they already have exactly what the Bill proposes to give them? They have.
277. Have they every alternate Saturday off? Yes; that is pay day. It is a holiday throughout the northern district.
278. Every fortnight? Yes. Our boys do not work more than eight hours a day. Some say it is the boys they wish to protect. The boys are at their places for work in the morning at 7 o'clock; they have two half-hours for meals during the day, and they leave off at 4. They are in the mine more than eight hours, but they do not work more than eight hours. There is the time occupied in walking in and walking out, which, we think, ought not to be calculated in the working hours. It would not be calculated in the case of a mechanic going to and from his work in Sydney.
279. Is that calculated now? No; we simply ask the boys to work eight hours, whether they are driving a horse, pumping, or baling water.
280. *Mr. Laidley.*] If the Bill becomes law, will it not materially affect the export trade in coal? If there was a full trade it would affect it materially.
281. *Mr. Vickery.*] Would it not affect the trade still more if it was a small trade? The trade would not feel the loss; but if the harbour were full of ships, as I have often seen it, it would then affect the trade.
282. *Mr. Laidley.*] It would detain the vessels? Yes; that is what I mean.
283. It would be detrimental to the interests of the coal trade generally? Yes.
284. *Chairman.*] What is the next clause which you wish to speak upon? Clause 3, which refers to the boys. I wish to refer to the age at which boys are to be allowed to work. I would say, as I said before the last Committee, that I do not consider the provisions in the present law very hard. There is no hardship in asking a boy to go to work at 13 years of age. The Public Instruction Act says that a boy must go to school until he is 14, but it would be a hardship upon his struggling parents with large families to compel the boys to remain out of the mines until they are 14. A boy's work at 13 in the mines is very easy. I think that the age fixed by the present Act—13 years—is the proper age for a boy to commence work in the mines. In the English Act it is 12 years.
285. *Mr. Vickery.*] How much a day do you give such boys? From 2s. to 2s. 6d. It is a very great help to poor families.
286. *Mr. Kater.*] Can you say, from your own knowledge, whether the boys entering the mines at 13 years of age clashes with the Public Instruction Department? I have never heard that it does.
287. Have parents been brought up and fined for their boys not being at school? Not to my knowledge. When a lad reaches 13 years, and his father wants his assistance in the mine, he simply gets a certificate of competency from the inspector, and we employ him.
288. *Mr. Combes.*] The English Act makes the age twelve years, and you say it should be thirteen? Yes; I think it is a fair age.
289. *Chairman.*] Which is the next clause to which you would refer? Clause 5, which prohibits the payment of wages at public-houses. The clause says "or place belonging or contiguous thereto or occupied therewith." By an arrangement with the Bank of Australasia, the bank pays the miners in the employ of the Wallsend Company at the bank, instead of at the colliery. This is a matter of great convenience to the proprietors and to the men, but if this was passed, though it is in the English Act, the bank might not be able to pay the men, because the bank is on the same premises, on which there is a public-house erected.
290. *Mr. Laidley.*] Have you heard of any objection to it? None whatever. It may be said that as the public-house is close by, the men will go there to spend their money, but that does not happen.
291. *Chairman.*] Which is the next clause to which you would refer? I would refer to clause 6, which says that the miners shall be paid, "according to the actual weight gotten by them of the mineral contracted to be gotten, and unless otherwise mutually agreed upon, &c." I think that this provision is really unnecessary. The present Act works very agreeably indeed. The portion that I have read should stop at the words, "be paid according to the weight gotten by them." The present Act contains fewer words.
292. Do you think that the provisions of the present Act would work satisfactorily to all parties? I do. I have never heard of any quarrel between the miners and the employers about the matter, except in the matter of standard weight, which I shall refer to later on.
293. *Mr. Kater.*] What is your objection to these words;—Is it that they are unnecessary verbiage? I think so.
294. Have you any other objection to them? No.
295. *Chairman.*] What is the practice now;—Is not one skip weighed out of a number, and an average taken? Yes.

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296. Under this provision, every skip would have to be weighed, would it not? I think it would. It would mean that every skip of coal that came out of the mine must be weighed, if the miners demand it.
297. Is that practicable? It would not be practicable at Wallsend, it might be at small collieries, but we could not do it. We have 4,000 skips of coal taken out of the mine every eight hours. That is eight skips per minute. We could not weigh eight skips, as they came out of the tunnel. It would cause delay, and the miners would not be able to get their work out.
298. *Mr. Vickery.*] You weigh as many as two men can weigh, then take the average? We weigh one skip in every eight, and by actual calculation at the end of the fortnight, we find that nothing could be more fair. Sometimes it comes out a ton over, and sometimes a ton less. But nothing could be more fair to the miners than the system of averaging that we have now. I have never heard of any disputes in the collieries in the Newcastle District, in reference to that system. If the clause is passed as it is, the miners could insist on every skip being weighed, and that would be a great infliction on both parties.
299. *Mr. Laidley.*] Would it not mean great additional cost in the getting of the coal? Yes; not only in labour, but also in plant.
300. And the detention of the collieries generally? Yes.
301. And the ships in port? Yes.
302. *Mr. Kater.*] And you think that the extra labour would be quite useless? Yes; quite useless.
303. *Mr. Laidley.*] Have you heard complaints of the present mode of weighing? No.
304. The men do not object to it? I have not heard that they do.
305. *Mr. Combes.*] What is the practice in England under the present Act? I could only speak from hearsay.
306. *Mr. Kater.*] What is the provision in the English Act? Clause 12 of the English Act is very nearly the same as clause 6 of this Bill. Our mines having been constructed in accordance with the requirements of the present Act, I think it would be a very injurious thing to so alter the law as to cause extra expense all round. The present Act as it is would certainly do so.
307. *Mr. Laidley.*] If they had to weigh every skip would that mean the employment of more labour at the pit? Yes.
308. That means an extra cost per ton in getting the coal? Yes.
309. *Chairman.*] Do you know whether the provision in the English Act has been found difficult to work under? I could not say.
310. You have no actual knowledge as to how that clause works? Only from hearsay. Mr. Boyd, whom you have summoned to give evidence, and who is in my office, has lately come from England, and he can explain something about it.
311. *Mr. Jacob.*] What is the date of the English Act? 1887. I may say that a large number of collieries in England are still weighing as they were weighing before the Act was passed, the Act not being enforced where the miners and their employers agree.
312. *Chairman.*] Do you desire to say anything further with regard to clause 6? Yes; sub-clause 3, which refers to the standard weight is not in the English Act. That was added to the Bill by the Assembly. It was not introduced by the Government. I think that sub-clause would inflict an arbitrary rule upon the collieries which have always worked according to the standard weight. We have not the standard weight at Wallsend, but I know companies that have.
313. *Mr. Vickery.*] What do you mean by the standard weight? In this way: The proprietors say that the miners, in filling their skips, must not put more than a certain quantity of coal into each skip. By calculation, the proprietors know that the ropes that wind and haul the skips along, the axles, the skip wheels, and the plant are not capable of carrying more than the manager says the skip should hold. If the standard weight is 13 cwt. and the miner puts 13 cwt. 2 qrs. into his skip, he simply loses the 2 qrs. The miners can gauge their skips so closely, that very few of them fill more than the standard weight. When I was manager of the Newcastle Colliery I never had more than twenty pairs of men who could be caught filling more than the standard weight. By a standard gauge, if a miner's skip comes up filled too high, and stops the work, that coal has to be thrown out and the skip is put to the accident society, which receives the benefit of it.
314. *Mr. Laidley.*] If a miner fills a skip beyond 13 cwt. it will damage the machinery, will it not? Yes; it is likely to do so, and that is why the proprietors who have the standard weight agree mutually with the miners.
315. It has been the custom for years, has it not? Yes; at the Co-operative Colliery and others it has been the custom ever since the colliery started.
316. *Chairman.*] So you think that this provision would be prejudicial to the interests of both the masters and the men? Yes. The large majority of miners take good care not to fill more than the standard weight. I admit that some of them raise a great objection to it, but there is nothing in the objection. It is all in his own hands.
317. *Mr. Kater.*] Is it in favour of the miner or against him, filling the truck too full? It is in his favour, provided it does not exceed the standard.
318. Do you ever find a miner put more coal into the skip than he need put in? At the last colliery at which I was manager not more than twenty pairs would be found doing it in a fortnight.
319. Do you find many miners put much less into the skips than they ought to do? Yes.
320. Then it cuts both ways. If one side is mentioned the other ought to be? We do not say that they must not fill less than the standard weight.
321. Is it in favour of the miner if he puts less than the standard weight? No; the more he can keep to the average weight the more he will earn at the end of the fortnight.
322. What I want to get at is whether the miners, for their own benefit, put in less coal than they should do sometimes? They please themselves.
323. *Chairman.*] Which is the next clause to which you would refer? Clause 7, sub-clause 1. That section says:—

The persons who are employed in a mine, and are paid according to the weight of the material gotten by them, may, at their own cost, station a person (in this Act referred to as "a check-weigher") at each place appointed for determining the deductions, in order that he may, on behalf of the persons by whom he is so stationed, take a correct account of the weight of the mineral, or determine correctly the deductions, as the case may be.

I should like to see the words, "who shall be an employee of the colliery" inserted after the words "station a person."

324. What is the object of that? The miners can surely obtain a suitable person among the large number employed in the mine without going outside to choose a stranger, whose interests might be inimical to those of the proprietors. I do not object to any employe out of our 600 hands being chosen, but I do want to say that a person shall not be chosen outside of the Wallsend Colliery. Mr.
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325. *Mr. Jacob.*] Are you aware that the miners desire to have the right to choose a person outside the colliery? Some, I believe, have expressed that wish.

326. You think that should not be? I think that it is unnecessary.

327. *Mr. Laidley.*] There has been no complaint up to the present time about the check weighman not being one of themselves? Not that I have heard of. I should like to refer to this line, "at each place appointed for determining the deductions." "This gives the check-weigher the power to say what deductions shall be made in the skip. The miners sometimes fill dirty coal, but, if the check-weigher has to determine what is dirty coal, the whole thing will be in his hands. At present the proprietors' man says this is not marketable coal, and we cannot have it." If the clause remains as it is the check-weigher might say that it was marketable coal, and he would have power to determine the deductions. I think these words would be far better left out. We have no quarrel now with the men about the matter.

328. *Chairman.*] You say that you have had no trouble with your men upon the subject? I have not.

329. Do you desire to say anything further about that clause? Yes; the clause says—

(1) A check-weigher shall have every facility afforded to him for enabling him to fulfil the duties for which he is stationed, including facilities for examining and testing the weighing machine.

I should like it made to say that he is to see the testing of the weighing machine as he does now. He can ask at any time to have the weighing machine tested, and it would be tested at once. The clause also says, "and checking the taring of tubs and trams where necessary." I should like to erase these words. They imply that the miner can ask for every skip to be weighed that comes out of the colliery. At Wallsend that would be impossible.

330. *Mr. Laidley.*] Do you not think it is impossible in other mines? I do; but I speak more particularly of my own.

331. It would lead to great delay? Yes; and the output of a large colliery would be curtailed to a wonderful extent.

332. *Mr. Combes.*] Unless some very expensive machinery were erected for weighing, it would necessitate the employing of a great number of men? It would necessitate the employment of more hands as well as the altering of the machinery. It would be inflicting serious injury upon collieries that have been opened under the existing law. I would ask that in sub-clause 3 the words "or determine such deductions," and that the words "or the taring of the tubs" be taken out.

333. *Chairman.*] You object to the check-weigher having the power to determine the deductions? Yes.

334. *Mr. Laidley.*] On what grounds? He should not have power to determine the deductions. It is for the proprietor to say what coal is marketable and what is not.

335. *Mr. Vickery.*] You are willing that he should see the tubs tested, and see them tared? There is no taring at present, and to have it in the Bill means that they will have it in their power to say that every skip must be weighed.

336. *Mr. Combes.*] I do not understand that? The tubs are skips that go into the mine. Under the English Act they do tare the tubs if there is not an agreement on the subject between the masters and the men. It is a very satisfactory arrangement which now exists, and the miners agreed to it over twenty-five years ago. When the suggestion came out first to weigh the coal at the bottom of the screen, that is, when the small coal has passed between the bars. That practice has remained in existence ever since, and to my knowledge has never caused any dissatisfaction.

337. *Chairman.*] What is the next clause to which you object? I would ask to have the word "tare" struck out in all the sub-clauses of clause 8. The clause says:—

Where a check-weigher has been appointed by the majority, ascertained by ballot, of the persons employed in a mine who are paid according to the weight of the mineral gotten by them, and has acted as such, he may recover from any person for the time being employed at such mine and so paid, his proportion of the check-weigher's wages.

This does not refer to coal-mining. It is simply a matter between the miners and their check-weigher. The question of the payment of the check-weigher should not be provided for in the Act. It is giving power to the check-weigher to recover from every man in the pit. No doubt the check-weigher will take care that he gets his wages from the men.

338. *Mr. Kater.*] What objection is there to it;—is it not simply to allow the man to get his wages from the miners? They now pay the check-weigher through the lodge, but if eight or nine men left the lodge they would refuse to pay the check-weigher, and, according to the Bill, the lodge would have power to go to the manager and say, "You must deduct so much from that miner who will not pay the check-weigher." I do not really think it is necessary to have this in the Bill.

339. *Chairman.*] What is your next objection to the Bill? I would now refer to clause 10, sub-clause B, which says:—

Every mine shall be provided with some automatic contrivance to prevent over-winding.

That is not in the English Act, and I am opposed to it. I think it would lead to more accidents than happen now. A Commission sat in England not many years ago to ascertain exactly how the automatic contrivances were working, and they found that more fatal accidents happened in England where the automatic contrivances were in operation than in the same proportion of collieries where no such contrivance was used. If an engine-driver knows there is an appliance at the pulley-heads that will prevent an accident from over-winding taking place, he becomes careless. Depending on such contrivances has cost men their lives. If the machinery gets a little coal-dust into it, or gets out of order in any way, it fails to act when wanted, and accidents happen.

340. *Mr. Kater.*] Is this contrivance used in England? It is in some of the collieries.

341. In some only? Yes.

342. And do you know that in those collieries, as a rule, the winders have become careless, or is it only an inference on your part? I obtained my information from the report of the Royal Commission.

[*The Hon. E. Combes took the Chair.*]

Mr. A. Ross, junr. 343. *Chairman.*] What is the next clause to which you wish to refer? Clause 13, sub-clauses 1 and 2 of that clause are the same as the English Act, but sub-clause 3 is as follows:—

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Within six months after the commencement of this Act, every mine, unless worked on the long-wall system, shall be divided into districts or splits of not more than sixty men, exclusive of wheelers and horses; and each district shall be supplied with a separate current of fresh air, which shall be taken to within 15 yards of each working-face by brattices or otherwise where gas does not exist, and to within 3 yards of the working-face where gas does exist.

That sub-clause lays down a very hard-and-fast rule, which would not be found to work in the best interests of the coal-miners and the coal-owners. We all know that to divide air-ways into little splits really means weakening the current and lessening the ventilation throughout the mine.

344. Do you think it is practically possible to get as much air as that within 15 yards of the working-face? With the present appliances I say no. We should have to get additional appliances to get that quantity of air to within 15 yards of the face. I presented a working sketch to the last Committee, showing the injurious effect in my opinion of splitting the air too much. It would be much better to have splits of 100 men instead of sixty men. If all the bords and working-places in the Wallsend colliery had to be bratticed throughout, I calculate that I should have to get about 4,000 yards of brattice-cloth for the colliery, and from my calculation I have arrived at the conclusion that it would cost fully 5d. to 6d. per ton on the coal for the supply and maintenance of that bratticing. General rule 1 in clause 42 says:—

An adequate amount of ventilation (not in any case less than 150 cubic feet of pure air per minute for each man and each boy and 200 cubic feet for each horse employed in the mine) shall be constantly produced in every mine, and shall sweep undiminished along the airways and into each working-place.

I maintain that it is practically impossible to force that quantity of air undiminished into each working-face.

345. Without very expensive machinery? Yes.

346. It could not be done with the ordinary furnace? It could be done, but there would have to be additional furnaces, and very likely additional air-shafts.

347. These fans and other ventilating machinery are, I believe, very expensive? Very expensive indeed.

348. I have seen them 30 feet in diameter, and very costly? I think we have the largest fan in the Colony at the Wallsend Colliery; it is 40 feet in diameter.

349. What, in your opinion, would be the extra cost entailed in getting the coal if such a provision were carried out? For 5d. or 6d. per ton.

350. *Mr. Laidley.*] Under that clause only? Under that clause only.

351. *Chairman.*] You say this after making a minute calculation? Yes.

352. *Mr. Laidley.*] And there would be no further benefit to the men? I do not think so. If the brattice has to be in every bord to force the air from the first miner to the sixtieth man, the latter and large portion would receive all the foul air and smoke from the other men. It is much better to let the air pass the working-place. The clause says:—

And no place shall be driven more than 25 yards, exclusive of the cut-throughs, away from the current of the air.

353. Is not the present distance 35 yards? Yes.

354. If they only cut 25 yards, would not that mean more labour? I do not know that it would mean more labour, but it would mean greater cost in yardage, and certainly more shift-men would be required.

355. If you have to have a cut-through at every 25 yards, instead of every 35 yards, you must employ more labour? It would cost at least an additional 1½d. per ton for every ton of coal that came out of the mine, whilst there would be from 5d. to 6d. extra for the bratticing, and the latter would be of no benefit to the miner.

356. That would swell the estimate which you gave previously? Yes. That would have to be added to the 4d. a ton which I gave for the twenty minutes' loss of haulage or day's work. There would be that 4d. per ton; there would be from 5d. to 6d. for the expense of bratticing, and 1½d. a ton for the lessening of the cut-through. I do not see that there is the slightest necessity for having such hard-and-fast rules in coal-mining Acts. There is no quantity of air specified in the English Act, only there shall be an adequate quantity. That Act does not say that the air shall pass into each working-place. It does not give the length of the cut-throughs, and it does not say that men are not to travel by the air-ways. The English Act had three years' consideration from a Royal Commission from the most practical and scientific men, and we cannot put our experience against the best evidence that they could produce in the United Kingdom, yet they formulated a rule such as the English Act without specifying details such as is mentioned in this Bill. These hard-and-fast rules are decidedly more against the best interests of mining than in its favour.

357. *Chairman.*] Under the English Act, the mines are placed under inspectors? Yes; and whatever the inspector thinks right is generally done.

358. There are mines that are gaseous and mines that are not? Yes. The mines of England are far more dangerous than the mines in the Colonies, yet in England they have chosen to omit from the Act the hard-and-fast rules which our legislators seek to impose here, and which must mean that the mines are not so well managed.

359. *Mr. Kater.*] You say that the extra cost entailed by the bratticing will be from 5d. to 6d. per ton? Yes; for the bratticing and the maintenance of it.

360. You say that at present the proposed volume of air could not be forced round those places by bratticing? Yes.

361. But you do not say whether if you supplied an extra quantity of air it could be forced round? To force it round would require more appliances.

362. It could be forced round? Yes.

363. You seem to say that it could not be, and then it could if you got air enough? With the present appliances it could not be forced round.

364. With present appliances it could not be done? No.

365. Then your objection is entirely to the cost? I have also mentioned that it would not be for the benefit of the miners.

366. I think your sole objection is as to the matter of cost. You said it would cost an extra 5d. or 6d. a ton to put in the bratticing, supplying additional machinery to force the air round, and having to get so many yards of coal down? That is a matter of cost; I have mentioned also that it would be no benefit to the miners.

367. These, the three things which mean an additional cost, you object to? Yes; there are other things as well.

368. *Chairman.*] That extra cost comes to 5d. or 6d. a ton? Yes, without adding the cost of additional appliances.

369. *Mr. Kater.*] Within how many feet of the working-face does the air go now by brattice or otherwise? By the present Act it goes within 35 yards. That is the maximum. The air does go in and out to a certain extent of every place now by the movement of horses and skips, and the men also.

370. *Mr. Laidley.*] You mean that the miners should have sufficient air without regard to the cost? I do not mean to say that they should not have sufficient air but let the Act read as the English Act, or remain as it is, then we must have sufficient ventilation, but we should not be dictated to in detail as to how it should be supplied.

371. You would not have a hard-and-fast rule? No.

372. *Mr. Kater.*] All your objection is based on the matter of the cost to the mine-owners? That is one of my objections.

373. That is the whole of your objection;—you have mentioned three things which are all based on one objection—the additional cost? Yes; and without benefit to the miners.

374. *Mr. Laidley.*] You think that the miners ought to have a sufficient amount of air? Certainly, but allow the English Act or the present Act to remain in force.

375. Suppose the Bill became law to-morrow, would that not mean the employment of more labour? It would in some cases; but if the provisions with regard to ventilation were enforced some portions of the collieries would have to discontinue working, and a number of men would be thrown out of work.

376. What do you think would be the effect on the mines generally in the Newcastle district if the Bill became law? The effect would be very injurious.

377. Would it not cost more to produce the coal? It would certainly cost more throughout the whole of the Colony.

378. How much do you think? It would cost 4d. a ton in the lessening of the drawing; it would cost from 5d. to 6d. for bratticing, and 1½d. per ton for the extra yardage—from 9½d. to 10½d. per ton all round.

379. Could the coal be produced under this Bill so as to leave a margin of profit to the owners at the present price of coal? Not at the present price.

380. I want to lay particular emphasis on that question;—will there be any margin of profit to the owners if the provisions of this Bill are enforced? In my opinion there will not.

WEDNESDAY, 22 NOVEMBER, 1893.

Present:—

HON. A. H. JACOB IN THE CHAIR.

HON. J. HOSKINS,

HON. H. E. KATER,

HON. W. LAIDLEY,

HON. E. VICKERY,

HON. E. COMBES.

Alexander Ross, junior, further examined:—

381. *Chairman.*] Perhaps you will resume your evidence where you left off at the last sitting, that was at clause 13? My last examination closed at clause 13. The next clause to which I wish to refer is clause 26, sub-clause 2. The words "on application" in the fourteenth line should be struck out. I hold that if it is compulsory for each company to supply returns as stated, the forms should be supplied by the Lands Department, as is done now.

382. Without their being applied for by every company in the trade? They might forget to apply for the form at the end of the year. I would next refer to clause 27. I should prefer that the word "six" should be substituted for the word "three." In most of our collieries the seams are high, and the distance travelled in three months is short, so that surveys made every three months would be found to be travelling over the same ground, and there would be no additional ground shown on the plan. I would also refer to clause 34, sub-clause 5. This, I may say, is an additional sub-clause. It is not contained in the English Act. The powers given to inspectors in the clause are sufficient without this new sub-clause. It gives the inspector the power to require the manager to withdraw the men if he finds inflammable gas in the mine, or of any cause whatever. This, in my opinion, is giving too much power to inspectors, who cannot possibly know as well as the manager the true condition of his mine. The manager only should have the responsibility of his men.

383. *Mr. Hoskins.*] Is it not a fact that under the English Act the inspector has this power? No.

384. Have you read the English Act? I have; and I have not found anything in the English Act bearing upon it. The preceding clauses, 1, 2, 3, and 4, give the same powers as the English Act to the inspectors.

385. *Mr. Kater.*] If the inspector considers the mine dangerous, you would not allow him to withdraw the men? No; I think that responsibility should be on the shoulders of the manager.

386. Would it be possible for the manager not to know? I do not think so, if he has able officers under him. Rule 7 in clause 42 says: "If at any time it is found by the person for the time being in charge of the mine or any part thereof, that by reason of inflammable gases prevailing in the mine or the part thereof, or of any cause whatever, the mine or that part is dangerous, every workman shall be withdrawn from the mine or part found so dangerous." The power is given in that rule to the management to which I do not object at all.

387. *Mr. Vickery.*] Does not the 4th sub-clause give him almost the same power. It says: "To exercise such other powers as may be necessary for carrying this Act into effect"? I do not think it would reach that far, but it is a great power.

388. What is the next clause to which you would refer? Clause 42, rule 1. When dealing in my previous examination with clause 13, rule 1 of this clause was pretty well gone into. I should only here like further to say that if rule 1 on the ventilation of the mines in the English Act of 1872 has been found, after fifteen years' trial, to be so satisfactory as to be re-enacted, word for word, in the Act of 1887, after exhaustive examination on the subject by a Royal Commission, we ought, with every confidence, to adopt it word for word, and avoid the numerous details proposed in this Act.

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389. *Mr. Combes.*] It was passed again in 1887? Yes.
390. And was never altered? Never altered, though a Royal Commission sat, and obtained the best opinions that could be obtained in the United Kingdom.
391. *Mr. Vickery.*] But they did re-enact it? Yes.
392. It provides for adequate ventilation? Yes.
393. *Mr. Kater.*] You wish to get rid of this provision? Yes, and insert the provision from the English Act.
394. What clause of the English Act? Clause 49, in the Act of 1887, relating to the ventilation of mines. It requires that an adequate amount of ventilation shall be constantly supplied in every mine to dilute and render harmless noxious gases, &c., &c.
395. *Chairman.*] What is the next clause to which you would refer? I wish to refer to rule 4. I advise that after the word "lamp," the following words in the English Act be inserted, "except in the case of any mine where inflammable gas has not been found within the preceding twelve months." That simply relates to the inspection of places each day by a proper man. The proposed Act requires that the competent person shall always have a safety-lamp, whether there is gas or not, but the English Act wisely provides that if there has been no gas found there for twelve months prior the man shall have power to inspect the places without a safety-lamp.
396. *Mr. Kater.*] Is that an advantage? It is a great advantage.
397. *Chairman.*] What objection is there to a safety-lamp? The safety-lamp is only necessary where there is gas. Without it the deputy has a better light, and gets along quicker, and is able to detect more readily dangerous places in every part that he visits.
398. The safety-lamp is not so convenient? It does not give such a good light as an ordinary lamp.
399. What is the next point to which you would refer? Rule 14. I object to manholes being made 6 feet high. It would be very absurd in a seam 4 feet high to make the manhole 2 feet higher, and in mines where gas existed it would be exceedingly dangerous. Let the height be made according to circumstances. In the English Act the height is 4 feet. I should advise that there should be no fixed height for the manholes. The manholes should not be higher than the seam.
400. *Mr. Vickery.*] If it is higher it allows the gas to accumulate in the top? Yes; the gas would naturally accumulate there.
401. *Mr. Kater.*] I suppose it might be made in the floor? Yes; but 4 feet would be enough for a man to stoop in. If a man should drop down 2 feet, that would be a nasty drop. When the seam is 6 feet high I have no objection to the manhole being 6 feet, but when the seam is less than that, let the manhole be the height of the seam.
402. *Chairman.*] What clause would you refer to next? In rule 15, 6 feet is again mentioned, and respecting that I would repeat what I have already said.
403. *Mr. Kater.*] Does not the English Act say that 4 feet shall be the minimum? I do not object to 4 feet.
404. *Chairman.*] What is the next point? Rules 17, 20, and 22, dealing with workings under tidal waters, ought not, in my opinion, to be inserted in the Bill. They are not in the English Act, though in Great Britain they have mines working miles under water.
405. What is the next point to which you would refer? Rule 24, dealing with pillars not under the ocean. That rule is not in the English Act. It is a great interference with coal-mining. The manager should be the best judge as to the size of the pillars left, and when to take them out. When working the Welsh bords it specifies that sufficient pack-walls should be built, when really good timber chocks, without the props outside, would be better.
406. What is the next point? Rule 29 refers to coal not to be worked under roads. I would advise that this be struck out altogether. It is unjust and too interfering.
407. *Mr. Hoskins.*] In what way is it unjust? I would refer you to the Wallsend Colliery, of which I am the manager. They have held their land for very many years, but the Government could at any time make new roads in any part of the estate, and if this provision is passed the Company could not work the coal underneath. It would interfere with the whole working of that part of the mine. After we pass through the roads we should have to start afresh.
408. *Mr. Kater.*] You have only to get the sanction in writing of the Minister? Yes; but I do not think that it is fair, seeing that the Company have had their land prior to the passing of the Act.
409. *Chairman.*] What is the next point to which you would refer? Rule 39, with regard to barometers, &c. I should advise that the words "where gas exists" be added to that rule; and, really, as far as my opinion goes, I would rather say erase the rule altogether. Where gas exists, barometers and thermometers tell the tale when the mischief has already been done. That is my experience. I would also refer to Rule 44, with regard to the appointment of workmen's inspectors. The words, "or any two persons not being mining engineers" I think should be struck out. I would also suggest that the words "the owners, agent, or manager" be struck out. Clause 7 deals with the grant of certificate of service. I approve of the clause, but the marginal note does not appear to be correct. I think it is only fair that long-service managers should have certificates of service the same as they had under the English Act of 1872.
410. *Mr. Hoskins.*] Are you pretty well acquainted with the provisions of the Coal Mines Regulation Act of England? I have read it through.
411. I suppose you are aware of the number of people who follow the occupation of coal-mining in Great Britain? The number is very great.
412. Would you prefer to have the English Act in force here? I would, with the exception of a few minor details, which I have enumerated.
413. Will you tell the Committee why you prefer to have the English Act instead of this Bill? Briefly, my reason for that is that it does not provide those hard-and-fast rules which are, in my opinion, so inimical to the best interests of mining throughout the Colony. The English Act does not interfere with mining as this Bill proposes to interfere.
414. Do you consider that if the Bill became law as it is now, that it would have not only a prejudicial effect on the working of the coal-mines, but that it would not be so effectual in preventing accidents as its authors imagine? Yes; I quite agree with that.
415. *Mr. Laidley.*] If this Act were in force, what would be its effect on the miners and mine-owners in the Newcastle district? It would deprive a great many men of work, and it would considerably increase the expense of working the mines, and it would certainly shut some of them up.

416. Would it close any of the mines at Newcastle? Under existing circumstances, it would.
417. They could not continue to work at the present prices of coal and labour? They could not.
418. Therefore, it would really recoil on the miners' wages? It would, eventually.
419. They would have to pay for it? I think so.
420. *Chairman.*] A Member of the other House has asked the Committee to summon two gentlemen from Newcastle, Mr. May and Mr. Green, who, he says, are mining teachers;—do you know them? Mr. May is employed by the Technological College to teach mining to young men; he has classes in various townships. I think he has three classes in the Northern district. Mr. Green I do not know.
421. *Mr. Laidley.*] Has he any in your district? He had one, but I think it has failed.
422. *Mr. Combes.*] Do you know what qualifications these gentlemen have? I do not. I know Mr. May only to speak to.
423. Have they been practical miners? I could not say; Mr. May has not been long in the Colony.
424. With reference to your evidence with regard to Rule 1, where you state that the cost of getting the coal would be increased so much a ton if the bratticing were carried out, I would ask whether, on further considering the subject, you have any doubt as to the correctness of the evidence you have given on that point? I am quite satisfied that it would cost what I have stated.
425. You did not make an extravagant estimate? No.

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Adam A. Boyd called in, sworn, and examined:—

426. *Chairman.*] Where do you reside, and what are you? I reside at Wallsend, and I am mining surveyor for the Wallsend Company.
427. This Committee is holding an inquiry concerning the Coal-mines Regulation Bill, which has been sent to the Legislative Council from the Assembly;—have you studied that Bill at all? Yes; I have written down a statement that I have to make. I may mention first that I have had eleven years' experience in coal-mining; three and a half years in the Colony, and the rest in Great Britain, and I am the holder of a first-class certificate of competency from the Home Government as a mining manager. I am acquainted with the Coal Mines Regulation Act at present in operation at Home. The first part of the Bill to which I take objection is clause 2. If this clause is retained, which really means seven hours and forty minutes work, it will seriously limit the output of a mine. All well-regulated mines or collieries work up to their fullest capabilities. That is to say, the machinery is running its utmost, compatible with safety, so that lost time cannot be overtaken. Twenty minutes' curtailment in the working time would mean a proportional decrease in the output. At Wallsend this would mean a loss of, on an average, 128 tons per day. I think it is unnecessary for me to state that a decrease in the output is accompanied with a proportional increase in the cost. At Wallsend this would be an additional 4d. per ton on the output.
429. That would be the result if this clause were passed? Yes; owing to the deduction of the twenty minutes. At present we work eight hours a day.
430. *Mr. Vickery.*] What is the whole output of the mine? 2,600 tons a day.
431. And it would add 4d. a ton to the whole of that 2,600 tons? Yes.
432. *Chairman.*] What is the next matter to which you would refer? I should like to mention the restriction with regard to the employment of boys in mines. Clause 3 says that the age shall be fourteen years. The English Act makes it twelve years, and I think it has never been shown that it was any injury to the health of boys to be employed in mines at the age of twelve years. To take twelve months off would be a great hardship to parents, who are very often depending greatly on what their children can earn.
432. *Mr. Vickery.*] The present Act says thirteen years? Yes.
433. And you think that is old enough? Quite. The next clause to which I would refer is clause 6:—This clause imposes a very serious drawback to the output of a colliery being maintained. In fact it would be impossible in some of our large mines to carry on the work and weigh every skip. In England, where mining is all conducted by shafts, the output in each is limited, but here we have a mine drawing as many as 4,000 skips per day of eight hours, or on an average, eight skips per minute. Although this clause is in the English Act, yet it is not acted up to in its entirety, as I personally know a large number of collieries where occasionally a skip is weighed, and I can also point to others, but small collieries, where only one skip is drawn at a time, and where every skip is weighed. This, I think, clearly proves that where the output is large, it is an impossibility, or at least a great hindrance to work to weigh every skip.
434. Sometimes they draw thirty or forty skips at a time? In England, owing to the outcrop portions of the seams being exhausted, tunnels are quite out of date. There are nothing but shafts. Some of the older shafts are only drawing one skip at a time, and then there is plenty of time to weigh every skip.
435. *Mr. Combes.*] You weigh one skip in every four? We weigh one in eight.
436. *Mr. Laidley.*] You think it would be a serious loss of time to weigh every skip? Yes.
437. It is almost impossible, is it not? I do not see how it could be possible in a large mine like the Wallsend mine.
438. *Mr. Hoskins.*] Do you think it is necessary even in the interests of the miners? No; averaging is equally fair to miners and mine-owners.
439. *Chairman.*] What is the next clause to which you would refer? Clause 7:—No check-weigher should have the power given him to say what he considers should be deductions. He is not in a position to know what is really marketable coal. The master has the best knowledge of what he can sell.
440. Still this is in the English Act, which has been in operation for some years? Yes.
441. What is the next point to which you would refer? Clause 13, sub-clause 3, and rule 1, which goes with it. It is a great fallacy to fix any hard and fast rule regulating the size of splits. This should certainly be left to the judgment of the manager of the mine, who will see that the air is split most effectively. Splitting of air currents to a certain extent is advantageous to the quantity obtained, but as soon as a certain limit is reached the current becomes so sluggish that it does not effectively ventilate the workings. Unless where gas exists, bratticing should not be compulsory. It is quite unnecessary. Bratticing, as proposed in this Bill, would cause an enormous amount of friction to the air current,
owing

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owing to the increased area of rubbing surface offered to the current. Another and very strong objection is that the powder smoke, fumes, &c., would be conducted round and into every working place, making the atmosphere more vitiated than it otherwise would be. The number of men should not be stated. Allow the manager to manage his mine. I have seen a great many collieries at home, but I never saw brattice used in one of them unless where they worked with locked safety lamps and feared sudden outbursts of gas. In rule 1, to which I would like to draw your attention at present, as it goes hand in hand with the one under discussion, I think the words "adequate amount of ventilation" is quite sufficient without adding any arbitrary words regarding the quantity to be supplied. No fixed quantity is laid down in the English Act. There it is recognised that varying circumstances alter requirements. The words "and shall sweep undiminished along the air-ways and into each working place." It is impracticable to follow out the above clause. According to this it would be necessary to have everything air-tight, which is impossible underground. At present our mines are fitted with ventilating machines or furnaces with sufficient power to give 100 feet per man in compliance with the present Act. Then leaving out of the question the extra power it would take if brattice was employed, with this increase of air from 100 to 150 would mean an increase in the power of three and a half times—that is to say, where two boilers do the work it would take seven. No distance is specified in the English Act about cut-throughs, and yet I never heard a miner complain that it was too far behind him. It is absurd to think that a return air-way cannot be used as a travelling road. It is very unfair to many colliery proprietors who have gone to the expense of preparing a good travelling road, in which the return air courses. It is very unfair. Perhaps the whole system of ventilation might have to be changed, &c.

442. *Mr. Vickery.*] The cut-throughs, according to the Bill, are to be 25 yards apart? Yes.

443. In the present Act the distance is 35 yards, do you think there is any reason for reducing it? There is no reason at all. I do not think that the length of the cut-throughs ought to be stated in the Bill.

444. *Mr. Laidley.*] Does it not mean more labour if this is to be done and the bratticing carried out? I do not know that it means the employment of more labour.

445. Will there not be extra work in cutting 25 yards? There will be more labour.

446. *Mr. Combes.*] The question is whether doing this extra work would not involve more labour? Certainly it would.

447. *Mr. Kater.*] Supposing the extra work were done, would the miners themselves be benefited by having a greater quantity of air and better air? I think not. If the bratticing were carried out as proposed in the Bill the miners would receive all the powder smoke, and some of them would be nearly suffocated. At present the current sweeps past the bords and they get sufficient fresh air.

448. *Mr. Laidley.*] It would be injurious to them? Certainly.

449. *Mr. Kater.*] Surely those nearest the air current would be benefited? Yes; those in the first part of the split, but it would make it all the worse for those at the other end.

450. You just said that all would suffer; you said it would be worse for them all;—do you mean that? All would suffer except the first two or three. It would not be any better for them, and it would be worse for the other twenty-seven bords.

451. *Chairman.*] Then it would do more harm than good? Yes.

452. *Mr. Combes.*] Would that apply to the Welsh bords? Yes; of course it would not apply to a long wall.

453. *Chairman.*] What is the next point to which you wish to refer? Clause 27, which provides for the surveying of the mine every three months. I think that every six months is as often as is necessary. In these high seams which we are working here the face does not advance a pillar's length in the six months, so that to make it three months would simply mean that there would be nothing additional to put on the plan.

454. *Mr. Vickery.*] What you mean is that the mine plan should be completed every six months? Yes.

455. *Mr. Laidley.*] There is nothing to be gained by surveying the mine every three months? Nothing.

456. *Chairman.*] What is the next clause to which you would refer? Clause 34. I should like to mention sub-clause 5, about the inspector having power to withdraw the miners. I strongly object to the inspector possessing this power. The manager is responsible for the management of his mine, and he is the person who is best able to judge of its safety. The manager should be as little hampered as possible. He should be given full scope to use his judgment and experience. This clause is not in the English Act.

457. You consider the sub-clause wholly unnecessary? Yes. Rule 15, with regard to the height of the manhole, is altogether wrong. We might have a 4-foot seam or a 5-foot seam, and suppose the manhole is 6 feet high, and there is gas in the mine, the gas would lodge in the cavity, and if a man went into it with a light on his head, it would explode. The manhole ought not to be higher than the ordinary roof.

458. *Mr. Kater.*] I suppose you have compared notes with Mr. Ross about the clauses of this Bill? Not all the clauses.

459. You compared notes as to the Bill as to what you would object to? No.

460. *Chairman.*] You have simply expressed your own views? Yes. I did not compare notes with Mr. Ross on the Bill.

461. *Mr. Laidley.*] From your experience as a mining manager, what would be the effect of this Bill if passed? It would involve extra cost in getting coal.

462. Would it be much more? I should say from 10d. to 1s. a ton more.

463. *Mr. Kater.*] Is that a guess? No; I have gone into it.

464. You thought of that beforehand, and worked it out, did you? Yes.

465. Is that your own calculation, or did anyone else work it? It is taken from the clerk in the office.

466. *Mr. Laidley.*] Is anything to be gained by the men or anyone else by the passing of this Bill? No; nothing.

467. *Chairman.*] Have you a pretty good knowledge of the working of the English Act? Yes.

468. Would you prefer to have that Act in operation here or this Bill? With a few exceptions, I should prefer the English Act, though I do not consider that it is perfect.

469. But you would prefer it to this Bill? Oh, certainly.

470. Do you consider the existing Act in this Colony preferable to this Bill? Yes.

471. *Mr. Vickery.*] Is there really any need for a new Act in this Colony? I think not.

472. *Chairman.*] The present Act works well? Yes.

473. *Mr. Kater.*] It is quite sufficient? I think so.

474. It does not want mending, in your opinion? No.

475. *Mr. Laidley.*] Would it be possible for some of the mines at Newcastle to work at any profit at all under the Bill with the present price of coal? No; it would close up several mines in the Newcastle district.

476. *Mr. Kater.*] Have you ever heard of any agitation for the present Act to be amended, or for a new Act to be passed? No.

Mr.
A. A. Boyd.
22 Nov., 1893.

Joseph Croft called in, sworn, and examined:—

477. *Chairman.*] Where do you live? At Newcastle.

478. What are you? Manager of the Newcastle collieries.

479. Have you prepared written evidence on the Coal Mines Regulation Bill? I have.

480. Does that contain all your views on the subject? Yes.

481. Will you hand in that evidence on oath? Yes.

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Part I clause 2—Employment of male persons.—I think that the provisions regarding eight hours should be more definitely stated. The clause reads, "Work below ground in any mine more than eight hours inclusive of one break of twenty minutes for the purpose of obtaining food," on the days named, I should like it to say exclusive of one hour for meals and the time occupied travelling in and out of the mine. I do not wish in any way to increase the hours of employment beyond eight, but wish it to be distinctly stated that the eight hours should not include travelling in and travelling out, it simply means that as in every other occupation he is going to his work.

Page 2, clause 6, sub-section (II).—The system provided for in this clause could not be satisfactorily carried out in the working of a mine, it would very seriously interfere with the out-put, and the cost of the coal would be increased. From one of our mines we take out and tip five skips of coal per minute. How is it possible to weigh them. I would ask that the word "actual" in line 53 be omitted, and that in line 54 after the word "gotten" the words "as ascertained at the weigh-screen" be inserted.

Page 3, clause 6, sub-section (III)—Standard weight.—Erase this clause. You could not work your mine with such a provision in the law. There are many reasons for that. The manager is the best judge of what weight of skips his machinery will carry. He is the best judge as to what is safe, and the height to which the skips should be loaded. When a train of skips is coming along at the rate of 12 to 14 miles an hour with coal piled to high above the skips, it will simply knock everything to destruction. You put up appliances to carry a certain working-load, and if you allow the men to overload the skips you disarrange everything. The manager must have the power to enforce discipline.

Page 3, clause 7, sub-section (1).—*Appointment on part of men and removal of check-weigher.*—Line 39, after "person" add "who shall be an employee of the Company." Line 42, after the word "or" omit "determine correctly" insert "of." The check-weigher should not have the power to determine deduction, as it would lead up to no end of argument, confusion, and probable stoppage when refuse is sent out. A check-weigher should be an employee of the Company. They might appoint somebody who would be very offensive to the manager. They might appoint a man who had been dismissed for insulting conduct. We wish to prevent this possibility by making it imperative that the check-weigher should be an employee of the Company.

Sub-section (II), line 46, after "and" insert "seeing"; line 47, omit "and checking the taring of tubs and trams where necessary."

Sub-section (III), line 56 and 57, omit "or determine such deductions"; also, in line 8, omit same words.

Sub-section (IV), line 17, omit "such"; same line, omit "determining"; line 18, omit "such deductions." The check-weigher in present Act was not allowed to interfere with the weighing authorised only to take such account.

Page 5, clause 10, section (d).—*Automatic contrivance.*—Lines 55 and 56 to be omitted. This is not in English Act. I would rather leave the responsibility upon a competent engine-driver, and let him have no excuse for neglecting his work. The appliances get rusty, or something goes wrong with them. If you allow an engine-man to suppose that you have provided something to take away the danger, it will make him careless.

Page 7, clause 13, sub-clause (III).—*Division of Mines into Splits.*—I am opposed to the minimum size of splits. I take it that only a given quantity of air for ventilation can enter a shaft in a given period, and if this is divided up into a number of splits the current would be weakened, and a less quantity of air per minute is supplied than would be the case if there were fewer splits. Could work the mine better if I had 100 men in a split, and it would be better for the health of the miners, because it would give in moiety 4 feet of air every second instead of 2½ feet. Ask to have seventy men, exclusive of wheelers and horses, in each district, not sixty, as provided in clause. Object to brattice where gas does not exist, and ask that after "air," in line 30, the remainder of clause be omitted.

Page 11, clause 26, sub-section (II), line 14, omit "on application."

Page 11, clause 27, line 32, omit "three," insert "six."

Page 14, clause 34—Miners may be withdrawn if inspector finds cause of danger.—Erase sub-section (v). I do not think the inspector should have the power to withdraw the men from a mine unless the Government became responsible for any loss that may arise. Manager should be competent to judge as to the safety of his mine. An inspector cannot be expected to be so thoroughly acquainted with the conditions of a mine as the manager and overman who are in daily touch with the mine. I think that where the inspector is of opinion that danger exists he should have the power to call the attention of the manager or sub-manager to the matter, and if they disagree in opinion with the inspector, the aid of a third person might be called in.

Page 19, part (II), rule (I).—*General rules.* I look upon the provision as it stands in the Bill as impracticable and unnecessary, because a door would have to be erected opposite every place, and as there would be thirty places by the time the air would reach the last bords, the accumulation of impure air which would come from the other bords would be carried into the last bords, and have a very injurious effect on the miners working there. Ask for 100 instead of 50, as in line 25, cubic feet of pure air per minute for each man and boy; object to line 29, which says "and into each working place." I would be satisfied if, instead of into each working place the rule were to read, past each working place; I would ask for the same cut

Mr. J. Croft, cut through distances, as we have at present "35 yards, exclusive of the cut-through," not 25 yards. Line 36, after "through," omit down to "travelling roads" inclusive. Line 40 goes on to say, "and no return air-way shall be used as a travelling road"—that is wrong; there should be no such words in the rule; I have cleared out return air-ways for the purpose of making it a safe road for the men going in and out, in place of using the engine road; men can go in and out with perfect safety, and it is perfectly pure.

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Page 20, rule 4, sub-section (1). Object to the books being open to the inspection of the workmen, as they may be made a lever for vexatious complaints; should be open only to the inspectors.

Page 23, rule 17.—*Width of pillars and position under ocean.*—I think these provisions are an interference with the ordinary management. One part goes on to say, "and the size of the pillars shall be such as will afford ample support after exposure to the crumbling effect of the air over many years." No man could say what would be a proper size for the crumbling effect; ask that the minimum width of the pillars of coal shall be six yards. The thickness of pillar must be decided by the circumstances, the depth, thickness, and character of the coal.

Page 24, rule 20, line 17. After "every" omit "bord" insert "winning headings, narrow bords, or leading levels."

Page 25, rule 29. Would ask to erase the whole of the clause. I think that without any reference to the Minister or any interference of the inspector we ought to be allowed to continue our working in the ordinary course if the cover was sufficient to protect the road, say, anything like 100 feet.

Page 26, rule 39. Ask to add at end of this rule "where gas exists"

Page 26, rule 43. I object to the inspector giving any person a written authority to take copies of the extracts, object to any person employed in the mine being allowed to inspect and take extracts from the books. He should make the inspection himself, and quite independently. These independent reports should then go to the Chief Inspector, who would deal with them without any prejudice. Books should only be accessible to an inspector.

Page 27, rule 44. I think the miners inspectors should forward their own complaints, and not make the Mining Manager the vehicle for conveying the complaints of the men to the inspectors.

482. *Chairman.*] What is your opinion as to the result, if the Bill becomes law, to the interests of coal-miners, coal-owners, and others? It would make a loss, taking the three items into consideration, the bratticing, the extra yardage, and the loss of twenty minutes per day, 1s. a ton.

483. You have worked that out? Yes.

484. *Mr. Kater.*] What is your output? About 1,500 tons a day.

485. Would the Bill, if in force, leave any profit to the proprietors of the collieries? I am positive that it would be the means of closing several mines in the north. At our own colliery, it would mean the putting off of a great number of our hands, if we were to act up to the conditions imposed in the Bill.

486. *Mr. Hoskins.*] Would it also, if brought into operation, compel the mine-owners, if they wished to have any profit at all, or to keep the mines going to reduce the miner's wages? Decidedly the wages would have to be reduced the moment the new Act came into operation.

487. To what extent? I could not answer that at the moment.

488. *Chairman.*] Would you prefer the existing Act to this Bill? I should certainly prefer the Act which we are now working under.

489. *Mr. Vickery.*] Is there any great complaint by miners and others against the provisions of the existing Act? I have never heard anyone complain about the hours of labour.

490. *Mr. Kater.*] Has there been any complaint with regard to any other parts of the present Act? No.

491. Do you consider that the Act wants amending? A few clauses which I have referred to.

492. You are perfectly satisfied with it? I am satisfied, with the exception of clauses mentioned in my evidence. I have worked under it for fourteen years.

493. Are the miners satisfied with the present Act? Yes.

494. You have never heard anything to the contrary? No.

495. Are you conversant with the English Act? I have been through it several times.

496. Would you prefer it to the present Bill? With some modifications.

497. You prefer the present Act to this Bill? I do.

498. *Mr. Combes.*] You think that the powers given to the inspectors under the present Act are quite sufficient to ensure the safety and the proper working of the mine? Yes; I am against the inspectors having certain powers.

499. *Mr. Kater.*] Are you satisfied with the powers that the inspectors have under the present Act? Yes; with certain modifications, as stated.

500. You think they are sufficient for the safety of the mine? Yes.

501. You would not curtail them? Only in the way I have mentioned.

502. Are the inspectors under the present Act clothed with too much or too little power? I think they have too much power with reference to the stoppage of mines.

503. *Chairman.*] Is that power provided in this Bill? Yes.

504. *Mr. Laidley.*] Is it the English Act? No.

505. *Chairman.*] Would you like to say anything more? I should like to draw attention to the clause with reference to certificates of service. In a marginal note it says, "under managers"; it should be "under manages." The clause should read in the same way as that of the English Act of 1872.

WEDNESDAY, 29 NOVEMBER, 1893.

Present:—

HON. W. H. PIGOTT IN THE CHAIR.

HON. J. HOSKINS,

HON. E. COMBES,

HON. A. H. JACOB.

Mr. George Henry Green called in, sworn, and examined:—

506. *Chairman.*] What are you? A mining engineer by profession and a certificated colliery manager.
507. What are you doing at present? I am working as a shiftman below ground.
508. What experience have you had in mining? I have had seventeen years experience here and in the old country together? I commenced as a mining pupil.
509. What is a mining pupil? A mining pupil is one who is apprenticed under a mining engineer to serve his time according to the custom in the old country. They are called mining pupils in the old country. You must serve five years according to the English Act. Then you must sit for examination, which I did. In 1879 I received my certificate of competency as a colliery manager. Also I was teacher of the coal-mining classes connected with the Newcastle (New South Wales) Technical School for two years.
510. What experience have you had as a practical miner? I do not quite understand what you mean.
511. You are now working as shiftman in the mine? Yes.
512. Do you know anything about the getting out of coal? Yes; I know all the operations in connection with mines. I have served as overman; I have got coal for a short time; I have worked as repairer in the old country, and been overman, under manager, and manager.
513. You are acquainted with the Bill we are dealing with? Yes.
514. Have you gone through it? I have gone through a portion of it.
515. What portion? I looked at the general rules, principally in clause 42.
516. Have you confined your attention to those rules? No; I have not. But owing to circumstances over which I had no control I have not been able to give that amount of time to the measure which I intended to give to it.
517. Will you state what you approve of and what you object to in the Bill? In the first place, as regards ventilation, the first rule provides that there shall be a certain amount of ventilation.
518. It provides for an adequate amount? Yes; it specifies a minimum.
519. Have you any objection to that? I have no objection to the quantity as a minimum. My own opinion is that if it is supplemented by canvassing or bratticing in the working places a minimum of 125 cubic feet per minute would be sufficient.
520. Have you anything to say further with regard to the rules? I thought that when I came here some information would be asked for.
521. You have come to give us some information about the Bill;—we want to know what you have to say about it? I have not made any special preparation; I want to say something with reference to splitting the air. Sub-clause 3 of clause 13 says:—

Within six months after the commencement of this Act, every mine, unless worked on the long-wall system, shall be divided into districts or splits of not more than sixty men, exclusive of wheelers and horses; and each district shall be supplied with a separate current of fresh air, which shall be taken to within fifteen yards of each working face by brattice or otherwise where gas does not exist, and to within three yards of the working face where gas does exist.

First of all, I wish to speak with regard to splitting: As a professional man, who has had a lot of experience, and has had a good deal to do with the ventilation of mines, and who has made a good deal of experiments with regard to splitting and otherwise, that a general system of splitting is very desirable. Also, that up to a certain point it will always benefit the ventilation of a mine. I have found in the old country that you can divide your ventilation into a certain number of splits, but you must not go beyond that number, or certain disadvantages will attach to it. I find the usual number is from ten to a dozen splits in large collieries. In large collieries you can have that number without diminishing the efficiency of the ventilation. Of course, as a matter of fact, the limit to which you can carry your splitting depends on the size of your shafts, and in the case of gaseous mines the velocity of the air current which you get in the working faces. I find when the splits are carried out to ten or a dozen that then the limit is not reached, that is to say, that up to that point the velocity was not reduced below an effective one in the face of the workings, nor was the quantity of air so much increased as to require any enormous power to get it through the shafts. As regards the number of men in the splits, there is no provision here for splitting in long wall working. I do not suggest that any should be made, although I think it would be advantageous to do so, but I wish to say that if you have sixty men in a split you ought to be able to provide places for any number of men to get an output equal to that of the largest mines we have in existence at the present time. As regards the bratticing, I hold that the air which is taken into a working mine unless it is taken into the face where the miners are working is only half effective; in fact, not that I know from experience, that if you are working in the face of the working-places and have no air carried in, it may be 25 or 35 yards from the current, the men must be working in an unhealthy atmosphere. If you have a dip working-place it will ventilate itself to some extent, but where you have rise-places and working-places at which the roof is higher than the hole through which the air passes, in such a case you cannot possibly expect to get more than a very moderate amount of air passing to the miners' working-places. And, as a rule, in this district most of the very bad atmosphere is in the working-face. I know that it is so, and I think that bratticing ought to be carried out to some extent in those working-places. I believe the Bill provides that the brattice shall be taken to within 15 yards of each working-face. I believe that the matter of a yard or two is not of so much importance as that the air shall really be turned into those working-places.

522. *Mr. Jacob.*] There is a distinction made with regard to gas or no gas? I am referring particularly to places where there is no gas. No one requires information as to a place where there is gas. Anyone with any practical acquaintance with the subject would admit that a place must be bratticed if there is fire-damp. There are mines in the Newcastle district which are bratticed now. I have often heard it remarked by miners that they prefer to work in a mine in which there is a certain amount of gas, just sufficient to require a brattice to keep it away from the working face, the reason being that in such

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cases they get good air carried up to the place where they are working. I am informed that there is an objection to bratticing, as the cost of it is very high on the one hand, and, secondly, that the additional resistance offered to the ventilation will make it impossible to ventilate a mine. As regards both these points I am in a position to give a little information. As a matter of fact, every mine in which I have worked in the old country, and I have been in a score of the largest mines, canvassing is used. Where there is gas there must be brattice. It is a matter of necessity then, and no difficulty is found about it. I have been employed in mines where they have been raising 1,500 tons of coal a day. I was under manager at one such mine, and throughout the mine in what were called the "whole" workings, canvas was made use of to ventilate the working faces. It was carried up according to special rules, and kept within 4 yards of the working face. It was a deep and very fiery mine, and proper ventilation was provided by means of a large fan. I have been employed in a mine in the Newcastle district, in which a certain amount of gas is found, and of course it is found necessary there to do the same thing, to brattice the working-places, but not to such an extent as was necessary in the North of England; not to keep the brattice within 4 yards of the working face, but generally to brattice so far as was necessary to keep the places clear of gas. My occupation for a time consisted in canvassing faces and conducting the air into them, and I found it absolutely necessary to canvas every place that was either flat or rise.

523. *Mr. Combes.*] Not in the dip? It is not necessary in the dip places. That is not necessary unless you have much black damp, or holes in the roof, &c. As a matter of fact there are no difficulties that cannot be overcome in regard to the ventilation by canvassing the places. As a student of mining and the laws which govern the ventilation of mines, I can calculate closely what would be the result of putting canvas in certain districts; canvassing the stalls and bords. According to the accepted rules as regard ventilation, I can calculate what you might expect would be the increase of power in such a case. It would be as well for me to mention the figures. I assume the intake into a bord or working face to be 8 feet by 6 feet where the main intake is 10 feet by 7 feet. I assume that the 8 feet by 6 feet is divided off by the canvas bratticing; taking an ordinary split with sixty men in it, you have thirty bords, and the average amount of canvas you will have in them will be about 10 yards if you are going to brattice up 20 yards as a maximum: so that on an average you would have about 300 yards of canvas bratticing in the bords. Generally speaking, I do not think that the increase of power in any case would be more than 10 or 15 per cent. Of course the power varies exactly in proportion to the quantity of coal consumed. It means that you would have to use from 10 to 15 per cent. more coal. As to the cost of bratticing, I do not think that that is such a great item as some people may imagine it to be. When I was doing this work I had to brattice the places up every day of working, and the output of that district would be about 200 tons a day. If you take 5s. for a half-day and the output is 200 tons—a man could easily follow up 150 tons in that way—I was following up 200 tons a day. Take 150 tons as a fair output for half a shift, and say that a man is doing nothing but attending to the canvas, and say that the charge is 5s. for that class of work, it is lower now. That gives you something between 3d. and 4d. as the cost of the labour for the canvassing. That is what it actually cost in cases where I was employed. I know from my experience in English mining that in no case has it cost much more than that. I had a place out of which 200 tons a day were coming. I kept it all ventilated. I hung the sheeting, took down all the old canvas, and rehung it where it was required, and kept the ventilation going in all the places, the whole of which were canvassed, except two dip places.

524. *Mr. Combes.*] And you ventilated by the ordinary furnace? No—by a fan, 30 feet in diameter.

525. Was that in England? No; that is in the northern district of this Colony. The cost comes out much the same in the old country, where you have a deputy attending to the work. He attends to the timbering and to the laying of turns, and also does the brattice work. He generally has an output of 60 to 80 tons a day to deal with. Where the output is from 60 to 80 tons a day the amount of canvassing is very small. It does not mean much more than a dozen places (sometimes I have known eighteen), and the man has to put the cogs into their places. Part of his work consists in doing that in timbering and laying the road turns, and only a small proportion of his time is taken up with canvassing. That means that certainly not more than a quarter or a sixth of his time is taken up with this canvassing work.

526. Your fan was used as an exhaust fan? Yes. What I have said will give some idea of the actual cost of bratticing in some cases in this country.

527. *Chairman.*] Have you finished with that clause? I have to refer to the cost of the material. In the north of England the cost of brattice cloth is 6½d. or 7d. per square yard, the same as it is here. I have known a gaseous mine with a large output, in which every place in the "whole" was canvassed, and the cost of the "whole" output (that is, not including the output of the pillar workings) was about 16 of a penny per ton of the coal got—about one-sixth of a penny. Of course the cost of bratticing would vary slightly with the conditions. If you have a wet mine, or one which works only one day a week, the canvassing will not be so cheap an item as it is in a mine working six days a week. The canvas rots whether you are working every day or only one day in six. The sum of my experience is that canvassing can be carried out in favourable cases at a half-penny a ton in this Colony. I like to substantiate a statement like that, because I know that most people are under the impression that it costs a great deal more, and it is necessary to get actual facts to oppose to wholesale assertion.

528. *Mr. Combes.*] With regard to the ordinary price of bratticing, what would the increase of cost per ton be? In certain mines, where they have a little gas, there would be no increase at all. I never had to do with mines until recently that were not canvassed. All my experience has been in mines that were canvassed.

529. I suppose all mines are more or less canvassed? In some mines there are a few sheets, but they add nothing to the total cost. Even in long wall collieries, fiery mines, the cost of canvassing has been very small. I worked one out to satisfy myself, and it came to some few hundredths of a penny per ton.

530. You are not prepared to say what the increased cost per ton would be? No; I have stated what I have known to be the total cost in some instances, and that was a halfpenny per ton.

531. *Mr. Hoskins.*] I understand you to say that you have been assistant manager in some mine? Yes, assistant manager, and also manager, both in this country and in England.

532. Are you pretty well acquainted with the Bill generally? I have not read it through; I have only glanced at it. I received an invitation to come and give evidence.

533. Could you say whether if the provisions of the Bill were strictly enforced it would or would not increase the cost of getting coal? It would undoubtedly increase the cost somewhat. 534.

534. Can you give an approximate idea as to what amount? There is the question of the eight hours involved in that. The eight hours might cause a diminution in the output, and the increased cost would depend on the extent of that diminution. I know as a matter of fact that the limitation of the hours of boys in the North of England did not increase the cost of the coal to any great extent. I think that in the case of the reduction of the hours of the boys, with sundry other alterations, the cost of the coal was increased by something approaching 1d. a ton.

535. What do you consider would be the increased cost of getting the coal if this Bill were rigidly enforced? I cannot answer for the result of the eight hours. If the eight hours is passed, and the men are simply paid by the hour, the increase of coal would be very slight from that source; the improvement in the ventilation would probably amount altogether, including bratticing, to $\frac{1}{2}$ d. I think, as a matter of fact, that there would be no great increase in the cost.

536. I understood you to say that if the Bill became law, and were strictly enforced, it would increase the cost of getting coal? Yes.

537. Are you in favour of enforcing the eight-hour system by law? I cannot say I am in favour of legalising or enforcing it.

538. Will you give us your objections to it? A reduction in the hours would always mean in the case of a colliery manager a certain amount of high-pressure work. I do not think that any colliery manager wishes to have any higher pressure than he has at present. A man does not want to be forced into matters of that sort. I think that haste and hurry in mining has a tendency to increase the number of accidents. Perhaps this tendency has not come out as strongly as it might have done if there had not been a good many improvements of various kinds introduced along with the reduction of hours.

539. Have you any further objection to the eight hours being legalised? No. I think when a big majority are in favour of a certain kind of legislation I should be inclined to sacrifice my own opinion.

540. *Mr. Jacob.*] Are you aware that a majority are in favour of it? I believe that the majority of the miners desire the legalisation of the eight hours system.

541. Are they in favour of this eight hours provision in the Bill? I think they are in the Northern district.

542. *Mr. Hoskins.*] Does that mean eight hours from the top of the shaft until they come out again, or eight hours at the face? Eight hours on the top of the shaft.

543. That might be only seven hours working? It might be less. In the county of Durham, in England, it takes an hour and a half to get in and out of the mine.

544. As regards the men who are not paid for getting coal—the wheelers and others—they are paid by the day, are they not? Yes.

545. Supposing it were enacted that eight hours was a day's work, how would it be arranged with regard to those men? I suppose they would be paid in proportion to the hours they worked.

546. Would it not, in your opinion, result in a diminished output of coal? That does not follow, not if you have a sufficient number of miners and wheelers and others engaged in getting the coal. There are very few pits which are engaged in raising coal the whole of the day. The majority of them have a considerable amount of spare time both for hauling and winding. I think that with a little contrivance in the majority of cases the output need not be materially reduced; that is, if a sufficient number of men are placed in the mine to get the quantity of coal.

547. To get the same quantity of coal they are getting now; if a day's work is to be eight hours would it be necessary to employ a larger number of men? Yes.

548. Would not that tend to diminish the earnings of the miner? Not if the actual coal-getters can get their usual quantity. My experience is that a man would get as much coal in seven hours as he will in a longer time. As regards the daymen, I consider that they would have to suffer a reduction of their wages.

549. Are you acquainted with the provisions of the English Act regulating coal-mines in Great Britain? I have managed collieries under them.

550. Were you satisfied with the English Act? Yes; I was fairly well satisfied with it taking it all round.

551. I suppose you have some knowledge of the number of persons engaged in coal-mining in Great Britain? About 600,000.

552. Are you not of opinion that if the English Act were embodied in our legislation it ought to suffice to regulate the working of the mines here? I think the English Mines Regulation Act is a very good Act.

553. I suppose you are aware that the English Act provides that the English inspectors of mines shall be certificated men? Yes.

554. Is it not a fact that under the English Act it is in the discretion of the inspectors to decide when a portion of a coal-mine is unsafe, and that they are empowered to stop the working of the mine;—is not that discretion left with the inspector? No; the Act distinctly states that in case of a difference of opinion as to the necessity of stopping a mine the matter must be referred to arbitration.

555. It must be referred to arbitration if the proprietors of the colliery are not satisfied with the inspector's decision? Yes.

556. I suppose, as a matter of fact, that seldom occurs? It seldom occurs. I have not known many cases where the inspectors have acted on their own responsibility. Arbitration would be resorted to in a case where a manager thought the inspector wrong in his judgment.

557. Has that often occurred? Very rarely.

558. From your experience do you think these men are qualified for their position? Undoubtedly.

559. Do you or do you not think that the coal-mines inspectors here are equally qualified? I know only one of them, and I believe him to be thoroughly qualified.

560. *Mr. Combes.*] Do you not think that if the inspectors here are equally well-qualified men, as compared with those in England, the mines could be safely worked here if the matter was left to the decision of the inspectors, without having the mode of procedure indicated by hard-and-fast lines as it is in this Bill? I am not prepared to say what would be case in this Colony, but my experience is, as regards ventilation, that it is not satisfactory.

561. Have the inspectors been applied to by the miners? I cannot say. I have not been mixed up with miners' unions.

562. Being connected with the mines you should know? I have known the inspector's attention to be drawn to the fact that the minimum quantity of air was not being supplied. In most places where it has got below the minimum I think the manager has done his best to bring it up to the minimum.

563. That would be the case in England? Yes.

564.

- Mr. G. H. Green. 564. I presume you are aware that the Coal Mines Regulation Act in England has none of the strict technical hard-and-fast rules for the working of coal-mines which are embodied in this Bill—more is left to the inspectors of mines? More is left to the discretion of the inspectors of mines; but similar provisions to that in this Bill are contained in the special rules. As regards bratticing, in the Durham district the rule is that every place should be canvassed to within 4 yards of the face.
565. From your experience, with such a measure as this in force, where everything to be done is prescribed by rule, would it not be possible to greatly thwart mining enterprise by causing trouble in respect to alleged non-compliance with these strictly technical rules, and would it not be better to leave it more to the coal-mines inspector, as is done by the English Act? If there is any one particular item that you would mention I would give my opinion. As regards the ventilation the amount stated in the present Act is the minimum which ought to be supplied.
566. Are you aware that the minimum provided in the English Act is not the same as the minimum in this Bill? There is no minimum provided in the English Act. It says that an adequate amount of air shall be provided.
567. Mr. Hoskins.] Is not that sufficient? My experience is that the minimum amount is generally from 200 to 300 cubic feet of air per man.
568. Mr. Combes.] Suppose you go up to 200 cubic feet of air per man, and you have a dozen splits, and sixty men in a split, will not an enormous quantity of air be required? The quantity required would be 144,000 cubic feet.
569. Do you think you could possibly get that amount of air into a mine by ordinary draft ventilation? Yes. I have known cases in which much larger quantities of air have been circulated in a mine. I have known 180,000 cubic feet of air to be circulated.
570. With the fire? Yes; at the Hetton colliery they circulate over 200,000 cubic feet of air.
571. With regard to the eight hours, you stated that you did not think the time would make any difference in the cost of the coal, although in some cases the time occupied in going in and out of the colliery was an hour and a half? That was in England. I know that a man can go and earn what he is allowed to earn per day often in much less time than he usually takes.
572. I am referring to the men who are working at roads, at brattices, and other things—men who are not miners;—in your opinion, should not that twenty minutes be taken into consideration; should not eight hours be eight hours work at the face? I have already stated that as a colliery manager I should not advocate the eight hours. I should prefer longer hours for the purpose of getting the coal out.
573. What is your opinion about the twenty minutes? If the twenty minutes is taken off for travelling the remaining time should be quite sufficient for the men to do their work.
574. Is it not impossible that so much work can be done in the mine if this twenty minutes is deducted from the eight hours? As a matter of fact, in the North of England we found that the miners increased the work per hour as the hours were reduced. I believe that here the output per man would not be reduced, but even if it were there would not be any great difficulty in putting more men into the mine to make up the amount.
575. Chairman.] Have you anything further to say on the subject? In rule 34 I would suggest that the word "necessary" be substituted for the word "sufficient," in line 13. That is a rule taken from the English Act. It is intended to provide against a danger where the drums are made too conical. Up to a certain point a drum may be coned, and it is quite safe. After that a groove of some kind is provided, and we generally call these spiral drums. The word "sufficient" would cover all conical drums. In the case of an ordinary conical drum you can get any amount of arrangements that would be sufficient, but they might not be necessary. If a drum is not coned too much you can have a conical drum without any spirals or grooves to it. I may add that I am in favour of the manager and the under manager being certificated; and, further, that mines inspectors should pass an examination at least up to the standard of that passed by colliery managers in the old country, and should have a minimum of ten years' experience.

Mr. Jonathan May called in, sworn, and examined:—

- Mr. J. May. 576. Chairman.] What are you? A mining engineer and colliery manager. I hold a first-class certificate of competency under the English Act—being the highest diploma in coal-mining. I have been two years in present appointment—teacher of coal-mining, Government Technical Education Department, New South Wales.
577. What experience have you had? About twenty years' experience.
578. Continuous experience? Yes.
579. Have you gone through the Bill? Yes.
580. Do you approve generally of the principles of the Bill? I approve of the Bill generally. I think it is based very largely on the English Act, and I consider that the general framing of the Bill is intended to give us a very fair working measure.
581. Do you know the English Act pretty well? Very well indeed.
582. Do you know in what respects this Bill differs from the English Act? I notice that this Bill provides for a minimum quantity of air; that is one of the points in which it differs from the English Act.
583. Where it differs from the English Act do you approve of those differences? Yes; I approve of the three or four deviations that are made.
584. Do you approve of the eight hours? That is a matter which mining engineers do not have much to do with.
585. Taking the matter from a general point of view as regards the getting of coal and the working of the mine, will the introduction of the compulsory eight hours be beneficial or otherwise to the industry? In the North of England, where my experience was obtained, the men do not work very long hours. They object in the North of England to the eight hours, but it is because the men work only about seven hours. For ten years the two shifts of my men averaged about thirteen hours a day.
586. You do not approve of the eight hours? For that reason only I should not. The miners in the North of England say if men are so foolish as to work nine or ten hours, if they have not intelligence enough to get the eight hours for themselves, we will not lengthen our hours to suit them. Mr. Burt and other gentlemen have been used to seven hours and six and a half hours. I have before me the evidence of one
of

of the largest coal-owners in England, Sir Joseph Peas, and he gives the number of hours which the miners work in Great Britain as seven hours and twenty minutes. The longest hours are at Nottingham, where the men work eight hours and twenty-three minutes, and the shortest in Durham, where in one case it is five hours and thirty-seven minutes. Mr. J. May
29 Nov., 1893.

587. Is it your opinion that this second clause would not work beneficially either to the owners or the men? It would not work detrimentally, and considering the very great preponderance of opinion—in all mining communities—in favour of the eight hours principle, I think it would be a judicious settlement of the question.

588. If the hours are thus limited by law would it not have the effect of reducing the quantity of coal hewn? Most certainly not.

589. Then, with regard to the ventilation of the mine, the English Act provides simply that there should be an adequate amount? Yes.

590. This Bill provides a minimum? Yes.

591. Do you think that is a good thing? I think that providing a minimum quantity is a distinct improvement on the English Act. There is one matter which I would mention, and that is, that there would be some difficulty about defining the minimum. Suppose that the manager supplies 100 cubic feet of air and something took place, there is an idea that if 100 cubic feet of air per man is supplied, that exonerates him, but where the minimum is mentioned in the Act it would be very wise to have a distinct understanding that it shall by no means exonerate the management if there is not sufficient air. One hundred and fifty cubic feet of air is a fair and reasonable thing in a non-gaseous mine, but the mines which I have been used to had 400 and 500 cubic feet per man.

592. *Mr. Hoskins.*] Was that in this Colony? No; but you will find that in this Colony modern engineers, capable managers, are laying out their mines so as to get much larger quantities of air. Certainly 150 cubic feet of air is not an extra large quantity per man.

593. *Chairman.*] Is there any particular clause to which you desire to refer? At one time the mines used to work ten or eleven hours in England, but the boys were not permitted to work so long as that, the consequence being that we had to supply fresh boys at a certain time. From the experience which I have had I do not think it would be at all difficult for the men and boys to work eight hours, and to make arrangements for the mine to work ten or twelve hours, if required.

594. *Mr. Hoskins.*] I will refer you to the wheelers? The wheelers are working nine or ten hours at present. If the Bill came into force the wheelers would have to work only eight hours, but if the mine was to run for ten hours the manager would have to provide for men or boys to fill up the extra time.

595. *Mr. Combes.*] That would make it more expensive? Not if the daymen are paid so much per hour.

596. A lot of the men are paid by the day? I am speaking of the practicability of the thing.

597. *Mr. Hoskins.*] You have read the Bill through? Yes.

598. If it came into force would it not increase the cost of getting coal? It will increase the cost of day labour if the wages remain the same, but as far as any trouble or difficulty in introducing the eight hours it would not increase the cost of the coal by a penny a ton.

599. *Mr. Combes.*] The hewers of coal get so much per ton, and it does not matter to the proprietors how many hours they work;—it is the men who are paid by the day, and the cost of keeping the machinery going? The men work nine hours for 9s. Eight hours would probably mean 8s., or an equal ratio.

600. *Mr. Hoskins.*] It has been stated by a gentleman of great experience in coal-mining that if the Bill becomes law without material alteration it will increase the cost of getting coal at least 1s. a ton? That is really a marvellous statement, to say the least of it.

601. *Mr. Combes.*] There is the extra cost of bratticing 25 yards instead of 35 yards; that causes more labour, and the more labour there is the greater the cost? I have had an extensive experience with regard to bratticing, and my experience was that one deputy looked after the men, and did all the timbering. The men did their own timbering if the deputy was not there. The deputy supervised the men, laid the road, and put in what is called the bearing-up “stoppings,” and bratticed every bord and cut-through. The total cost of the deputy work in this case was about 1d. per ton. The proportion of his labour devoted to bratticing would be barely one-fifth of the total = one-fifth pence per ton. In the North of England, at those collieries, and they are a large proportion, where every bord and cut-through is bratticed, the cost of brattice per ton raised will be about one-eighth pence, or half a farthing, per ton.

WEDNESDAY, 6 DECEMBER, 1893.

Present:—

THE HON. A. H. JACOB IN THE CHAIR.

THE HON. E. COMBES.

THE HON. B. VICKERY.

Mr. Jonathan May, colliery manager, further examined:—

602. *Chairman.*] Are you a “certificated colliery manager”? Yes.

603. Under the Government? Yes; I am a teacher of mining under the Technical Education Department. Mr. J. May
6 Dec., 1893.

604. Have you anything further to say in reference to this Bill? I was asked at the last meeting what would be the cost of bratticing. I have had a good deal of experience in bratticing. Bratticing was a general thing in the mines which I was used to. A deputy attended to the men, and to the timbering, if it was not put in when he reached the place. He supervised the men, and kept what is called the bearing-up stoppings in repair, and bratticed every place,—every cut-through and every bord,—and the cost of that was something like a penny a ton. The amount of labour devoted to the work of bratticing would probably be about one-fifth of his total labour, which would make the cost of labour for bratticing about one-fifth of a penny per ton.

605. *Mr. Combes.*] And there is the cost of the cloth? In the north of England that would average about one-fifth of a penny per ton of the coal raised. I might add, that bratticing is the rule in the north of England, that is the bratticing of every bord and every cut-through, in gaseous mines. I have here a plan of bord and pillar workings. In this case every district gets its own quantity of air. The air

Mr. J. May. air is conducted round the face by what are called bearing-up or face stoppings. Where I was for some years the deputy used to sign his name that he would keep the brattice within three yards of the face, but that became a dead letter, simply because the men used to say, "For heavens' sake take that brattice down." There was too much air for them.

6 Dec., 1898.

606. **Mr. Vickery.]** The Bill says the brattice must be taken to within three yards of the face? That is where gas exists. If provision were made for that in the Bill, it would not be done, because it would not be necessary. In the case I refer to, the brattice was seldom taken more than half way along the bord.

607. **Chairman.]** It would not be necessary to carry out that provision of the Bill? Not in that respect. There is no doubt that bratticing the air within three yards of the face has arisen out of accidents which would probably have been prevented if that had been carried out in the winning places, which in gaseous mines are bratticed as close up as is practicable.

608. **Mr. Vickery.]** In your estimate of the cost of bratticing, did you include the taking of the air to within three yards of the face? I know that, in extraordinary cases, you might take it to within three yards of the face, but not as a general rule.

609. **Mr. Combes.]** Under the present Act they can call the inspector's attention to these matters? Yes. The plan which I have produced shows the general system adopted. Under the present arrangements, there must be a cut-through at every thirty-five yards. Then, if there is no gas there, they are not compelled to brattice; if there is gas there, they are compelled to brattice. There may be carbonic acid gas, which is very injurious to a miner's health, but a man could not ask for bratticing for that.

610. **Chairman.]** Why could he not? Because it is not customary to do it, at present.

611. **Mr. Combes.]** He would only have to speak to the inspector? The inspector could not order it,—except where the air was extremely unsanitary,—owing to the difficulty of defining the phrase "adequate ventilation."

612. **Chairman.]** You are stating that of your own knowledge? Yes.

613. What is the next point to which you would refer? There is this point with regard to what is called adequate ventilation. It is difficult to define without some stated minimum.

614. That is provided for in the existing Act? Yes, and wisely so; it being so difficult to say what is adequate ventilation. Dr. Foster, in his evidence before the Mines Commission in Great Britain, said: "There is a difficulty. I find, in the wording of the Act. I mean in this respect. If you have to bring a charge of bad ventilation against the manager of a mine, you have to prove to the bench of magistrates (who don't understand the thing very often) that the ventilation was inadequate. The words are, 'an adequate amount of ventilation.' Now, you have to prove that it is in an unfit state for 'working and passing therein.' If you go before them, and they find that a candle will burn well and the manager says that the ventilation is perfectly good, and the candle burns perfectly upright—though you may feel convinced that the ventilation is not good by the smell of humanity and the smoke lying about,—then you would have a difficulty in proving your case."

615. **Mr. Combes.]** The ventilation, in my opinion, consists in changing the air? Yes; that is a very good definition.

616. Have you had any experience in the southern coal-fields of New South Wales, and in the western? I have been in the coal-fields in the Lithgow district, and I have been in the Illawarra district, and thoroughly understand their modes of working and mining conditions.

617. You know that there is no gas in the western district? You mean no carburetted hydrogen or "fire damp?"

618. Where the conditions are entirely different, I suppose you would not advise the adoption of a hard-and-fast rule with reference to ventilation? Not where the conditions do not require it.

619. You would not enforce one rule in several places? Where there are different conditions, should not there be different regulations? Yes.

620. And they could be set forth in any legislation that might take place? In the cases to which you refer I presume there is no gas.

621. If there is gas, more air will be required than where there is no gas? We say gas with regard to carburetted hydrogen or fire damp; but if there is carbonic acid gas or "choke damp," though a man's light will burn, it is very injurious to his health.

622. **Chairman.]** Which is the next point to which you desire to refer? I wish to refer to one of the schedules. It refers to the number of days in each month during which coal or shale has been drawn, a return of which has to be supplied. I should like to suggest that there be added to the annual report of the Mines Department the average number of days per week worked by the whole of the mines. At present we have a return from the report of that department specifying the quantity of coal sent away. I think it would be highly beneficial for the coal trade if the number of the working days of each mine were stated.

623. **Mr. Vickery.]** What would be the benefit of that? I think if that were done it would be a great protection to the capital employed in the coal-mining. From Newcastle there is about two and a half million tons of coal sent away annually. Now, ten of the mines in the Newcastle district could supply the whole of that by working three and a half days a week each, and all the other mines (fifteen or twenty more) are practically doing nothing. For example, the Greta Colliery has a capital of £150,000, but—like that of other mines—it is practically destroyed. If what I suggest was published in the report of the Department of Mines, when the public were being approached by the syndicate and their satellites, philosophers, and friends *re* the starting of new mines, they would say, "Here are mines doing nothing." Two mines out of three in the Newcastle district are doing nothing practically, and the consequences are most serious, not only to those who invest their money in mines, but to others. Those mines which got started, and which used to make good profits, are going down in value owing to the flotation dexterity of the syndicates. It was on the strength of those profits that the new mines were "successfully floated," and it is the "successful floaters" who are responsible for the commercially disastrous conflict between the workmen and the owners, interest in the district. It's a monstrous thing that legitimate mining companies like the Minmi, of Messrs. Brown, the A. A. Co., or the Lambton Colliery's should have their capital at the mercy of conscienceless syndicates. I believe that no country in the world is more efficiently supplied with thoroughly reliable scientific data as to its geological formation and mineral resources than New South Wales through its Mines Department. The names of Clarke, Wilkinson, David Pitman, and McKenzie are not more remarkable for scientific ability than personal probity. I am certain,

Mr. J. May,
6 Dec., 1893.

certain, if the above suggestion were pointed out, they would readily adopt it in the Mines Department for the protection of *bona fide* mining capital from the syndicate-mongers and their unprincipled satellites. To hear the latter blaming the unions for destroying the British capitalists' confidence would be infinitely amusing were it not so immeasurably wicked.

624. *Chairman.*] What other point do you wish to refer to? I should like to make a remark about detaching hooks. Sub-clause D of clause 10 provides that every mine shall be provided with some automatic contrivance to prevent overwinding. There is beginning to be a great consensus of opinion that something should be done to provide a detaching hook for the cage. There has also been some misapprehension on the part of those who oppose this idea. There are three ideas connected with it. The first is to detach the cage, the next is to prevent the cage from jerking back. It has a catch-plate to hold the cage up. Unless some provision is made for the height of fall due to the kinetic energy of the cage it would drop back with a jerk. There are four principal ideas in overwinding: 1st, an automatic steam brake; 2nd, detaching hook; 3rd, keps; 4th, springs—to prevent headgear injury.

625. *Chairman.*] Would that not come under the provision as to the supplying of proper apparatus for raising and lowering persons? I thoroughly approve of the detaching hook, but some additional provision must be made in the shape of keps to prevent the cage from falling back and the other ideas suggested.

626. *Mr. Combes.*] Something to come out and bite it? That is one idea; another is to have some automatic arrangement to cut the steam off. I have known cases where the shock of the cage in coming back has torn away the support of the catch-plate for holding the cage.

627. *Chairman.*] Do you think it necessary to enter into all these details in the bill;—you see that the bill provides that all these apparatus shall be provided under a penalty? Yes; I approve of that.

628. *Mr. Vickery.*] You say that the apparatus provided for in the bill should be a detaching hook? Yes; and, in addition to that, there should be something to prevent the cage from flying against and damaging the headgear, also to counteract the jerk due to the slack chain, and keps to catch the cage.

629. What is the next point? I would now refer to the subject of splits. Sub-clause 3 of clause 13 says:—

Within six months after the commencement of this Act, every mine, unless worked on the long-wall system, shall be divided into districts or splits of not more than sixty men, exclusive of wheelers and horses; and each district shall be supplied with a separate current of fresh air, which shall be taken to within fifteen yards of each working face by brattice or otherwise where gas does not exist, and to within three yards of the working face where gas does exist.

I have here a plan showing a mine split up into districts with each district receiving fresh air. From my past experience I am sure that this will not trouble the managers. In the past there have been old mines which have been opened out by rule of thumb, and I have been very sorry for competent managers who took charge of such mines, because his conditions have been made for him, but where a competent mining manager has to make his own conditions the splits will not be any trouble to him. The splitting the air is a thoroughly established principle. A competent manager splits the air right off. Then each district is ventilated with pure air, and it is very much pleasanter for the manager, the workmen, and everybody else concerned, and its economy is beyond question.

630. *Chairman.*] Then you approve of the provisions in that clause? Yes; I thoroughly approve of that provision. That clause must have been introduced for this reason that an experienced colliery manager has no trouble in carrying out a thing like that. But in the cases of bad ventilating practice the air has gone round the mine in one unbroken volume, and the men have felt the bad effects of it and have objected to it. I have always had an idea that workmen who have worked in a mine which has been well laid out where the ventilation has been in separate splits will always ask to have this practice introduced.

631. *Mr. Vickery.*] Can you tell us why that idea was not introduced in the recent English Act? Probably for one of the best of reasons, namely, that it is the rule in the English mines. Splitting the air is the English mining practice. There are mines in the North of England where you would have an explosion every week if the air was not split. The home of good and efficient ventilation is the North of England, because that is where they first got large quantities of gas in coal-mining. The circumstances made such men as Nicholas Wood, John Wales, J. J. Atkinson, and W. Hopton. Their principle of ventilation is essentially separate splits—pure air.

632. What is the next thing to which you propose to refer? The next thing is the certificates of the managers. That is really the most important matter connected with the Bill. To have some guarantee that the manager is a thoroughly competent man is to have the best guarantee that the mine will be worked under good sanitary and safe conditions, and also economically.

633. *Chairman.*] You approve of that clause? Yes; but it is very singular that the agent is not mentioned here. I am referring to clause 14, which says:—

After one year from the passing of this Act, every mine shall be under a manager, who shall be responsible for the control, management, and direction of the mine, and the owner or agent of every such mine shall nominate himself or some other person to be the manager of such mine, and shall send written notice to the inspector of the district of the manager's name and address.

One of the weaknesses of the English Act was that the agent, who is not responsible under the Act, can interfere with the managers. It was felt to be a very great hardship that the manager, who was responsible to the Government, and responsible to public opinion as well as to his directors, should be subject to an agent going to give him instructions, whilst occasionally there might be a conflict of opinion.

634. *Mr. Vickery.*] You agree with this clause, do you not? I agree with it except that no irresponsible person should be allowed to give directions to the manager.

635. Under this clause the agent cannot interfere? We had some trouble about that in Great Britain.

636. *Chairman.*] Under a similar provision? Yes; that was one of the weaknesses of the Act. One agent might have three or four mines, and at each mine there would be a certificated manager, and that agent would give instructions to the managers of four or five mines. The inspectors set their faces strongly against it. They said, "Let us know who is really the manager, and do not make him responsible for somebody else's instructions."

637. Did that occur under the specific wording of this clause? Yes, it was a grievance which was felt at home very considerably.

638. How do you suggest we should get over it? I suggest that where any irresponsible person gives instructions those instructions should be made a note of. Just the same as when an inspector goes to a school and makes suggestions, which are entered in a book; so that if a certain mode of working has been adopted in obedience to an agent, the agent shall be responsible if an accident occurs. At present the manager is responsible and the agent goes scotfree.

Mr. J. May. 639. *Mr. Combes.*] The clause under consideration is almost word for word the same as the provision in the English Act? Yes; it was felt to be a defect among mining managers, who were the men who had to do the hard work. I would also refer to clause 15, which says:—

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In every mine required by this Act to be under the control of a certificated manager, daily personal supervision shall be exercised either by the manager or by a duly qualified under-manager, in accordance with the provisions of this Act, nominated in writing by the owner or agent of the mine.

I would suggest that it be provided that daily supervision shall be exercised by either the manager or a duly qualified under-manager; that is, an under-manager who holds a second-class certificate.

640. *Chairman.*] Those are the words in the Bill? I would also refer to clause 17, which provides for the constitution of a board appointing examiners for granting certificates of competency to managers and under-managers.

641. Do you approve of that clause? Yes, I approve of that for the purpose of granting certificates. I might say about the English examining board that the members are selected as being practical miners and practical mining engineers and mine owners. Those gentlemen, with the inspector for the district, and very often his assistant, constitute the board, and they conduct the oral examinations. I should just like to suggest that there should be an oral examination in conjunction with the other examination. Clause 27 makes provision with regard to the plan of the mine. I would strongly recommend that the provision with regard to the three months be retained, and that the mode of ventilation should be clearly and distinctly shown in the working plan of the mine up to date, so that an inspector could at once see the system practiced. Clause 33 makes provision for the disqualification of persons appointed as inspectors. I strongly recommend that that clause be retained as it has an important bearing on the welfare of the mining population. Clause 32 deals with the appointment of inspectors. I presume that the inspectors will have to get certificates under the Act the same as the managers. I should like to say that the granting of a certificate of service is in accordance with the spirit of the English Act. We had an inspector in England, Mr. Dickenson, who was regarded as the father of the inspectors at that time, and who knew more about coalmining than any fifty of the younger men, but it would have been absurd to ask him to pass an examination—it would be like comparing Count Von Moltke with some self-assured stuffed goose from some military school.

642. *Mr. Vickery.*] You approve of this clause? Yes; for nothing would be more supremely ridiculous than to ask that an inspector of such great natural ability, extensive experience, tact and judgment as Mr. Dixon, for example, should be placed on the same footing with some young gentleman who has "got a certificate." In the early days of inspection a great disparity existed betwixt the class of man acceptable to the owners, who objected to inspection, and the workmen who wanted it. The latter were most anxious to have men of practical experience, familiar with the minutest detail of underground operations. The spirit in which modern appointments are made is—given equality of theoretical knowledge—the preference is distinctly in favour of men with practical experience. That this is the practice in New South Wales is, I believe, principally due to the senior Mines Inspector, Mr. Dixon, who, to unimpeachable integrity as a man, adds the universal reputation of being one of the best practical mining engineers in Australia, and I believe Australia holds men who, in the science and practice of mining, equal any men in the world.

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No. 55.

MINUTES OF THE PROCEEDINGS OF THE LEGISLATIVE COUNCIL.

WEDNESDAY, 1 MAY, 1895.

1. The House met pursuant to adjournment. The President took the Chair at half-past Four o'clock.

Members Present:—

The Honorable Sir John Lackey, K.C.M.G., *President.*

The Honorable Richard Ryther Steer Bowker,
M.D., M.R.C.P., Lond.,
The Honorable William Robert Campbell,
The Honorable Edward Combes, C.M.G.,
The Honorable John Mildred Creed, M.R.C.S.,
The Honorable Thomas Dalton,
The Honorable Henry Carey Dangar,
The Honorable John Davies, C.M.G.,
The Honorable Andrew Garran, LL.D.,
The Honorable Charles Augustus Goodchap,
The Honorable Edward Greville,
The Honorable Charles Gilbert Heydon,
The Honorable Richard Hill,
The Honorable James Hoskins,
The Honorable Frederick Thomas Humphery,
The Honorable Solomon Herbert Hyam,
The Honorable Archibald Hamilton Jacob,
The Honorable Henry Edward Kater,
The Honorable Philip Gidley King,
The Honorable George Lee,
The Honorable John Macintosh,
The Honorable Charles Kinniard Mackellar,
M.B., C.M.,

The Honorable Henry Norman MacLaurin, M.D.,
LL.D.,
The Honorable Henry Moses,
The Honorable James Norton, LL.D.,
The Honorable Richard Edward O'Connor,
The Honorable William Hilson Pigott,
The Honorable Charles Edward Pilcher, Q.C.,
The Honorable Sir Arthur Renwick, Kt., M.D.,
F.R.C.S.,
The Honorable Charles James Roberts, C.M.G.,
The Honorable Richard Hutchinson Roberts,
The Honorable Sir Julian Salomons, Q.C.,
The Honorable Thomas Hawkins Smith,
The Honorable William Henry Suttor,
The Honorable George Thornton,
The Honorable William Joseph Trickett,
The Honorable Ebenezzer Vickery,
The Honorable John Henry Waut, Q.C.,
The Honorable James Watson,
The Honorable Edmund Webb.

(2.) Coal Mines Regulation Bill:—

MR. PRESIDENT,—

The Legislative Assembly having had under consideration the Legislative Council's Message, dated 6th December, 1894, requesting its concurrence in certain amendments made by the Council in the Coal Mines Regulation Bill,—

Agrees to the amendments in clause 1, but proposes to substitute the word "July" for the word "March" proposed to be inserted,—because the Bill is not likely to be passed much before the 1st July.

Agrees to the amendments in clause 2, page 2, lines 3 to 12 inclusive.

Agrees to that part of the amendment in clause 2, page 2, line 26, which omits the word "ten," but proposes to substitute the word "twenty" for the word "thirty" proposed to be inserted,—because it is considered that a mine employing more than twenty men should be under the control of a properly qualified manager.

Agrees to the amendments in clauses 3 and 4, and to those in clause 5, page 2, down to and including that in line 57.

Disagrees to the insertion in clause 5, page 2, after line 57, of the following words:—“(a) Three persons being owners or agents of mines in the Colony of New South Wales,” but proposes to further amend the clause by inserting after the word “persons,” in line 1, page 3, the words “being owners or agents of mines, or persons,”—because the three persons mentioned in subclauses (a) and (c) respectively represent in this Colony practically the same interest; and because, by this alteration, equal representation will be secured on the Board for the classes mainly interested in securing the services of capable examiners.

Agrees to the amendment in clause 5, page 2, line 59, to the omission of clause 6 and the insertion of a new clause instead thereof, and to the amendments in clause 7.

Disagrees to the omission of clauses 8 and 9,—because it is of the highest importance that a person on whose skill and care the lives of a number of persons and the safety of the owner's property depend, should be qualified to perform the work entrusted to him, and the qualification of such person can be best ascertained by examination as to competency or by evidence of service. General Rule 24 requires such person to be a competent person, but does not define how his competency is to be ascertained; and it would be a protection to the owner if such person were certificated.

Agrees to the insertion of a new clause to follow clause 8.

Agrees to the amendments in clauses 11 and 13.

Disagrees to the amendment in clause 15, which inserts the words “or for registration of;”—because no fee for registration has been named in the Schedule.

Disagrees to the omission of clause 17,—because it seems scarcely fair to the manager that he should be required to carry out instructions in which he may not concur but which he is compelled to obey, and without any record to show who gave such instructions.

Disagrees to the amendments in clause 19,—because any existing inspector who has no certificate should have an opportunity of getting one, and because the clause as amended reads as though an inspector can be appointed under the Act before its commencement.

Disagrees to the omission of clause 21 and the insertion of a new clause instead thereof,—because in the new clause the words “when absolutely necessary” are omitted, and it would be impossible for an inspector to make a proper inspection without impeding the work to some extent, however slight. And because it does not provide for the inspector to enter in a book the result of his inspection. And further, because it does not give the inspector power to require the manager to withdraw the men in case of danger.

Disagrees to the amendment in clause 22, which omits the words “and enter such report in a book at the mine,”—because such provision is considered desirable.

Agrees to the amendments in clause 27, but proposes to amend that on page 11, line 1, by omitting therefrom the words “a Police or Stipendiary Magistrate, or a Barrister-at-law,” and inserting the words “or other person agreed to by the arbitrators” instead thereof,

Agrees to the amendment in clause 29.

Disagrees to the amendment in clause 30, page 12, line 32, which omits the word “three” and inserts the word “six” instead thereof,—because six months is too long a period for the plotting of the workings to be in arrears.

Disagrees to the remaining amendments in clause 30,—because the want of the information provided for has on several occasions led to the working of coal outside the boundaries of the mine and the owners have been fined in consequence, and the Crown has lost revenue through owners having extracted coal outside their boundary.

Disagrees to the amendments in clause 31,—because the insertion of the word “serious” leaves it to the discretion of the manager what accidents shall and what shall not be reported. If proceedings are taken against a manager for not reporting an accident, he simply says he did not consider it serious. And with regard to the alteration as to the period within which the report shall be made, the original words of the clause are considered preferable.

Disagrees to the amendment in clause 32, which omits the word “forthwith” and inserts the words “within one month” instead thereof,—because there is no valid reason for delay.

Agrees to the amendments in clause 34, but proposes to further amend that clause by inserting in line 46, page 14, after the word “boundaries” the word “of.”

Agrees to the amendment in clause 35.

Disagrees to the omission of clause 36.—because the limitation of a day's labour to eight hours is desirable and is not a new provision. It is to be found in the Victorian Act, sections 353, 354, and 355, and also in our regulations relating to the inspection of metalliferous mines as to engine-men; so that it has been recognised in this Colony for nearly twenty years, and the provision is not contrary to the general practice in the mines.

Agrees to the amendment in clause 37, line 39.

Agrees

Agrees to the amendment in clause 37, line 41, which inserts after the word "mine" the words "And no boys between the age of fourteen years and eighteen years shall be employed in or allowed to be, for the purpose of employment, in any mine below ground for more than 'ten' hours on Monday, Tuesday, Wednesday, Thursday, Friday, and six hours on 'one' Saturday, and eight hours on the next 'Saturday.'"

"For the purpose of this Act, with respect to the employment of such boys in a mine below ground, the following regulations shall have effect, that is to say:—

"(I) There shall be allowed an interval of not less than twelve hours between each period of employment.

"(II) Each period of employment shall be inclusive of one hour for meals."

"(III) A week shall be deemed to begin at midnight on Saturday night, and to end at midnight on the succeeding Saturday night,"—

but proposes to amend such amendment by omitting the word "ten" and inserting the word "eight" instead thereof; by omitting the word "one"; by omitting the words "and eight hours on the next Saturday"; and by omitting the words "(II) Each period of employment shall be inclusive of one hour for meals,"—because ten hours per day is too long for the employment of boys in a mine.

Agrees to the remaining amendments in clause 37, and to those in clauses 38 and 40.

Disagrees to the amendments in clause 41,—because as this clause has been altered, payment by weight only applies to miners who are paid for "large coal." It may be true that under existing agreements the miners, as a rule, are paid only for large coal, but there are at least two coal mines in the Colony where the miners are paid for all the coal sent up, and their right to be so paid should not be taken from them, but they should be left free to make any contract that they and the owners think fit, and yet be entitled to be paid by weight. It does not follow that the present practice, viz., to pay for large coal only will not be altered in the near future, seeing the demand for and the price of small coal is increasing, unless as proposed by the Council, the right to alter be taken away by Act of Parliament; and because the addition to subclause (III) of clause 38 is unnecessary, as miners are not paid "by the method known as the standard-bar system"; the standard-bar is simply used to prevent skips being overfilled, and usually skips that are overfilled are not paid for.

Disagrees to the amendments in clause 43, down to and including that in line 25, page 18, which omits the word "he" and inserts the words "the owner, agent, or manager,"—because even when the miners are to be paid by "measure or gauge" they are only to be paid for "large coal"; and the check-weigher is not allowed to check the taring of tubs and trams, and the person appointed by the owner is not to be punished for improperly interfering with or altering the tare.

Agrees to the amendment in clause 43, page 18, line 26.

Disagrees to the remaining amendments in clause 43, for the reasons given for previous disagreements in this clause.

Disagrees to the amendment in clause 44,—because the men who are getting the mineral are those who should have the right to appoint the check-weigher, not merely those who are getting large coal.

Disagrees to the amendments in clause 45,—because, under this clause as amended, the "Weights and Measures Act" will only apply to weights, &c., used for weighing "large coal."

Agrees to the amendment in clause 46, line 54, which omits the word "fifty" but proposes to substitute the word "thirty" for the word "fifteen" proposed to be inserted.

Agrees to the remaining amendment in clause 46.

Agrees to the amendments in clause 48, but proposes to amend those in lines 2 and 7 by substituting the word "thirty" for the word "fifteen" proposed to be inserted in each case.

Disagrees to the amendment in clause 49, which omits subsection (III),—because if the provision as to splits be omitted there may be some difficulty about enforcing a separate current of air for each district.

Disagrees to the amendments in clause 50, page 21, lines 45 to 50,—because the omission of the minimum quantity of air will seriously increase the difficulties to be encountered by the inspectors, and will possibly lead to frequent and serious conflicts with the managers, and frequent references to arbitration or prosecution for offences against the Act, and may in some cases result in the cancellation or suspension of a manager's certificate, and in the interest of both owners and miners it would be expedient to have a minimum.

Agrees to the amendment in clause 50, page 21, line 55.

Disagrees to the amendment in clause 50, page 22, lines 2 to 6,—because without the use of brattice it is not clear how, if the rules as amended by the Council became law, a single heading could be driven more than 35 yards.

Agrees to the amendment in clause 50, page 22, line 12.

Disagrees to the amendments in clause 50, page 22, lines 23 to 56,—because it is important that inexperienced men should not be employed to make such inspections, as the lives of a number of men may depend upon the skill and care with which this duty is performed; if the place has to be marked the men can see for themselves that it has been visited before going into work; the extra cost is trifling, and the life of the man making the inspection might be endangered by using a naked light; and if danger exists it should be recorded in the book so that persons likely to be affected by such danger may know of its existence.

Disagrees to the amendment in clause 50, page 23, line 22, which omits the words "by such person,"—because it is important that there shall be no question as to the person on whom this important duty devolves.

Disagrees to the amendment in clause 50, page 24, line 14, which inserts the words "except within a completely-closed chamber attached to the fuse of the shot,"—because such words appear to be quite unnecessary.

Agrees to the amendments in clause 50, page 24, lines 21 and 22, and to that in clause 50, page 24, line 27, which inserts the words "nor 'shall' coal or coal-dust be used for tamping," but proposes to amend such amendment by inserting after the word "shall" the word "dry."

Disagrees

Disagrees to the amendment in clause 50, page 24, lines 32 to 35, which omits the words "Provided that no person shall return to a place where such charge has missed fire until a period of eight hours has elapsed from the lighting of the fuse attached to such charge,"—because it is very desirable that some period of time should elapse after a charge has missed fire before the men are allowed to return to the place.

Agrees to the amendment in clause 50, page 26, lines 5 and 6, which omits the words "six feet high, three feet wide, and four feet deep," and inserts the words "of sufficient length, and at least three feet in width," but proposes to amend the words proposed to be inserted by omitting the word "length" and inserting the word "height"; by omitting the word "three" and inserting the word "four"; and by inserting after the word "in" the words "depth and three feet in."

Disagrees to the amendment in clause 50, page 26, which omits *Rule 19*,—because the object of this rule being to prevent accidents it is thought it should be allowed to remain.

Disagrees to the amendment in clause 50, page 26, lines 32 and 33, which omits the words "Every shaft in course of sinking shall be kept clear of all noxious gases by a fan or some other appliance,"—because there can be no good reason why, if gas in a dangerous quantity exists in any shaft or pit, its removal should not be made compulsory. The need for this has been proved by experience.

Disagrees to the amendment in clause 50, page 26, which omits *Rule 25*,—because the removal of coal from under a road where the cover is thin and weak may endanger the lives not only of the men employed in the mine, but also of the travelling public.

Disagrees to the insertion of new *Rule 24*,—because it does not define what constitutes a "competent person." The responsibility rests upon the owner or manager, and in their own interest one would suppose they would wish the term to be defined.

Disagrees to the amendment in clause 50, page 27, which omits *Rule 34*,—because it is most important, in the interest of both owners and men, that every precaution should be taken to prevent explosions by reason of defects in boilers.

Disagrees to the amendment in clause 50, page 28, lines 12 and 13, which omits the words "or any one having the written authority of any inspector or person so employed,"—because these words appear necessary, and they occur in the English Act, and no doubt they have been inserted in that Act as the result of experience.

Disagrees to the amendment in clause 50, page 28, line 22, which inserts the words "not being mining engineers who are practical working miners,"—because the choice should not be restricted.

Disagrees to the amendment in clause 50, pages 28 and 29, which omits *Rules 41, 42, 43, 44, 45, and 46*; to the omission of clause 51; and to the omission of proviso to clause 52,—because it is necessary that none but experienced coal-miners should work alone. This provision is also in the English Act. Even though it be admitted that these rules, or some of them, may be unsuitable to some collieries, it will be conceded that they make for safety, and may be beneficial in some cases; and as ample provision is made in clause 51 for exempting a colliery to which they are not applicable, there should be no objection to embodying them in the Bill.

Agrees to the amendments in clause 54.

Disagrees to the amendment which omits clause 59,—because in the interest of both the owners and the miners it would be wise not to strike out this clause, as there may occur a period during which no special rules made by the owner can be in force when the special rules made by the Governor would supply the deficiency.

Disagrees to the amendment in clause 62, line 39, which omits the word "wilfully,"—because a person should not be liable to be punished for pulling down a notice, &c., accidentally.

Disagrees to the amendment in clause 63, line 6, which omits the words "five pounds" and inserts the words "one pound" instead thereof,—because the fine of one pound might not be effective. It rests with the Justices to fix the amount to suit the circumstances of each case.

Disagrees to the amendments in clause 69,—because it leaves a workman to be prosecuted by anybody, whereas the owner, agent, manager, or under manager, can be prosecuted only by an inspector.

Disagrees to the amendment in clause 72,—because under no circumstances should such persons be allowed to adjudicate.

Agrees to the omission of clause 76 and to the amendments in clause 77.

Disagrees to the amendment in clause 78, page 35, which inserts the words "Large coal means all coal passing over a three-quarter-inch screen,"—because too much of the coal raised will pass through the screen.

Agrees to the amendment in clause 78, page 36, line 6, which omits the words "section four hereof," and inserts the words "Part II of this Act," but proposes to amend the words proposed to be inserted by omitting the words "Part II of."

Agrees to the remaining amendments in clause 78, and to the insertion of new Schedule I.

Disagrees to the amendments in Schedule II, lines 40 and 41, which omit the word "(round)" and insert the word "(large)" instead thereof, and which omit the words "coal (small),"—because for statistical purposes it is necessary that the quantity of small coal raised should be known, especially as small coal is a saleable commodity.

Agrees to the remaining amendment in Schedule II.

And the Legislative Assembly requests the concurrence of the Legislative Council in the amendments upon the Council's amendments in the Bill.

Legislative Assembly Chamber,
Sydney, 30th April, 1895.

J. P. ABBOTT,
Speaker.

Ordered, on motion of Mr. Want, That the consideration of this Message in Committee stand an Order of the Day for this day fortnight.

No. 64.

MINUTES OF THE PROCEEDINGS OF THE LEGISLATIVE COUNCIL.

THURSDAY, 13 JUNE, 1895.

1. The House met pursuant to adjournment. The President took the Chair at half-past Four o'clock.

Members present :—

The Honorable Sir John Lackey, K.C.M.G., *President.*

The Honorable Richard Ryther Steer Bowker,
M.D., M.R.C.P., Lond.,
The Honorable Alexander Brown,
The Honorable William Robert Campbell,
The Honorable Samuel Charles,
The Honorable Edward Combes, C.M.G.,
The Honorable John Mildred Creed, M.R.C.S.,
The Honorable Thomas Dalton,
The Honorable Henry Carey Dangar,
The Honorable John Davies, C.M.G.,
The Honorable George Day,
The Honorable Andrew Garran, LL.D.,
The Honorable Charles Augustus Goodchap,
The Honorable Edward Greville,
The Honorable Charles Gilbert Heydon,
The Honorable Louis Francis Heydon,
The Honorable Richard Hill,
The Honorable James Hoskins,
The Honorable Frederick Thomas Humphery,
The Honorable Solomon Herbert Hyam,
The Honorable Archibald Hamilton Jacob,
The Honorable Henry Edward Kater,
The Honorable Andrew Taylor Kerr,
The Honorable Philip Gidley King,
The Honorable William Laidley,
The Honorable George Lee,
The Honorable William Alexander Long,

The Honorable John Lucas,
The Honorable John Mackintosh,
The Honorable Charles Kinnaird Mackellar,
M.B., C.M.,
The Honorable Henry Norman MacLaurin,
M.D., LL.D.,
The Honorable Henry Moses,
The Honorable James Norton, LL.D.,
The Honorable Richard Edward O'Connor,
The Honorable William Hilson Pigott,
The Honorable Charles Edward Pilcher, Q.C.,
The Honorable Sir Arthur Renwick, Kt., M.D.,
F.R.C.S.,
The Honorable Charles James Roberts, C.M.G.,
The Honorable Richard Hutchinson Roberts,
The Honorable Alexander Ryrie,
The Honorable Sir Julian Salomons, Q.C.,
The Honorable Patrick Lindsay Crawford
Shepherd,
The Honorable Thomas Hawkins Smith,
The Honorable William Henry Suttor,
The Honorable George Thornton,
The Honorable John Thomas Toohy,
The Honorable William Joseph Trickett,
The Honorable Ebenezer Vickery,
The Honorable John Henry Want, Q.C.,
The Honorable Robert Hoddle Driberg White.

4. COAL MINES REGULATION BILL:—Mr. Brown, as Chairman, having brought up the Report from the Select Committee appointed to draw up reasons for disagreeing to certain of the Assembly's amendments upon the Council's amendments, and for insisting upon certain of the Council's amendments disagreed to by the Assembly,—
The same was, on motion of Mr. Brown, read by the Clerk, viz. :—

THE SELECT COMMITTEE of the Legislative Council, to whom it was referred, on the 6th instant, to draw up reasons for disagreeing to certain of the Assembly's amendments upon the Council's amendments, and for insisting upon certain of the Council's amendments disagreed to by the Assembly, beg to recommend to your Honorable House,—

That the Council agrees to the Assembly's amendment upon the Council's amendment in clause 1, which substitutes the word "July" for the word "March."—

Disagrees to the Assembly's amendment upon the Council's amendment in clause 2, page 2, line 26, which proposes to substitute the word "twenty" for the word "thirty,"—because it is not considered necessary that a mine employing less than thirty men should be under the control of a certificated manager, and be subject to all the restrictions and responsibilities which would attach to a large mine, and it would mean considerably increased expenditure to a number of hard working and industrious men who are engaged now in developing small properties, which, if trammelled with the conditions under which large coal-mining properties ought to be worked, would be closed up.

Insists upon its amendment in clause 5, page 2, after line 57, which inserts the words "(a) Three persons being owners or agents of mines in the Colony of New South Wales," and disagrees to the Assembly's amendment in the same clause, page 3, line 1, which inserts the words "being owners or agents of mines or persons,"—because inasmuch as all parties should be represented on a Board of this kind, and it does not necessarily follow that the composition of the Board would be one-sided. The amendment follows closely the words of the English Act, which provides for representation on a similar Board of an exactly similar character. The Minister has the power to appoint and remove this Board, and they only hold office during his pleasure. The field outside is large enough to make a selection of a very capable and disinterested Board.

Insists upon its omission of clauses 8 and 9,—because it is not considered necessary either in the interests of the owners, nor is it any advantage to the workmen that the men in charge of machinery should have certificates of competency. For their own protection a qualified man is always provided by the owners, and great care is exercised in the selection of a sober, trustworthy person. It has not been found necessary with the large mining operations in the United Kingdom to have any such provision as this, and new clause 8 is a copy of the section of the English Mining Act, which deals with this question. Rule 24, the subsequent part of the Bill, makes the further necessary provision in connection with these sections.

Insists upon its amendment in clause 15, which inserts the words "or for registration of,"—because provision should be made for the payment of some fee by applicants for a certificate who have undergone examination in the United Kingdom or elsewhere, and who possess the necessary qualifications, and desire only to register in this Colony. Insists

Insists upon the admission of clause 17,—because of its apparently far-reaching and unnecessary operations. Apart from its impossibilities, some of the Companies' consulting engineers are not resident in the Colony, and whilst possessing an exceedingly competent manager at a high salary here questions connected with the general character of operations at the mine are submitted for the consulting engineer's judgment, though he is resident in England, and it would be impossible for such a person to conform to this section. The same contention may be raised regarding a managing director or the Board governing a company; besides, no good object could possibly be obtained by such a record. If orders were given to the manager, his proper business, provided he did not agree with the instructions given him, would be to at once record in writing, for conveyance to the authorities above him, his objections.

Does not insist upon its amendments in clause 19.

Insists upon its omission of clause 21 and the insertion of a new clause in lieu thereof,—because the new clause, which is an exact copy of section 41 of the English Act of 1887, provides all that is necessary to enable an Inspector to do his duty if he understands his work, whilst, on the contrary, if clause 21 was retained, it would hand over in an arbitrary way the whole of the mining operations of this Colony to the whim and caprice of, it might be, an incompetent Inspector, and would give him too absolute a power, which is undesirable. The power he possesses now under the present Coal-fields Regulation Act is quite sufficient, if not too extensive as it is, whilst the substitution of section 21 in lieu of the law as it now stands would endow the Inspector with such substantial power that, at his will, he could ruin any mining company if he thought fit. All he would require to do, without rhyme or reason, would be to announce to the colliery manager that it was his wish the men should be withdrawn from the mine, in which case 400 or 500 men would be thrown out of employment, and a repetition of what occurred at the Stockton mine possibly be the result. In that case the mining authorities declared the pit unsafe, ordered the men to be withdrawn, and the men themselves, after some enforced idleness, petitioned the manager to be allowed to go back to work as the mine was safe, notwithstanding the opinion expressed to the contrary by the mining authorities. The men went back to work, and have been at work for the last two years, in the face of the order that they should be withdrawn, and the fact that a prosecution was instituted against the manager for not complying with the mining authorities' orders, the manager being fined for working, what was then alleged, a property which was unsafe, but which, as has already been stated, has been at work for two years since, and is at the present moment in operation.

Insists upon its amendment in clause 22, which omits the words "and enter such report in a book at the mine,"—because the provision is entirely unnecessary, and not in conformity with the English Act.

Disagrees to the Assembly's amendment upon the Council's amendment in clause 27, page 11, line 1, which proposes to substitute the words "or other person agreed to by the arbitrators," for the words "a Police or Stipendiary Magistrate, or a Barrister-at-Law,"—because in matters of this kind it is necessary that all adjudications should be before some independent person, and it is thought that this can best be obtained by the retention of the officials designated as above.

Insists upon its amendment in clause 30, page 12, line 23, which omits the word "three" and inserts the word "six,"—because six months is not too long a period for the plotting of the workings to be in arrears, and it is the law now, and has been for years past, without causing any inconvenience, nor has it been a disadvantage to those concerned—employer or employed.

Insists upon its remaining amendments in clause 30,—because the words proposed to be omitted are unnecessary, ample provision being made in the Bill by re-enacting clause 38 of the present Coal Mines Regulation Act, which serves all the purposes for ascertaining the working of coal outside the boundaries of mines, and if the Crown have lost revenue, as alleged, through owners having taken coal outside their boundary, the fault lies in not making use of the provisions of the law as it now stands in section 38 referred to.

Insists upon its amendments in clause 31,—because it copies, word for word, section 35 of the English Act, and to refuse to insert the word "serious" would render the work of those called upon to supervise mining operations, a grave burden to them, and make them liable to be penalised for the most trifling accidents which are bound to occur in any large operations where hundreds of men are employed, and as a matter of fact, all serious injuries are always reported.

Insists upon its amendment in clause 32, which omits the word "forthwith" and inserts the words "within one month,"—because there is no valid reason for having it done immediately.

Disagrees to the Assembly's amendment upon the Council's amendment in clause 34, page 14, line 46, which proposes to insert after the word "boundaries" the word "of,"—because it is as well that any plan should show the surface boundaries as well as the workings underground.

Insists upon its omission of clause 36,—because it is not desirable to limit by legislation the hours of labour, and penalise any man for working beyond eight hours, or have any time stipulated by legislation, apart from the fact that the application of what is commonly known as the eight-hours system to coal-miners is unnecessary, inasmuch as, by voluntary combinations and regulations, they have now eight hours, with an idle Saturday every fortnight; besides, being contractors at so much per ton, they can go to work and leave off practically when they please.

Disagrees to the Assembly's amendments upon the Council's amendment in clause 37, line 41, which propose to substitute the word "eight" for the word "ten;" to omit the word "one;" to omit the words "and eight hours on the next Saturday;" and to omit the words "(1) Each period of employment shall be inclusive of one hour for meals,"—because this being the law now under the present Coal Mines Regulation Act, sections 8 and 9, any alterations in the present hours of working would curtail the output of the various mines, and lessen the wages earned by the workmen. The boys referred to in this section are not necessarily employed underground for ten hours. Under present arrangements they work now only eight hours, but it is necessary for them, as part of their employment, to travel in and out of the mine either with their horses, for gatekeeping or other purposes for which they may be employed underground, and the time for this varies according to the length of time the colliery has been opened. In some places it might occupy them altogether an hour—in others probably not ten minutes, and it must be borne in mind that one hour of the ten mentioned in the Statute is occupied exclusively for meals. It is necessary, in order to maintain the proper output of the mine, that these lads should be in attendance, and it is the training ground which all colliers like to give their sons before putting them to work on the coal.

Insists

Insists upon its amendments in clause 41,—because it is an honest attempt to settle by legislation for what the miners are paid, and if it is not ascertained by the provisions of this section, and any demand was made for payment for what is commonly known as “small coal,” it would involve an immediate reduction of the hewing rate now paid to the miner. His contract is to fill clean, round coal only, and he is paid an additional rate, which is taken into consideration, for the small coal that is unavoidably sent up and passes through the screens when the coal is being made marketable. Miners are not ordinarily employed to get small coal—if small coal is filled it is paid for; besides, the retention of the section will conform with the judgment of the House of Lords in several recent cases where a demand had been made to secure payment for small coal under the title of “mineral,” and it would set at rest any little uneasiness that may be felt upon this question. The law as it stands under the English Act and in our present Colonial Act, according to the judgment of the House of Lords, entitles the miner to be paid for small coal; but, with the exception of three or four demands in England, the law has not been invoked by the parties interested, they, no doubt, feeling that when payment was made for hewing large coal it also included small as above referred to, and it was only to harmonise the present legislation with the English Act, making the question more definite, that the clause was inserted, and which, in the interest of all parties, the Council desires now to insist upon. If this position be conceded then the insistence on subsection 3 is necessary.

Insists upon its amendments in clause 43 down to and including that in line 25, page 18, which omits the word “he” and inserts the words “the owner, agent, or manager,”—because it concedes ample provision for the protection of the wage-earner, and is the same provision as in the English law as at present, with the exception that it provides that the check-weigher shall be an employee of the colliery. This is the colonial law, and its operation has not been conducted with any disadvantages. It is often very desirable that persons who are not connected with the mine should not be allowed to act as check-weighers, and that the person filling this office should be an employee of the company.

Insists upon its remaining amendments in clause 43 disagreed to by the Assembly,—because it brings its provisions in conformity with the English Act.

Insists upon its amendment in clause 44,—because it is desirable that it may be brought within the provisions of clause 41.

Insists upon its amendments in clause 45,—because the miner is only to be paid for hewing large coal or shale.

Disagrees to the Assembly's amendment upon the Council's amendments in clause 46, line 54, which proposes to substitute the word “thirty” for the word “fifteen,” because this is in accordance with the English Act.

Disagrees with the Assembly's amendments upon the Council's amendments in clause 48, lines 2 and 7, which propose to substitute the word “thirty” for the word “fifteen” in each case,—because it forms part of the English Act.

Insists upon its amendment in clause 49, which omits subsection (III),—because this provision of the Bill refers only to the division of mine into parts, and it has been erroneously classed under the title of “Division of mine into splits,” and represents clauses 19 and 20 of the English Act, which describes it under the heading of “Division of mine into parts,” and not “Division of mine into splits,” and in the English Act the legislation is permissive, and not compulsory, the word “may” occurring in the English Act, but in this section it has been converted into “shall.”

Insists upon its amendments in clause 50, page 21, lines 45 to 50,—because the term “adequate” will be quite sufficient for every purpose connected with mining operations. It is sufficient for all the legislation on this class of mining in the United Kingdom, and gives rise to no difficulty there, and if administered here by competent people, the same results will follow. The present law provides for a minimum quantity of air, and if this is to be amended by the addition of any further prescribed figures, it is thought better to follow out the English practice, as our deep sinkings are producing fiery mines, where it is notorious that 100 feet (cubic) of air would be absolutely insufficient. As the law stands now, in one of the mines of this Colony, the quantity of air circulated as a matter of necessity is three times more than that required by law, and it is thought that the retention of the word “adequate” will be more than sufficiently satisfactory to determine special application to each mine where either less or more ventilation may be required. The quantity now in some places as fixed by law is very much too large, whilst in the case cited above it is very much too little.

Insists upon its amendment in clause 50, page 22, lines 2 to 6,—because it is not necessary to have bratticing as well as cut-throughs. One or other of these provisions is all that is necessary.

Insists upon its amendments in clause 50, page 22, lines 23 to 56, because this portion of the Act has only been brought into accordance with the exact wording of the English Act.

Insists upon its amendment in clause 50, page 23, line 22, which omits the words “by such person,”—because the words “by such person” do not appear in the English Act.

Insists upon its amendment in clause 50, page 24, line 14, which inserts the words “except within a completely-closed chamber attached to the fuse of the shot,”—because this is in accordance with the English Act, and is absolutely necessary in every fiery mine.

Disagrees to the Assembly's amendment upon the Council's amendment in clause 50, page 24, line 27, which proposes to insert after the word “shall” the word “dry,”—because this is not in accordance with the English Act, the word “dry” not being made use of, and it appears to the Council that the term “coal and coal-dust” would be quite sufficient to embrace coal of any character, whether dry or wet.

Insists upon its amendment in clause 50, page 24, lines 32 to 35, which omits the words “Provided that no person shall return to a place where such charge has missed fire until a period of eight hours has elapsed from the lighting of the fuse attached to such charge,”—because it does not appear to be part of English legislation, and it is unnecessary to make it part of statute law, and precautions are taken by the men themselves, by voluntary action on their part, of absenting themselves for a reasonable period where the shot misses fire.

Disagrees to the Assembly's amendments upon the Council's amendment in clause 50, page 26, lines 5 and 6, which propose to substitute the word “height” for the word “length” and the word “four” for the word “three” and to insert after the word “in” the words “depth and three feet in,”—because the provision to the extent of sufficient height and 3 feet in width is that provided for in the English Act, and should be sufficient for all purposes.

Insists

Insists upon its amendment in clause 50, page 26, which omits *Rule 19*,—because such a provision is unnecessary, and is really the course pursued as a matter of practice.

Insists upon its amendment in clause 50, page 26, lines 32 and 33, which omits the words "every shaft in course of sinking shall be kept clear of all noxious gases by a fan or some other appliance,"—because it is an addition to the English legislation on this subject which is considered to be unnecessary. The words "or otherwise made secure" in the rule itself is capable of a much larger construction than limiting an expression regarding it as it is proposed to do by the addition of the words "every shaft in course of sinking shall be kept clear, &c."

Insists upon its amendment in clause 50, page 26, which omits *Rule 25*,—because it is the business of the Crown when leasing coal to see that sufficient provision is made for protecting the surface, and that owners of the mineral long before any improvements in the shape of roads or townships were in existence ought not to be punished now by losing their coal, as it is by no action of theirs that circumstances have produced an apparent necessity for not mining the coal which they are entitled to. Practically in nearly all mining townships the large companies make provision—even at the proprietor's expense—for the maintenance of the surface where the safety of the travelling public has to be considered. It is notorious that roads have been made long after the coal has been taken out, and the authorities ought to have known this would one day result in a settlement of the surface before they made the roads.

Insists upon the insertion of new *Rule 24*,—because it is in conformity with the provisions of the English Act, and necessary to be placed here if the Council's omission of section 8 is maintained.

Insists upon its amendment in clause 50, page 27, which omits *Rule 34*,—because it forms no part of English legislation, nor of any legislation in this Colony, and it appears to be unnecessary.

Insists upon its amendment in clause 50, page 28, lines 12 and 13, which omits the words "or any one having the written authority of any inspector or person so employed,"—because they appear to be superfluous; besides, it is doubtful if the power of an inspector or employee should be delegated in this way, as such a power might be given for improper purposes.

Insists upon its amendment in clause 50, page 28, line 22,—which inserts the words "not being mining engineers who are practical working miners,"—because the retention of such authority as this would leave it open to the persons employed at the mine obtaining an inspection of a valuable mining property possibly for sinister purposes, and all that is required in an inspection of this kind can always be accomplished by two working miners.

Insists upon its amendments in clause 50, pages 28 and 29, which omit *Rules 41, 42, 43, 44, 45, and 46*; which omit clause 51, and the proviso to clause 52,—because legislation of this character would simply destroy the coal-mining industry of the Colony, and particularly that of the Newcastle District.

Insists upon its amendment which omits clause 59,—because it would be undesirable that there should be any set of special rules established by the Executive, whilst ample provision is made for all the preliminary mining operations under the Bill, and it would be the business of the authorities and everyone interested in the colliery operations to frame a set of special rules in accordance with the Act as speedily as possible, so as to govern the mining property for the interest of all concerned.

Insists upon its amendment in clause 62, line 39, which omits the word "wilfully,"—because any one pulling down notices should be punished. If it could be shown to the Court that it was the result of an accident, the offender could not be punished. In any case it would be difficult to obtain a conviction with the word "wilfully" retained in the section.

Insists upon its amendment in clause 63, line 6, which omits the words "five pounds" and inserts the words "one pound,"—because the section itself differentiates now to a serious extent between the manager and the workman. It provides a punishment not exceeding £20 as against the manager, and to anybody else, for a similar offence, a fine of £2. Besides, it assimilates the punishment of £1 to that provided for in the English Act.

Insists upon its amendments in clause 69,—because it is only right that offences committed by owners, agents, managers, or under managers should be prosecuted for by a specially constituted authority in the shape of an inspector under the Act, otherwise it would be competent for outsiders and employees to be constantly annoying those concerned in the administration of the mine by projecting charges of offences under the Act, which were frivolous and untenable, and the section as amended makes it an exact copy of clause 65 of the English Act of 1887.

Insists upon its amendment in clause 72,—because it leaves it optional to the parties interested to make the agreement, and, unless both parties are agreed, the adjudication could not take place, and it is part of the English Act, clause 69.

Insists upon its amendment in clause 78, page 35, which inserts the words "Large coal means all coal passing over a three-quarter-inch screen,"—because it is a consequential amendment to the definition of the term "mineral," which must be defined as in manner stated.

Disagrees to the Assembly's amendment upon the Council's amendment in clause 78, page 36, line 6, which proposes to omit the words "Part II of,"—because the duties and powers of an Inspector are defined under Part II.

Insists upon its amendments in Schedule II, lines 40 and 41, which omit the word "(round)" and insert the word "(large)," and which omit the words "coal (small),"—because they are consequential upon those already made, and it is unnecessary for statistical or any other purpose to have legislation in a Coal Mining Bill of this character, inasmuch as the information is always available from the Coal-mining Offices of the various collieries, and it is not in accordance with the returns asked for under Schedule 3 of the English Coal Mines Regulation Act of 1887.

Committee Room, No. 2,
Sydney, 12th June, 1895.

ALEXANDER BROWN,
Chairman.

Mr. Brown moved, That the report be now adopted.

Question put and passed.

Mr. Brown then moved, That the following Message be carried to the Legislative Assembly:—

MR. SPEAKER,

The Legislative Council having had under consideration the Legislative Assembly's Message, dated 30th April, 1895, in reference to the Coal Mines Regulation Bill:—

Agrees to the Assembly's amendment upon the Council's amendment in clause 1, which substitutes the word "July" for the word "March." Disagrees

Disagrees to the Assembly's amendment upon the Council's amendment in clause 2, page 2, line 26, which proposes to substitute the word "twenty" for the word "thirty,"—because it is not considered necessary that a mine employing less than thirty men should be under the control of a certificated manager, and be subject to all the restrictions and responsibilities which would attach to a large mine; and it would mean considerably increased expenditure to a number of hard-working and industrious men who are engaged now in developing small properties, which, if trammelled with the conditions under which large coal-mining properties ought to be worked, would be closed up.

Insists upon its amendment in clause 5, page 2, after line 57, which inserts the words "(a) Three persons being owners or agents of mines in the Colony of New South Wales," and disagrees to the Assembly's amendment in the same clause, page 3, line 1, which inserts the words "being owners or agents of mines or persons,"—because inasmuch as all parties should be represented on a Board of this kind, and it does not necessarily follow that the composition of the Board would be one sided. The amendment follows closely the words of the English Act, which provides for representation on a similar Board of an exactly similar character. The Minister has the power to appoint and remove this Board, and they only hold office during his pleasure. The field outside is large enough to make a selection of a very capable and disinterested Board.

Insists upon its omission of clauses 8 and 9,—because it is not considered necessary either in the interests of the owners, nor is it any advantage to the workmen that the men in charge of machinery should have certificates of competency. For their own protection a qualified man is always provided by the owners, and great care is exercised in the selection of a sober, trustworthy person. It has not been found necessary with the large mining operations in the United Kingdom to have any such provision as this, and new clause 8 is a copy of the section of the English Mining Act, which deals with this question. Rule 24, the subsequent part of the Bill, makes the further necessary provision in connection with these sections.

Insists upon its amendment in clause 15, which inserts the words "or for registration of,"—because provision should be made for the payment of some fee by applicants for a certificate who have undergone examination in the United Kingdom or elsewhere, and who possess the necessary qualifications, and desire only to register in this Colony.

Insists upon the omission of clause 17,—because of its apparently far-reaching and unnecessary operations. Apart from its impossibilities, some of the Companies' consulting engineers are not resident in the Colony, and whilst possessing an exceedingly competent manager at a high salary here questions connected with the general character of operations at the mine are submitted for the consulting engineer's judgment, though he is resident in England, and it would be impossible for such a person to conform to this section. The same contention may be raised regarding a managing director or the Board governing a company; besides, no good object could possibly be obtained by such a record. If orders were given to the manager, his proper business, provided he did not agree with the instructions given him, would be to at once record in writing, for conveyance to the authorities above him, his objections.

Does not insist upon its amendments in clause 19.

Insists upon its omission of clause 21 and the insertion of a new clause in lieu thereof,—because the new clause, which is an exact copy of section 41 of the English Act of 1887, provides all that is necessary to enable an inspector to do his duty if he understands his work, whilst, on the contrary, if clause 21 was retained, it would hand over in an arbitrary way the whole of the mining operations of this Colony to the whim and caprice of, it might be, an incompetent inspector, and would give him too absolute a power, which is undesirable. The power he possesses now under the present Coal-fields Regulation Act is quite sufficient, if not too extensive as it is, whilst the substitution of section 21 in lieu of the law as it now stands would endow the inspector with such substantial power that, at his will, he could ruin any mining company if he thought fit. All he would require to do, without rhyme or reason, would be to announce to the colliery manager that it was his wish the men should be withdrawn from the mine, in which case 400 or 500 men would be thrown out of employment, and a repetition of what occurred at the Stockton mine possibly be the result. In that case the mining authorities declared the pit unsafe, ordered the men to be withdrawn, and the men themselves, after some enforced idleness, petitioned the manager to be allowed to go back to work, as the mine was safe, notwithstanding the opinion expressed to the contrary by the mining authorities. The men went back to work, and have been at work for the last two years in the face of the order that they should be withdrawn, and the fact that a prosecution was instituted against the manager for not complying with the mining authorities orders, the manager being fined for working, what was then alleged, a property which was unsafe, but which, as has already been stated, has been at work for two years since, and is at the present moment in operation.

Insists upon its amendment in clause 22, which omits the words "and enter such report in a book at the mine,"—because the provision is entirely unnecessary, and not in conformity with the English Act.

Disagrees to the Assembly's amendment upon the Council's amendment in clause 27, page 11, line 1, which proposes to substitute the words "or other person agreed to by the arbitrators," for the words "a Police or Stipendiary Magistrate, or a Barrister-at-Law,"—because in matters of this kind it is necessary that all adjudications should be before some independent person, and it is thought that this can best be obtained by the retention of the officials designated as above.

Insists upon its amendment in clause 30, page 12, line 23, which omits the word "three" and inserts the word "six,"—because six months is not too long a period for the plotting of the workings to be in arrears, and it is the law now, and has been for years past, without causing any inconvenience, nor has it been a disadvantage to those concerned—employer or employed.

Insists upon its remaining amendments in clause 30,—because the words proposed to be omitted are unnecessary, ample provision being made in the Bill by re-enacting clause 38 of the present Coal Mines Regulation Act, which serves all the purposes for ascertaining the working of coal outside the boundaries of mines, and if the Crown have lost revenue, as alleged, through owners having taken coal outside their boundary, the fault lies in not making use of the provisions of the law as it now stands in section 38 referred to.

Insists upon its amendments in clause 31,—because it copies, word for word, section 35 of the English Act, and to refuse to insert the word "serious" would render the work of those called upon to supervise mining operations, a grave burden to them, and make them liable to be penalised for the most trifling accidents which are bound to occur in any large operations where hundreds of men are employed, and as a matter of fact, all serious injuries are always reported.

Insists

Insists upon its amendment in clause 32, which omits the word "forthwith" and inserts the words "within one month,"—because there is no valid reason for having it done immediately.

Disagrees to the Assembly's amendment upon the Council's amendment in clause 34, page 14, line 46, which proposes to insert after the word "boundaries" the word "of,"—because it is as well that any plan should show the surface boundaries as well as the workings underground.

Insists upon its omission of clause 36,—because it is not desirable to limit by legislation the hours of labour, and penalise any man for working beyond eight hours, or have any time stipulated by legislation, apart from the fact that the application of what is commonly known as the eight hours system to coal-miners is unnecessary, inasmuch as, by voluntary combinations and regulations, they have now eight hours, with an idle Saturday every fortnight, besides, being contractors at so much per ton, they can go to work, and leave off practically when they please.

Disagrees to the Assembly's amendments upon the Council's amendment in clause 37, line 41, which propose to substitute the word "eight" for the word "ten;" to omit the word "one;" to omit the words "and eight hours on the next Saturday;" and to omit the words "(11) Each period of "employment shall be inclusive of one hour for meals,"—because this being the law now under the present Coal Mines Regulation Act, sections 8 and 9, any alterations in the present hours of working would curtail the output of the various mines, and lessen the wages earned by the workmen. The boys referred to in this section are not necessarily employed under ground for ten hours. Under present arrangements they work now only eight hours, but it is necessary for them, as part of their employment, to travel in and out of the mine, either with their horses, for gatekeeping, or other purposes for which they may be employed underground, and the time for this varies according to the length of time the colliery has been opened. In some places it might occupy them altogether an hour—in others probably not ten minutes, and it must be borne in mind that one hour of the ten mentioned in the Statute is occupied exclusively for meals. It is necessary in order to maintain the proper output of the mine that these lads should be in attendance, and it is the training ground which all colliers like to give their sons before putting them to work on the coal.

Insists upon its amendments in clause 41,—because it is an honest attempt to settle by legislation for what the miners are paid, and if it is not ascertained by the provisions of this section, and any demand was made for payment for what is commonly known as "small coal" it would involve an immediate reduction of the hewing rate now paid to the miner. His contract is to fill clean round coal only, and he is paid an additional rate, which is taken into consideration, for the small coal that is unavoidably sent up and passes through the screens when the coal is being made marketable. Miners are not ordinarily employed to get small coal—if small coal is filled it is paid for; besides, the retention of the section will conform with the judgment of the House of Lords in several recent cases where a demand had been made to secure payment for small coal under the title of "mineral," and it would set at rest any little uneasiness that may be felt upon this question. The law as it stands under the English Act and in our present Colonial Act, according to the judgment of the House of Lords, entitles the miner to be paid for small coal; but, with the exception of three or four demands in England, the law has not been invoked by the parties interested, they, no doubt, feeling that when payment was made for hewing large coal it also included small as above referred to, and it was only to harmonise the present legislation with the English Act, making the question more definite, that the clause was inserted, and which, in the interest of all parties, the Council desires now to insist upon. If this position be conceded then the insistence on subsection 3 is necessary.

Insists upon its amendments in clause 43 down to and including that in line 25, page 18, which omits the word "he" and inserts the words, "the owner, agent or manager,"—because it concedes ample provision for the protection of the wage-earner, and is the same provision as in the English law as at present, with the exception that it provides that the check-weigher shall be an employee of the colliery. This is the colonial law, and its operation has not been conducted with any disadvantages. It is often very desirable that persons who are not connected with the mine should not be allowed to act as check-weighers, and that the person filling this office should be an employee of the company.

Insists upon its remaining amendments in clause 43 disagreed to by the Assembly,—because it brings its provisions in conformity with the English Act.

Insists upon its amendment in clause 44,—because it is desirable that it may be brought within the provisions of clause 41.

Insists upon its amendments in clause 45,—because the miner is only to be paid for hewing large coal or shale.

Disagrees to the Assembly's amendment upon the Council's amendment in clause 46, line 54, which proposes to substitute the word "thirty" for the word "fifteen",—because this is in accordance with the English Act.

Disagrees to the Assembly's amendments upon the Council's amendments in clause 48, lines 2 and 7, which propose to substitute the word "thirty" for the word "fifteen" in each case,—because it forms part of the English Act.

Insists upon its amendment in clause 49, which omits subsection (111),—because this provision of the Bill refers only to the division of mine into parts, and it has been erroneously classed under the title of "Division of mine into splits," and represents clauses 19 and 20 of the English Act, which describes it under the heading of "Division of mine into parts," and not "Division of mine into splits," and in the English Act the legislation is permissive, and not compulsory, the word "may" occurring in the English Act, but in this section it has been converted into "shall."

Insists upon its amendments in clause 50, page 21, lines 45 to 50,—because the term "adequate" will be quite sufficient for every purpose connected with mining operations. It is sufficient for all the legislation on this class of mining in the United Kingdom, and gives rise to no difficulty there, and if administered here by competent people, the same results will follow. The present law provides for a minimum quantity of air, and if this is to be amended by the addition of any further prescribed figures, it is thought better to follow out the English practice, as our deep sinkings are producing fiery mines, where it is notorious that 100 feet (cubic) of air would be absolutely insufficient. As the law stands now, in one of the mines of this Colony, the quantity of air circulated as a matter of necessity is three times more than that required by law, and it is thought that the retention of the word "adequate" will be more than sufficiently satisfactory to determine special application to each mine where either less or more ventilation may be required. The quantity now in some places as fixed by law is very much too large, whilst in the case cited above it is very much too little.

Insists

Insists upon its amendment in clause 50, page 22, lines 2 to 6,—because it is not necessary to have bratticing as well as cut-throughs. One or other of these provisions is all that is necessary.

Insists upon its amendments in clause 50, page 22, lines 23 to 56,—because this portion of the Act has only been brought into accordance with the exact wording of the English Act.

Insists upon its amendment in clause 50, page 23, line 22, which omits the words “by such person,”—because the words “by such person” do not appear in the English Act.

Insists upon its amendment in clause 50, page 24, line 14, which inserts the words “except within a completely closed chamber attached to the fuse of the shot,”—because this is in accordance with the English Act, and is absolutely necessary in every fiery mine.

Disagrees to the Assembly's amendment upon the Council's amendment in clause 50, page 24, line 27, which proposes to insert after the word “shall” the word “dry,”—because this is not in accordance with the English Act, the word “dry” not being made use of, and it appears to the Council that the term “coal and coal-dust” would be quite sufficient to embrace coal of any character, whether dry or wet.

Insists upon its amendment in clause 50, page 24, lines 32 to 35, which omits the words “Provided that no person shall return to a place where such charge has missed fire until a period of eight hours has elapsed from the lighting of the fuse attached to such charge,”—because it does not appear to be part of English legislation, and it is unnecessary to make it part of statute law, and precautions are taken by the men themselves, by voluntary action on their part, of absenting themselves for a reasonable period where the shot misses fire.

Disagrees to the Assembly's amendments upon the Council's amendment in clause 50, page 26, lines 5 and 6, which propose to substitute the word “height” for the word “length” and the word “four” for the word “three” and to insert after the word “in” the words “depth and three feet in,”—because the provision to the extent of sufficient height and 3 feet in width is that provided for in the English Act, and should be sufficient for all purposes.

Insists upon its amendment in clause 50, page 26, which omits *Rule 19*,—because such a provision is unnecessary, and is really the course pursued as a matter of practice.

Insists upon its amendment in clause 50, page 26, lines 32 and 33, which omits the words “every shaft in course of sinking shall be kept clear of all noxious gases by a fan or some other appliance,”—because it is an addition to the English legislation on this subject which is considered to be unnecessary. The words “or otherwise made secure” in the rule itself is capable of a much larger construction than limiting an expression regarding it as it is proposed to do by the addition of the words “every shaft in course of sinking shall be kept clear, &c.”

Insists upon its amendment in clause 50, page 26, which omits *Rule 25*,—because it is the business of the Crown when leasing coal to see that sufficient provision is made for protecting the surface, and that owners of the mineral long before any improvements in the shape of roads or townships were in existence ought not to be punished now by losing their coal, as it is by no action of theirs that circumstances have produced an apparent necessity for not mining the coal which they are entitled to. Practically in nearly all mining townships the large companies make provision—even at the proprietor's expense—for the maintenance of the surface where the safety of the travelling public has to be considered. It is notorious that roads have been made long after the coal has been taken out, and the authorities ought to have known this would one day result in a settlement of the surface before they made the roads.

Insists upon the insertion of new *Rule 24*,—because it is in conformity with the provisions of the English Act, and necessary to be placed here if the Council's omission of section 8 is maintained.

Insists upon its amendment in clause 50, page 27, which omits *Rule 34*,—because it forms no part of English legislation, nor of any legislation in this Colony, and it appears to be unnecessary.

Insists upon its amendment in clause 50, page 28, lines 12 and 13, which omits the words “or any one having the written authority of any inspector or person so employed,”—because they appear to be superfluous; besides, it is doubtful if the power of an inspector or employee should be delegated in this way, as such a power might be given for improper purposes.

Insists upon its amendment in clause 50, page 28, line 22, which inserts the words “not being mining engineers who are practical working miners,”—because the retention of such authority as this would leave it open to the persons employed at the mine obtaining an inspection of a valuable mining property possibly for sinister purposes, and all that is required in an inspection of this kind can always be accomplished by two working miners.

Insists upon its amendments in clause 50, pages 28 and 29, which omit *Rules 41, 42, 43, 44, 45, and 46*; which omit clause 51, and the proviso to clause 52,—because legislation of this character would simply destroy the coal-mining industry of the Colony, and particularly that of the Newcastle District.

Insists upon its amendment which omits clause 59,—because it would be undesirable that there should be any set of special rules established by the Executive, whilst ample provision is made for all the preliminary mining operations under the Bill, and it would be the business of the authorities and everyone interested in the colliery operations to frame a set of special rules in accordance with the Act as speedily as possible, so as to govern the mining property for the interest of all concerned.

Insists upon its amendment in clause 62, line 39, which omits the word “wilfully,”—because anyone pulling down notices should be punished. If it could be shown to the Court that it was the result of an accident, the offender could not be punished. In any case it would be difficult to obtain a conviction with the word “wilfully” retained in the section.

Insists upon its amendment in clause 63, line 6, which omits the words “five pounds” and inserts the words “one pound,”—because the section itself differentiates now to a serious extent between the manager and the workman. It provides a punishment not exceeding £20 as against the manager, and to anybody else, for a similar offence, a fine of £2. Besides, it assimilates the punishment of £1 to that provided for in the English Act.

Insists upon its amendments in clause 69,—because it is only right that offences committed by owners, agents, managers, or under managers should be prosecuted for by a specially constituted authority in the shape of an inspector under the Act, otherwise it would be competent for outsiders and employees to be constantly annoying those concerned in the administration of the mine by projecting charges of offences under the Act, which were frivolous and untenable, and the section as amended makes it an exact copy of clause 65 of the English Act of 1887.

Insists

Insists upon its amendment in clause 72,—because it leaves it optional to the parties interested to make the agreement, and, unless both parties are agreed, the adjudication could not take place, and it is part of the English Act, clause 69.

Insists upon its amendment in clause 78, page 35, which inserts the words "Large coal means all coal passing over a three-quarter-inch screen,"—because it is a consequential amendment to the definition of the term "mineral" which must be defined as in manner stated.

Disagrees to the Assembly's amendment upon the Council's amendment in clause 78, page 36, line 6, which proposes to omit the words "Part II of,"—because the duties and powers of an Inspector are defined under Part II.

Insists upon its amendments in Schedule II, lines 40 and 41, which omit the word "(round)" and insert the word "(large)" and which omit the words "coal (small),"—because they are consequential upon those already made, and it is unnecessary for statistical or any other purpose to have legislation in a Coal Mining Bill of this character, inasmuch as the information is always available from the Coal Mining Offices of the various collieries, and it is not in accordance with the returns asked for under Schedule 3 of the English Coal Mines Regulation Act of 1887.

B.

SECTIONS IN COAL MINES REGULATION ACT, NEW SOUTH WALES, 11th May, 1876, REFERRED TO IN EVIDENCE.

Section 12.

- (2) An adequate amount of ventilation shall be constantly produced in every mine to dilute and render harmless noxious gases to such an extent that the working places of the shafts levels stables and workings of such mine and the travelling roads to and from such working places shall be in a fit state for working and passing therein. General Rules
- (3) An adequate amount of ventilation shall mean not less (as a minimum) than one hundred cubic feet of pure air per minute for each man boy and horse which shall sweep undiminished along the airway past each working place.
- (4) Within six months after the commencement of this Act every mine shall be divided into districts or splits of not more than seventy men and each district shall be supplied with a separate current of fresh air. All intake air shall travel free from all stagnant water stables and old workings and no place shall be driven more than thirty-five yards before the current of air without a cut through put through or bratticed up within three yards of the face of such working place.
- (5) If at any time it is found by the person in charge of a mine or any part thereof or by the examiner or inspector that by reason of noxious gases prevailing in such mine or such part thereof or of any cause whatever the mine or the said part is dangerous every workman shall be withdrawn therefrom and the examiner or inspector shall inspect the same (and if the danger arises from inflammable gas shall make such inspection with a locked safety-lamp) and in every case shall make a true report of the condition of such mine or part thereof and no workman shall except in so far as is necessary for inquiry into the cause of danger or for the removal thereof or for exploration be readmitted into the mine or such part thereof as was so found dangerous until the same is stated by the examiner or inspector to be safe. Every such report shall be recorded in a book which shall be kept at the mine for the purpose and shall be signed by the person reporting.

Section 19. Where the amount of wages payable to any of the persons employed in a mine depends on the amount of mineral gotten by them such person shall after the first day of February one thousand eight hundred and seventy-six be paid according to the weight of the mineral gotten by them. Provided always that nothing herein contained shall preclude the owner or agent of the mine from agreeing with the persons employed in such mine that deductions shall be made in respect of stones or materials other than mineral contracted to be gotten which shall be sent out of the mine with such mineral or in respect of any tubs baskets or hutches being improperly filled in those cases where they are filled by the getter of the mineral or his drawer or by the persons immediately employed by him such deductions being determined by the banksman or weigher and check-weigher (if there be one) or in case of difference by a third party to be mutually agreed on by the owner agent or manager of the mine on the one hand and the persons employed in the mine on the other. Where it is proved to the satisfaction of the Minister that by reason of any exigencies existing in the case of any mine or class of mines to which the foregoing provisions in this section applies it is requisite or expedient that the persons employed in such mine or class of mines should not be paid by the weight of the mineral gotten by them or that the beginning of such payment by weight should be postponed such Minister may if he think fit by order exempt such mine or class of mines from the provisions of this section either without condition or during the time and upon the conditions specified in the order or postpone in such mine or class of mines the beginning of such payment by weight and may from time to time revoke or alter any such order. If any person contravenes or fails to comply with or permits any person to contravene or fail to comply with this section he shall be guilty of an offence against this Act and in the event of any contravention of or non-compliance with this section by any person whomsoever the owner agent and manager shall each be guilty of an offence against this Act unless he prove that he had taken all reasonable means by publishing and to the best of his power enforcing the provisions of this section to prevent such contravention and non-compliance.

Section 25. If in any respect (which is not provided against by any express provision of this Act or by any special rule) any inspector find any mine or any part thereof or any matter thing or practice in or connected with any such mine to be dangerous or defective so as in his opinion to threaten or tend to the bodily injury of any person such inspector may give notice in writing thereof to the owner or agent of the mine and shall state in such notice the particulars in which he considers such mine or any part thereof or any matter thing or practice to be dangerous or defective and require the same to be remedied and unless the same be forthwith remedied the inspector shall also report the same to the Minister. If the owner or agent of the mine objects to remedy the matter complained of in the notice he may within seven days after the receipt of such notice send his objection in writing stating the grounds thereof to the

the Minister and thereupon the matter shall be determined by arbitration in manner provided by this Act in relation to the special rules and the date of the receipt of such objection shall be deemed to be the date of the reference. If the owner or agent fail to comply either with the requisition of the notice given by the inspector when no objection is sent within the time aforesaid or with award made on arbitration within twenty days after the receipt of such notice or the making of the award (as the case may be) he shall be guilty of an offence against this Act and the notice and award shall respectively be deemed to be written notice of such offence. Provided that the Court if satisfied that the owner or agent has taken active measures for complying with the notice or award but has not with reasonable diligence been able to complete the works may adjourn any proceedings taken before them for punishing such offence and if the works are completed within a reasonable time no penalty shall be inflicted. No person shall be precluded by any agreement from doing such acts as may be necessary to comply with the provisions of this section or be liable under any contract to any penalty or forfeiture for doing such acts.

NEW ZEALAND COAL MINES ACT, 1891.

General Rules.

Section 38—

Ventilation.

Rule 1.—An adequate amount of ventilation shall be constantly produced in every mine to such an extent that the shafts, winzes, sumps, levels, underground stables, and working-places of such mine, and the travelling roads to and from such working-places, shall be in a fit state for working and passing therein.

An adequate amount of ventilation shall mean not less than one hundred cubic feet of pure air per minute for each man and youth, and horse, pony, donkey, or mule, which shall sweep undiminished along the airway through each working place.

STATUTES OF BRITISH COLUMBIA, 51 Vic., c. 84.

PART II.—*Rules.*

Ventilation.

Rule 1.—An adequate amount of ventilation shall be constantly produced in every mine to dilute and render harmless noxious gases to such an extent that the working-places of the shafts, levels, stables, and workings of such mine, and the travelling roads to and from such working-places, shall be in a fit state for working and passing therein.

Rule 2.—An adequate amount of ventilation shall mean not less than one hundred cubic feet of pure air per minute for each man, boy, horse, and mule employed in a mine, and as much more as the inspector may direct, which shall sweep the face of each working-place. Every mine shall be divided into districts or splits of not more than seventy men in each district, and each district shall be supplied with a separate current of fresh air. All intake air shall travel free from all stagnant water, stables, and old workings, and every place shall be bratticed up within four yards of the face. On all main roads where a door is required, the inspector of mines may order that two doors shall be placed so that while boxes are being taken through the one the other shall remain closed and no air shall be lost.

REVISED STATUTES OF THE UNITED STATES.—Vol. 1, 2nd Edition, 1874–1891.

Chap. 564, March 3, 1891—An Act for the protection of the lives of miners in the Territories.

Ventilation to be provided.

Section 6. That the owners or managers of every coal mine at a depth of one hundred feet or more shall provide an adequate amount of ventilation of not less than fifty-five cubic feet of pure air per second, or thirty-three hundred cubic feet per minute, for every fifty men at work in said mine, and in like proportion for a greater number—which air shall, by proper appliances or machinery, be forced through such mine to the face of each and every working place, so as to dilute and render harmless and expel therefrom the noxious or poisonous gases; and all workings shall be kept clear of standing gas.

REVISED STATUTES OF NOVA SCOTIA.—Fifth series.

General Rules.

Section 25—

Ventilation.

Rule 1.—An adequate amount of ventilation shall be constantly produced in every mine to dilute and render harmless noxious gases to such an extent that the working-places of the shafts, levels, stables, winzes, sumps, and workings of such mine, and the travelling roads to and from such working-places, shall be in a fit state for working and passing therein.

C.

SECTIONS IN ENGLISH COAL-MINES REGULATION ACT, 1887, REFERRED TO IN EVIDENCE.

English Act 1887.
Disqualification of persons as inspectors.
Sec. 40.

Any person who practises or acts as or is a partner of any person who practises or acts as a land agent or mining engineer, or as a manager, viewer, agent, or valuer of mines, or arbitrator in any difference arising between owners, agents, or managers of mines, or is otherwise employed in or about any mine, or is a miner's agent or a mine-owner (whether the mine is one to which this Act applies or not), shall not act as an inspector of mines under this Act, and no inspector shall be a partner or have any interest direct or indirect in any mine in the district under his charge.

Act of 1870.
N.S.W.

Section 27. No examiner or inspector shall act or practise as a land agent or as a manager viewer or agent or mining engineer or a valuer of land or arbitrator in any matter of dispute arising between owners of mines or be otherwise employed or interested in any way in any mine.

English Act 1887.
Notice by inspector of causes of danger not expressly provided against.
Sec. 42. Sub-sec. 1.

If in any respect (which is not provided against by any express provision of this Act, or by any special rule) an inspector finds any mine, or any part thereof, or any matter, thing, or practice in or connected with any such mine, or with the control, management, or direction thereof by the manager to be dangerous or defective, so as, in his opinion, to threaten or tend to the bodily injury of any person, he may give notice in writing thereof to the owner, agent, or manager of the mine, and shall state in the notice the particulars in which he considers the mine or any part thereof, or any matter, thing, or practice, to be dangerous or defective, and require the same to be remedied; and unless the same be forthwith remedied shall also report the same to a Secretary of State.

¹Where

¹Where in or about any mine, whether above or below ground, either—

- (i) loss of life or any personal injury whatever to any person employed in or about the mine occurs by reason of any explosion of gas, or of any explosive,² or of any steam boiler; or
- (ii) loss of life or any serious personal injury to any person employed in or about the mine occurs by reason of any accident whatever,

Notice to be given of accidents in mines. Sec. 25 Sub-sec. 1.

the owner, agent, or manager of the mine shall, within twenty-four hours next after the explosion or accident, send notice in writing of the explosion or accident and of the loss of life or personal injury occasioned thereby to the inspector of the district on behalf of a Secretary of State, and shall specify in the notice the character of the explosion or accident, and the number of persons killed or injured respectively.

¹ *The whole of this section in the English Act 1887 re-enacts, with considerable variations, section 39 of the Act of 1872.*

² "Powder" in the repealed section.

The following general rules¹ shall be observed, so far as is reasonably practicable,² in every mine:

Ventilation of Mine.³

Part II.
Rules.
General Rules.
Sec. 49.

Rule 1. An adequate amount of ventilation shall be constantly produced in every mine to dilute and render harmless noxious gases to such an extent that the working-places of the shafts, levels, stables, and workings of the mine, and the travelling roads to and from those working-places shall be in a fit state for working and passing therein.⁴

In the case of mines required by this Act to be under the control of a certificated manager, the quantity of air in the respective splits or currents shall at least once in every month be measured and entered in a book to be kept for the purpose at the mine.

Rule 2. Where a fire is used for ventilation in any mine newly opened after the passing of this Act, the return air, unless it be so diluted as not to be inflammable, shall be carried off clear of the fire by means of a dumb drift or air-way.⁵

Rule 3. Where a mechanical contrivance for ventilation is introduced into any mine after the commencement of this Act, it shall be in such position and placed under such conditions as will tend to insure its being uninjured by an explosion.⁶

¹ Any breach of these rules, by whomsoever committed, may be an offence on the part of the owner, agent, and manager.

² The words "reasonably practicable" are not to be construed with reference to what is practicable for the carrying on of the mine as a profitable business concern, but with reference merely to physical or engineering difficulties. (*Wales v. Thomas*, 16 Q.B.D. 340, a decision under the Act of 1872.) The words seem to apply to affirmative provisions only. Negative provisions are always practicable, because it is always possible to do nothing.

³ The first clause of this rule is a re-enactment of rule 1, of section 51 of the Act of 1782.

⁴ To comply with this provision ventilation must be produced even during the temporary suspension of actual work, as on Sundays, and it is necessary not only that the actual working-places and travelling roads should be ventilated, but also that the ventilation should pass through the contiguous parts although not actually in use; for so much of the mine must be kept so ventilated as to render the working-places and travelling roads safe. (A decision under a former Act which contained similar provisions.)

⁵ This Rule is new.

⁶ This Rule is new.

D.

A Bill to Amend the English Coal Mines Regulation Act, 1887 (prepared and brought in by Mr. Secretary Asquith and Mr. George Russell).

[Ordered by the House of Commons to be printed, 4 April, 1895.]

COAL MINES REGULATION BILL.

ARRANGEMENT OF CLAUSES.

Dangerous Mines.

Clause.

1. Notice that a mine is a dangerous mine.
2. Constitution of Coal Mines Board.
3. Appeal to board against notice.
4. Powers and proceedings of board.
5. Special rules as to dangerous mines.
6. Shot-firing in dangerous mines.

Miscellaneous Amendments.

7. Representation of workmen on arbitration or appeal.
8. Deductions by agreement.
9. Amendment of 50 and 51 Vict. c. 58. s. 13, as to check-weigher.
10. Particulars to be shown by returns from mines.
11. Plan of abandoned mine.
12. Amendment of general rules as to inspection, trimming of lamps, and tamping.
13. Provision as to explosives.
14. Qualification and examination for certificates.

Short Title.

15. Short title.

A Bill to Amend the Coal Mines Regulation Act, 1887.

A.D. 1895.

BE it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

Dangerous

Dangerous Mines.

Notice that a mine is a dangerous mine. 50 & 51 Vict. c. 58.

1.—(1.) Where it appears to any inspector appointed under the Coal Mines Regulation Act, 1887 (in this Act referred to as the principal Act), that any mine, or seam, or part of a mine is dangerous, as being either fiery, or dry and dusty, or both, he shall serve a notification to that effect on the owner, agent, or manager of that mine, and from and after the expiration of *one month* after the service of the notification, or if the notification is confirmed on appeal under this Act, *one month* after such confirmation, the mine, or seam, or part of the mine mentioned in the notification shall be subject to the provisions of this Act with respect to dangerous mines.

(2.) For the purposes of this Act—

The expression "fiery mine" means a mine, or seam, or part of a mine, in the return air of which a dangerous per-centage of fire-damp is found.

The expression "dry and dusty mine" means a mine, or seam, or part of a mine in which a dangerous amount of dry coal-dust is found.

The expression "dangerous mine" means a mine or seam or part of a mine which is dangerous.

Constitution of Coal Mines Board.

2.—(1.) For the purposes of this Act there shall be a board of three persons, to be called "The Coal Mines Board" (in this Act referred to as the board), of whom the chairman shall be a person who is not a mine owner or a miner's agent or employed in or about a mine, one other member shall be a person who is or has been an owner or manager of a mine, and the third shall be a person who is or has been employed in or about a mine and is not and has not been an owner or manager of a mine.

(2.) The powers of the board shall continue until the end of the year *one thousand eight hundred and ninety-eight*, and no longer, unless Parliament otherwise determines.

(3.) Each member of the board shall be appointed and may be removed by a Secretary of State.

(4.) On the occurrence of any vacancy in the board, or during the temporary absence of any member thereof through illness or other unavoidable cause, a Secretary of State may appoint a fit person to be a member, or to act temporarily as a member, as the case may be, in lieu of the member whose place is vacated, or who is temporarily absent as aforesaid.

(5.) Each member of the board shall be entitled to such remuneration as the Treasury may direct.

(6.) The board may, with the consent of a Secretary of State, and the consent of the Treasury as to number and remuneration, appoint or employ and remove such officers and persons, with such remuneration, as may appear necessary for enabling the board to perform their duties under this Act.

(7.) *The remuneration aforesaid, and all incidental expenses sanctioned by the Treasury of the performance of the duties of the board, shall be paid out of moneys provided by Parliament.*

Appeal to board against notice.

3.—Any owner, agent, or manager of a mine on whom a notification has been served under this Act by an inspector may appeal to the board, and may show cause against the notification, and the board shall either confirm the notification, or, if they are satisfied that the mine is not dangerous within the meaning of this Act, make an order annulling the notification, and the same shall be annulled accordingly, without prejudice to any power of issuing a fresh notification if circumstances should make it expedient so to do.

Powers and proceedings of board.

4.—(1.) For the purposes of and incidental to the hearing and determination of any appeal the board shall, subject to any rules of procedure made under this section, have all the powers of a court of summary jurisdiction when acting as a court in its ordinary jurisdiction, and all the powers of an inspector under the principal Act, and, in addition, the following powers, namely:—

- (a) power to enter and inspect, or to authorise any person to enter and inspect, any mine or premises the entry or inspection whereof appears to the board requisite for the said purposes;
- (b) power by summons, signed by the chairman of the board, to require the attendance of all such persons as they think fit to call before them and examine for the said purposes, and to require answers or returns to such inquiries as they think fit to make;
- (c) power to require the production of all books, papers, and documents which they consider important for the said purposes;
- (d) power to administer an oath and require any person to make and sign a declaration of the truth of the statements made by him in his examination.

(2.) every person attending as a witness before the board shall be allowed such expenses as would be allowed to a witness attending before a court of record.

(3.) The board may order any costs and expenses incurred in and about any appeal to be paid either by the appellant or by any person summoned before it or partly by the appellant and partly by any such person, as they may direct, and any such order shall, on the application of any person entitled to the benefit thereof, be enforced by any court of summary jurisdiction as if the costs and expenses were a penalty imposed by that court; but subject to any such order, such costs and expenses shall be deemed to be expenses of the board in the execution of this Act.

(4.) In case of dispute as to the amount to be allowed under this section for any costs or expenses, the board may, if they think fit, refer the matter to a master of the Supreme Court, who, on request signed by the chairman of the board, shall ascertain and certify the proper amount of the costs or expenses.

(5.) If any person without reasonable excuse (proof whereof shall lie on him) either fail, after he has had the expenses (if any) to which he is entitled tendered to him, to comply with any summons or requisition of the board under this section, or prevents or impedes the board in the execution of their duty, he shall for every such offence be liable on summary conviction to a fine not exceeding *ten pounds*, and in case of failure to comply with any requisition for making any return or producing any document, shall be liable on summary conviction to a fine not exceeding *ten pounds* for every day that such failure continues.

(6.) The board may, with approval of the Secretary of State, make rules as to the procedure to be followed in cases of appeal to the board, including the time and notice of appeal, and as to fees to be paid by appellants and other parties.

(7.) The Public Offices Fees Act, 1879, shall apply to fees payable under this Act.

5.—(1.) A Secretary of State may make special rules for the conduct and guidance of the persons acting in the management of any dangerous mine or employed in or about the mine with respect to any of the following matters:—

- (a) the lights to be used in the mine; and
- (b) the explosives to be used in the mine, the mode of using and storing such explosives, and of making and stemming holes, and the times at which and the manner in which shots are to be fired in the mine; and
- (c)

42 & 43 Vict. c. 58. Special rules as to dangerous mines.

- (c) the watering of the mine or any ways or places therein ; and
- (d) generally the precautions to be adopted for the prevention of accidents from fire-damp and coal-dust.

(2.) Any special rules made under this section shall be served on the owner, agent, or manager of the mine to which they are to apply, and if the owner, agent, or manager does not within *twenty days* after the special rules are received by him object in writing to them, the proposed special rules shall be established.

(3.) If the owner, agent, or manager sends his objection in writing within the said twenty days to the Secretary of State the matter shall be referred to arbitration under the principal Act, and the date of the receipt of the objection by the Secretary of State shall be deemed to be the date of the reference, and the rules shall be established as settled by an award on arbitration.

(4.) While any such special rules are in force in any dangerous mine, any general rule contained in section forty-nine of the principal Act, and any special rule established under the principal Act, which may be inconsistent with any special rules made under this section shall, to the extent of such inconsistency, be suspended in relation to that mine.

(5.) Any special rules made under this section shall come into force on such date or dates as may be therein appointed, and from and after the date on which any such rule comes into force it shall be observed in and about the mine to which it applies in like manner as if it were enacted in the principal Act.

(6.) Sections fifty-seven and fifty-eight of the principal Act shall apply to the publication of special rules made under this section in like manner as to the publication of special rules established under that Act.

6.—In any dangerous mine no shot shall be fired unless all the workmen employed therein are for the time being out of the mine, except those firing the shot and others necessarily present, not exceeding ten persons, or such greater number as may be allowed in the case of the mine by special permission of a Secretary of State.

Shot-firing in dangerous mines.

Miscellaneous Amendments.

7.—Where any matter in difference is referred to arbitration under the principal Act, and where any appeal against any notification is brought before the board under this Act, the arbitrators or umpire, or the board, as the case may be, may, on the application of any of the workmen employed in the mine to which the arbitration or notification relates, and on such security, if any, as may appear to the arbitrators or umpire or board sufficient to provide for the costs of and consequential on the application, appoint any person to represent the workmen, or any class of them, on the arbitration or appeal, and any person so appointed shall be entitled to attend and take part in the proceedings of the arbitration or appeal to such extent and in such manner as the board may direct, and be subject to the same liability with respect to costs as if he were a party to the arbitration or appeal.

Representation of workmen on arbitration or appeal.

8.—(1.) Any agreement to vary wages in accordance with the amount of stones or substances other than the mineral contracted to be gotten, or in accordance with the mode of filling any tubs, baskets, or hatches, shall be treated as an agreement for deductions under section twelve of the principal Act.

Deductions by agreement.

(2.) In estimating any deduction under that section, regard may be had not only to the amount of the stones or substances aforesaid, or to the nature or extent of the improper filling, but also to the diminution in the value of the coal or to any additional expense caused thereby.

(3.) Any such agreement for deductions, and any deduction made in pursuance thereof, shall be illegal, null, and void unless—

- (a) the agreement is evidenced by a memorandum in writing signed by the workman ; and
- (b) the deduction authorised by the agreement is reasonable, having regard to all the circumstances of the case.

(4.) Any deduction made in pursuance of any such agreement shall not be lawful unless particulars in writing, showing the nature and items of the deduction, are supplied to the workman on each occasion when the deduction is made.

9.—(1.) A statutory declaration made by any person acting or claiming to act as a check-weigher under section thirteen of the principal Act, or by any other person entitled to be represented by such a check-weigher, to the effect that he was present at a meeting for the purpose of appointing a check-weigher, and that the person named in the declaration was duly appointed check-weigher by that meeting, shall be *prima facie* evidence of that appointment.

Amendment of 50 & 51 Vic. c. 58 s. 18 as to check-weigher.

(2.) Where the check-weigher was appointed by a majority ascertained by ballot of the persons employed in the mine, and paid according to the mineral gotten by them, the declaration shall so state, and if it does not so state, then it shall state the names of the persons by whom or on whose behalf the check-weigher was appointed. Where a check-weigher is appointed by such a majority as aforesaid he shall be deemed to be appointed on behalf of all the persons employed in the mine who are entitled to appoint him.

(3.) The facilities to be afforded to a check-weigher under section thirteen of the principal Act shall include a shelter from the weather and a desk or table at which the check-weigher may write.

10. The annual return under section thirty-three of the principal Act shall, with respect to the year mentioned in that section, show for each mine, in such form as the Secretary of State may prescribe,—

Particulars to be shown by returns from mines. [50 & 51 Vict. c. 58, s. 33.]

- (1) to the best of the information and belief of the person making the return, the distribution of the coal gotten at the mine, specifying whether it is supplied for colliery consumption, for domestic consumption, for the manufacture of coke, for the manufacture of gas, for other manufacturing purposes, or for export ; and
- (2) the quantity and value of coke produced at the mine ; and
- (3) the rates of and total amount paid for royalties, rents, and wayleaves, in respect of coal, ironstone, fireclay, oil shale, and other minerals respectively ; and
- (4) the average price of coal at the pit's mouth,

Plan of abandoned mine.

11. Section thirty-eight of the principal Act shall be amended as follows:—

(1.) The following subsection shall be substituted for subsection one:—

“(1.) Where any mine or seam is abandoned, the person who is owner of the mine or seam at the time of its abandonment shall, within *three months* after the abandonment, send to a Secretary of State:

- (i.) An accurate plan of the mine or seam, being either the original working plan or an accurate copy thereof made by a competent draftsman, and showing—
- (a) the boundaries of the workings of the mine or seam, including not only the working faces but also all headings in advance thereof, up to the time of the abandonment;
 - (b) the pillars of coal or other mineral remaining unworked;
 - (c) the position, direction, and extent of every known fault or dislocation of the seam with its vertical throw;
 - (d) the position of the workings with regard to the surface;
 - (e) the general direction and rate of dip of the strata; and
 - (f) a statement of the depth of the shaft from the surface to the seam abandoned; and
- (ii.) A section of the strata sunk through, or if that is not reasonably practicable, a statement of the depth of the shaft with a section of the seam.

“Every such plan must be on a scale of not less than that of the ordnance survey of twenty-five inches to the mile, or on the same scale as the plan used at the mine at the time of its abandonment.”

(2.) In sub-section two, after the words “without the consent of the owner of the mine or seam” shall be inserted the words “or the licence of a Secretary of State.”

(3.) The following sub-sections shall be added to the said section:—

“(6.) At any time after the expiration of *ten years* from the time of the abandonment, the Secretary of State may, with the consent of any local authority, deposit with that authority the said plan and section, or may authorise the local authority to deposit the same in any public library or other public building, and may make rules for the safe custody, inspection, and copying of the same, and as to the fees (if any) to be taken in respect thereof. Every plan and section so deposited shall be delivered up to the Secretary of State on demand.”

“(7.) The High Court, or in Scotland the Court of Session, may, on application, by or on behalf of the Secretary of State, make an order requiring any person who has for the time being the custody or possession of any plan or section of an abandoned mine or seam to produce the same to the Secretary of State for the purpose of inspecting or copying the same.”

Amendment of general rules as to inspection, trimming of lamps, and tamping.

12.—(1.) The inspection before the commencement of work required by Rule 4 (i.) contained in section forty-nine of the principal Act shall extend to the roadways and to all parts of the mine the condition of which may affect the safety of the mine.

(2.) Rule 10 of the general rules contained in section forty-nine of the principal Act shall apply to the trimming of safety lamps in like manner as to the examining thereof, and shall be read as if the words “and trim,” “and trimmed,” and “and trimming” were respectively used after the words “examine,” “examined,” and “examining” wherever those words respectively occur.

(3.) A safety lamp shall not be used in any mine or part of a mine unless it is the property of the owner of the mine, and no portion of any safety lamp shall be removed by any person from the mine while the lamp is in ordinary use.

(4.) In Rule 12 of the said general rules, for the words “nor shall coal or coal dust be used for tamping” shall be substituted the words “and only clay or other non-inflammable substances shall be used for tamping.”

Provision as to explosives.

13.—An explosive shall not be used in any mine unless it is of a kind for the time being certified by a Secretary of State as fit to be used in that mine or in any designated class of mines including that mine, and the Secretary of State may grant certificates for the purpose of this section in such form, on such terms, and subject to such conditions as he thinks fit.

Qualification and examination for certificates.

14.—(1.) To sub-section one of section twenty-three of the principal Act shall be added the following words “or such experience or other training as the board to which he applies may consider equivalent to such five years’ experience.”

(2.) The examinations for certificates of competency under the principal Act shall be partly by examination papers and partly by oral examination.

(3.) The examination by examination papers shall be conducted by examiners to be appointed by a Secretary of State, and any rules made by any board under section twenty-four of the principal Act, so far as relates to the examiners appointed under this section, shall not have effect until approved by the Secretary of State; but save as aforesaid section twenty-four of the principal Act shall apply to all examinations conducted under the provisions of the principal Act as amended by this Act.

Short Title.

Short title.
57 & 58 Vict.
c. 52.

15.—This Act may be cited as the Coal Mines Regulation Act, 1895, and the principal Act and the Coal Mines (Check Weighers) Act, 1894, and this Act may be cited collectively as the Coal Mines Regulation Acts 1887 to 1895.

E.

CHAPTER 52.

An Act to amend the provisions of the English Coal-mines Regulation Act, 1887, with respect to Check-weighers. [25th August, 1894.]

BE it enacted by the Queen’s Most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons in this present Parliament assembled, and by the authority of the same, as follows:—

Penalty for interference with office of check-weigher.

1. If the owner, agent, or manager of any mine, or any person employed by or acting under the instructions of any such owner, agent, or manager, interferes with the appointment of a check-weigher, or refuses to afford proper facilities for the holding of any meeting for the purpose of making such appointment, in any case in which the persons entitled to make the appointment do not possess or are unable

unable

unable to obtain a suitable meeting place, or attempts, whether by threats, bribes, promises, notice of dismissal, or otherwise howsoever to exercise improper influence in respect of such appointment, or to induce the persons entitled to appoint a check-weigher or any of them, not to re-appoint a check-weigher, or to vote for or against any particular person, or class of persons, in the appointment of a check-weigher, such owner, agent, or manager shall be guilty of an offence against the Coal-mines Regulation Act, 1887.

2. This Act may be cited as the Coal-mines (Check-weigher) Act, 1894.

50 and 51 Vic,
c. 55.

Short title.

E1.

CHECK-WEIGHERS' STATEMENTS, Southern District Collieries; Minutes of Evidence, Questions 1619-1805. MOUNT PLEASANT COLLIERY.

- Question 1. Have you a standard weight? Yes, a standard weight fixed at 20 cwt.
- " 2. How many skips have been weighed per 1,000 filled for the past three months? For the past three months, dating up to September 7th, 1895, 13,081 skips of coal have been booked to the miners' account; out of that amount 306 skips have been weighed; taking the amount per 1,000, we have weighed 23 and $\frac{1}{2}$ skips per 1,000.
- " 3. How many men are there who have not been weighed for the past month, two months, or three months? Fourteen numbers have not been weighed for a fortnight, or twenty-seven men in all, dating from August 23rd to September 7th. Two numbers have not been weighed for a period of three weeks, or four men in all, from August 13th to September 7th. One number has not been weighed for a period of eight weeks, or two men in all, from July 15th to September 7th. One number has not been weighed for a period of nine and a half weeks, or one man in all, from July 4th to September 7th.

H. R. MURDOCH,
Check-weighman.

COALCLIFF COLLIERY.

June 17th to September 7th, 1895.

This list comprises the number of times each miner was weighed during the last twelve weeks.

Miners' Nos.	No. of times weighed.	
1	...	Left the colliery June 24th.
2	3	Once June 24th, and twice on September 3rd.
3	...	Left the colliery July 9th.
4	1	On June 24th.
5	1	On September 3rd.
6	1	On " " "
7	...	Not weighed during past three months.
8	1	On June 24th.
9	...	Not weighed during past three months.
10	1	On September 3rd.
11	...	Not weighed.
12	...	" " paid by the average of the mine, and has not been weighed up to September 9th.
13	1	On June 24th.
14	...	Employed at the colliery from July 22nd, and paid by average, and not weighed up to September 9th.
16	1	On June 24th.
22	3	Once on June 24th, and twice on September 3rd.
63	...	An old miner named Wm. Walker, principally sending out slack.

It will be seen by the above list that there have been only two weighings during this period, and the number of days worked is thirty-eight.

Miners' Weighed, September 3rd, 1895.

Nos.	cwt. qr. lb.		cwt. qr. lb.		
1					September 4th. Objected to this weigh, because he did not call on the weigh until the set was out at the tunnel mouth, and got them removed from the sheet.
2	13	2 0	13	2 0	This average went up, 1 qr.; ought to be 14 cwt. 1 qr. 7 lb. if the standard weight was removed.
5	13	1 14	13	2 0	No. 5 went up from 12 cwt. 3 qr. to 13 cwt. 1 qr. 14 lb.
6	11	1 0	13	2 0	This number lost 2 qr. 14 lb. He did not want him.
10	12	1 0	13	2 0	This number lost 2 qr. 14 lb. He did not want him.
22	12	3 0	12	1 14	This number went up 3 qr. 7 lb.

The above is what they call weighing by average at the Coalcliff Colliery.

We used to get 3d. a cask for bailing water, but that is done away with. If you do not bail it you can sit there until somebody comes to do it—that is, there is no other place for you; this has happened with several men, now and again. We have also to pay 1s. per fortnight for house coal, but had not to do it before. As regards the eight hours, I should like to see it become an established fact. There are men in the Coalcliff Colliery who go in at 12 o'clock at night and are not out until 5.30 p.m. the next night, and they have often had to go in and work from 3 and 4 o'clock in the morning until 5 p.m. at night. At one time if they wished an early start the manager would ask if we would oblige him, but he does not do it now; he simply sends round some one between 8 and 9 o'clock to tell us that he wants us to start at a certain hour in the morning, and there is no more about it; yet people will say we have the eight hours. I have known him repeatedly chastise men for coming out of the colliery after being in nine and ten hours, just because it was not 5 o'clock; and yet, in the face of all this, it is said we do not want the eight-hour clause because we have it already. I would like to know where we have it. Both men generally go in

in together now ; it is not as it used to be, a front and back shift, and I have heard the manager tell men that were on the back shift that it was time they were in, and then it was not much after 7 o'clock ; their reason could not be because they got more coal out, because they do not average any more now than they did when they were working the eight hours, front and back shift.

Coalcliff Colliery, September 9th, 1895.

A. NICOL,
Check-weighman.

METROPOLITAN COLLIERY, Helensburgh.

Miners skips drawn from the Metropolitan Mine from the 8th July until the 31st August, 1895, were 31,549 ; number weighed, 477 ; average, 1 in 66.

THOS. HALL, Check-weighman.

SOUTH CLIFTON COLLIERY, 10th September, 1895.

1. Number of skips weighed per 1,000, 1 to each 255.
2. Number of men not weighed for three months, 12.
3. Number of men not weighed for two months, 32.
4. Number of men not weighed for one month, 58.
5. Number of men getting coal, 70.
6. Total number of skips weighed for three months, 53.

The above is for six pays, and is a fairly representative account.

JAMES MAGUIRE,

South Clifton.

Miners' Check-weighman.

NOTE.—See Geo. Henderson's evidence. Questions 1668-1674.

CORRIMAL COLLIERY.

No. 6 token : On 7th August, 1894, had a Tommy weighed 8 cwt. 2 qr. ; also a Kembla skip weighed on 29th August, 1894, 8 cwt. 1 qr. This number was no more weighed till 21st December, 1894, a Kembla skip ; a Tommy not being weighed till 31st January, 1895.

Period—Kembla, four months ; Tommy, nearly six months.

No. 11 token : Tommy, 5th November, 1894 ; Kembla, 29th November, 1894 ; Tommy, 29th March, 1895 ; Kembla, 19th April, 1895.

Period—Over four months in both skips.

No. 55 token : A tommy skip weighed on 13th March, 1894 ; weighed no more till 13th November, 1894—this is a period of eight months ; and then on the 13th November the overman chalked the skip that was weighed.

It is a common occurrence for men to run over a month, and upwards of two months, without having a skip weighed.

On Saturday, 6th July, 1895, whilst the Company's weighman was busy up the yard helping to unload some trucks, he noticed a small skip coming down the incline, when all of a sudden he jumped down from that work and ran down the yard up to the weigh-screen and called it in to be weighed. These men were in a deficient place, and made an agreement with the overman that they should have 6 cwt. per skip to fill all away together, but after having been weighed only 4 cwt. per skip the manager vetoed the arrangement made by the overman, to the men's loss.

On Sunday night, the 4th August, 1895, two men were brought out of their own place and put into a pillar to oblige the Company, by filling all the empty skips, and when the pay came they were deficient 2d. per ton for that night's work, whilst they were weighed in that coal which caused them to lose a quarter of a hundredweight off every skip filled during that fortnight.

For the two weeks ending 31st August, 1895, the pit worked seven days on coal ; during that time 4,287 skips of best coal and 489 skips of slack passed over the screens. Out of this number twenty-four skips were only weighed—an average of three skips per day. Two days on weighing.

From Friday, 30th August, 1895, till 14th September, 1895, the pit worked fourteen full days and twelve nights of from four to five hours' duration, when the miners were requested to run shifts to supply them with coal.

One young man (a day-man) after running one extra shift at night-time refused to do any more overtime, for which action he has received fourteen days' notice to quit the Company's service. For twelve full days and eleven nights during this time 7,396 skips of best coal and 1,056 skips of slack passed over the screens, and only 109 skips were weighed. Twenty-nine of this number were weighed during one midnight, leaving the balance of eighty skips weighed for twelve full days of ten hours each.

Twenty-two men out of a total of 122 have not had one skip weighed this fortnight.

F.

Extracts from Fifth and Final Report of Royal Commission on Labour in England, 1894.

EIGHT HOURS.

Page 70, paragraph 198.—Mining is confessedly an occupation exceptionally dangerous, disagreeable, and laborious ; it is also alleged that the hours now worked make it exceptionally unhealthy. It was not contended by witnesses before the Commission that the hours of labour in mines are long as compared with those of other industries,* but only that they are unduly long, having regard to the character

Arguments in favour of legal restriction of hours of miners.

*Mr. Pickard, however, stated at the Conference at the Westminster Palace Hotel (1891) between coal-owners and miners that the "hours which miners have to put in from the time they leave their homes to engage upon their work in any shift are, on the average, longer than in any other trade or occupation in the country" (See minutes of evidence, Group A., Vol. I., Appendix XVI., page 485). For the actual average hours worked by the hewers in the different districts from bank to bank (in no case more than 9½), or at the face, exclusive of meal times (in no case more than 8½), see the table given in the summaries of evidence, Group A., Part I., paragraph 19 (a). It must be remembered that the hewers do not, as a rule, work the six days of the week.

character of the work, and that eight hours a day of labour underground in an impure atmosphere, with the risk to which miners are exposed of catching chills in changing from the hot air of the mines to the cold and damp above, is as much as it is right to ask any man to work. Longer hours are (it is maintained) most injurious to health, they also increase the danger of a calling already dangerous enough. More accidents occur towards the end of shift than at the beginning, simply in consequence of the hewers becoming over-tired.

In further justification of the demand for special treatment for workers underground, it is asserted that the miners have, by an unmistakable majority, declared themselves in favour of an eight-hours' day by legal enactment, and in this respect stand or (if an exception is to be made with regard to the cotton operatives of Lancashire) stood, till lately, alone among the the great industrial bodies of the kingdom.

Paragraph 199.—These are the main reasons of a positive kind advanced in favour of statutory restrictions of the hours of labour in mines to a maximum of eight from bank to bank. The economical arguments put forward by most advocates of the measure are only ancillary to these, and are not so much reasons in favour of restrictive legislation as answers to economic objections urged on the other side.

Paragraph 200.—It is, however, worthy of note that the representatives of the Lanarkshire and Ayrshire miners openly advocated an eight-hour day on the express ground that it would have the effect of reducing output, and thereby give "better wages, a better price, and bigger profits," as well as provide work for the unemployed. This appeared to be with them a principal consideration, at least as important as any direct benefit to be derived from a shorter spell of work. There is some ground for suspecting that the views thus frankly expressed by the West of Scotland miners have, in reality, not been without influence on the miners' leaders in other districts also. For instance, it is often argued on behalf of the miners, that only legislation can secure a uniform limit of hours throughout the country, and that uniformity is necessary in order to prevent the unfair competition of long-hour districts with short-hour districts. This argument assumes that districts continuing to work long hours would have an economic advantage over the districts which had adopted an eight-hours' day; but it is hardly consistent with the official view put forward by the Miners' Federation at the Westminster Palace Hotel Conference (1891), that a reduction of hours would not diminish output, and therefore would not increase the cost of production. Be that as it may, the evidence given before the Commission by witnesses representing the miners in districts other than the West of Scotland, and favourable to a legal eight-hours' day, certainly indicated that in their belief the output per man would be maintained in spite of reduced hours. The witness who appeared on behalf of the Merthyr and Aberdare districts formed, perhaps, a solitary exception. In his opinion an eight-hours' day, from bank to bank, would ruin the industry in those valleys; he was therefore in favour of an eight-hours' *working* day instead.

Argument as to benefits from reduction of output.

Paragraph 201. In support of the view that the output per man would be maintained, it was represented—

Arguments as to maintenance of output.

- (1) That so much depends in this occupation upon actual physical energy, that a man could probably hew as much, by more concentrated work in a less time, as he now does in the longer hours.
- (2) That under a system of shorter hours a mine would work more regularly through the week, instead of as is now usual, taking one day or two days off.
- (3) That legal reduction of hours, even if for the moment it resulted in diminished output, would probably lead to better organisation, to the introduction of improved machinery for extracting the coal, and to greater speed in winding it, so that the deficiency would speedily be made good.

Paragraph 202.—The case for limiting the hours of labour in mines by special enactment may be summed up thus:—Mining is an occupation exceptionally injurious to health, as well as dangerous to life and limb from accidents. Shorter hours would conduce to healthiness and diminish accidents. A legal eight-hours' day from bank to bank, is asked for by an undoubted majority of those employed in the trade, and might be established without economic loss to anybody.

Summary of arguments for legal restriction.

Paragraph 203.—If it be true that a decided majority of the miners are in favour of statutory restriction of hours for underground labour, the employers, on the other hand, seem almost unanimously opposed to it. To the arguments used by the advocates of special legislation they reply, that the case in favour of exceptional treatment for miners breaks down on examination; that shorter hours are not required for health, and would not diminish, but rather tend to increase, the dangers of the occupation; that the majority of miners (if indeed they are a majority) who favour an eight-hours' day from bank to bank, are mistaken as to its economic consequences; and that if they realised the true facts of the case, and the manner in which the proposed measure would affect them individually if strictly enforced, they would cease to demand legislation and prefer the safer, if slower, methods of claiming through their union a reduction in the hours of work whenever the conditions of trade in any district was such as to allow of it. A similar line was also taken by one or two "independent" miners from the Midlands; and (speaking especially for their own district) by the representatives of the men of Northumberland and Durham.

Arguments against legal restriction of hours of miners

Paragraph 204.—As regards the laborious and disagreeable character of a miner's work, it was urged that this was common to other industries as well, for which no exceptional treatment was demanded. Considerations of health and safety might no doubt justify a legislative intervention; but mining was not an unhealthy occupation, and shorter hours would not increase safety. The weight of evidence certainly seems to be against the idea that coal-mining is an unhealthy occupation, even when allowance is made for the probability that weakly men either avoid entering or soon abandon it. Dr. Ogle, who has given special attention to this subject, stated in his evidence that coal-miners were among the healthiest set of men in all the trades he had examined, and that the same thing was found to hold good on the Continent also. In England and Wales, according to the witness, "the death rates of coal-miners are surprisingly low. In spite of their terrible liability to accident, and their constant exposure to an atmosphere vitiated by coal dust, by foul air, and by an excessively high temperature, the comparative mortality of these labourers is considerably below that of all trades; nor is this only true of coal-miners in the aggregate, but it is true, with one single exception, of the miners in each great coal area, taken separately. * * * * The one exception to the rule is furnished by South Wales and Monmouthshire * * * but even here, if deaths from accidents be left out of account, the rule holds good; the mortality of miners from all other causes together is below that of the general male population."

Examination of arguments to health.

As to accidents.

Paragraph 205.—The contention that the larger proportion of accidents in mines occur during the later hours of the shift, and that therefore the increase must be due to the physical and mental exhaustion of the miner, also seems to fail when brought to the test of figures. The statistics of accidents, whether arising from explosions or from falls of roof and sides, cannot fairly be interpreted to indicate a preponderance of accidents during the later portion of the shift. A good many witnesses indeed went so far as to say that the dangers of mining would be augmented rather than diminished by an eight-hours day, because the hewers would be in such a hurry to get the full tale of coal in order to make up their usual wages, that they would be tempted to neglect the necessary repairs, and because the speed of winding was already at the limit of safety, and any increase might itself lead to accidents.

View of employers as to economic effects.

Paragraph 206.—As from the economic effects of an eight-hours' day from bank to bank, a very general opinion was expressed on the part of the employers that the total output would, in most districts, be greatly reduced, chiefly as a result of the diminished hours for drawing and winding coal. The cost of production would be doubly increased, because, along with a reduced output, there would have to be an increase in the permanent repairing staff. The result would probably be that some of the collieries which now work under least advantageous circumstances would have to be closed. Even if prices rose in the first instance, they would eventually fall again, partly in consequence of the natural re-action of high prices on the demand for fuel for our home industries, partly because high prices caused by an artificial increase in the cost of production confined to this country would give advantage to foreign coal-owners, who compete with us in foreign markets. A large measure of the loss must ultimately fall on the men's earnings, but it was difficult to make them believe this.

Evidence of "independent" witnesses.

Paragraph 207.—A point especially insisted on by some witnesses from Derbyshire who were working miners, and two of them members of the union, though they appeared before the Commission in an independent capacity, was the ignorance of the miners as to the bearing of the proposed measure on their individual comfort and convenience. These witnesses declared that when the ballot was taken in that district on the question of a legal eight-hours' day, the men were confused as to the real issue, and did not understand that if the Bill became law they would be prevented from working a minute beyond the fixed hour, or from working longer for their own sakes in busy times in order to make up for slack times. Men work in different ways and at different rates of speed according to their respective capacities and temperaments, and it would be unfair on the slower workman to prevent him by law from working longer hours in order to make up for lack of speed. Moreover, the conditions of coal-mining do not allow of stopping work at a given moment, e.g., a hewer at the end of his day may see some necessary repair which he could do in 20 minutes, but which, if left to the next day, will take much longer.

Question of area of proposed restriction.

Paragraph 208.—Another point remains to be considered. In support of a statutory eight-hours' day for miners, the following argument is often used:—Even the opponents of the movement (it is said) admit that eight hours of labour underground is as much as is desirable in every twenty-four, and that an eight-hour day secured by trade-union effort would be a good thing. If it is a good thing when obtained by trade-union effort, how can it be a bad thing when secured by legislation?

This argument raises the important question, Is the proposed measure to be uniform in its operation, and binding on all districts alike throughout the country, or is room to be allowed for local exemption? An eight-hours' day (it is urged) may be an excellent thing in the abstract, and yet but a doubtful boon if, in practice, it takes the shape of loss of employment for some and reduced earnings for others. It is a good thing when secured by combination, partly because it could not be so secured and maintained unless the state of the trade in the particular district admitted of it. A legal eight-hours' day is objectionable just because it allows no latitude and no exceptions. Coal-mining presents a range and variety of conditions such as can be found in few other industries. One stall differs in facility of working from another stall, one seam from another seam, one colliery from another colliery. To apply one same hard-and-fast rule to the very different conditions which obtain, even within the same district, would give rise to anomalies and hardships; but if it is proposed to force a fixed limit of working hours on all districts alike, the difficulties become still more serious. At present there is a natural adjustment of hours to different circumstances in different districts. If the Legislature interferes with the natural adjustment, it will benefit some districts at the expense of others.

Special objection in Durham and Northumberland Division of opinion.

Paragraph 209.—It is in Durham and Northumberland that this objection finds its strongest expression. These districts carry on the work of coal-mining on a system peculiar to themselves. The hours of the hewers from bank to bank are decidedly less than eight, and shorter than in most other districts, but the hours of the boys and lads amount to ten on a full working day, though their work is, as a rule, comparatively light. The hewers work on a double-shift system, which adjusts itself to a simple long shift of winders and drawers; and the representatives of the miners' unions emphatically assert that, if the hours of the latter are reduced to eight, it will upset the system with which they are contented, and that no other system is practicable consistently with maintaining the prosperity of the industry. This was denied by one independent witness from Northumberland who placed a scheme of his own before the Commission.* The coal-owners, however, confirm the view held by the great majority of the men, with the result that in these two counties employers and employed alike are opposed to a legislative reduction of hours. The men say they would gladly see the hours of the boys further diminished; but they maintain that, inasmuch as a lad working long hours at drawing, subsequently becomes a hewer and works on short shifts, the general effect of the system, looking at his whole career, is more advantageous to him than would be shorter hours for a few years with the risk of longer hours for the rest of his life, and that, as regards the workmen generally, an eight-hours' day by law would produce greater evils than it would remove.

Paragraph 210.—Thus, at the present time, the great body of miners in the country is divided into two camps on the question of a legal eight-hours' day; nor does there seem any immediate prospect of a reconciliation, even on the basis of district option, seeing that the spokesman of the Miners' Federation has declared, on behalf of those whom he represents, that their object is "a uniform eight-hour day for the underground toilers in the United Kingdom" and that anything less would be entirely unacceptable.

Page

* Detailed accounts of this, as well as other schemes considered, but rejected by the majority of the men, will be found in the summaries of evidence, Group A., Part I., paragraph 31.

Page 104, paragraph 320.—To establish by law a maximum working day of a fixed number of hours applicable to all trades and occupations alike does not appear to us to be a proposal which bears serious examination.

Paragraph 321.—The proposal that any trade should be enabled to decide by vote its own maximum hours of labour, and obtain legal sanction to that decision appears to us to be more worthy of consideration. No schemes, however, have been produced which solve the practical difficulties of defining in all cases a trade, and of ascertaining its collective decision, especially in the case of the less well-organised industries. Even if these difficulties could be overcome, we do not see how the proposal could be adopted without danger of injustice to employers and to minorities of workmen, or without risk of economic injury in some cases to the country at large, in others to districts which have less natural advantages in competing with rival districts.

Paragraph 322.—A further proposal is that special Acts of Parliament shall be passed with regard to special trades, either directly fixing the maximum hours of labour in such trades, or giving power to special Boards or to Public Departments to regulate the hours in them. We have had to consider the first of these alternatives chiefly with reference to the coal-mining industry.

Paragraph 323.—The Miners' Federation, which covers the larger part of the English coal-mining districts, having refused to send any representatives to give evidence, we have only heard one side of the question so far as relates to the districts so controlled. We have, however, received evidence from both coal-owners and miners in Northumberland, Durham, Scotland, and Wales. Upon the evidence before us, we are not prepared to advise that a general rule fixing a maximum of eight hours "from bank to bank" of all persons employed underground in mines should be laid down by the Legislature for a number of districts varying so much in circumstances.

Paragraph 324.—We are decidedly of opinion that no sufficient ground exists for Legislative interference with the present arrangements as to hours of work in the districts of Durham and Northumberland where, as the evidence shows, these arrangements are approved of by the great majority of those employed.

Paragraph 325.—With regard to mines in other districts we do not think that a special case has, so far as the evidence in our possession goes, been made out for exceptional legislation upon the ground that the length of the hours now worked leads to an increase of accidents or to injury to health. The miners are moreover in almost every district a very powerful and highly organised body of workmen, and we do not think that it has yet been proved that they are unable to obtain by voluntary agreement with employers the hours which are best suited to the circumstances and interest of the industry in each district.

F 1.

EXTRACT from "Coal Pits and Pitmen," by Nelson Boyd, M. Inst. C.E., 1892.

THE limitation of hours of labour, or the eight hours' movement as it is called, is reasonable enough if agreed on by a general *consensus* of opinion in different trades, but it is open to grave doubt whether Parliament should be appealed to in order to fix the exact time a man ought to work at a certain occupation. One objection the men had to the education clauses was, that if the boys only worked eight hours a day the pit would be laid idle, and the industrious collier who wanted to make wages would be debarred from doing so by a clause in an Act of Parliament. This is not so long ago, and it is not easy to understand how it now comes to pass that the men wish to see the hours of work fixed and limited by an Act of Parliament. The matter is under consideration by the leading statesmen of the day, and belongs to the future. It is only alluded to here as a subject which for some years has been publicly advocated by a section of the workmen. It may, however, not be out of place to state as an opinion that Parliament is not exactly the fit tribunal to judge as to the precise time a man ought to continue at any particular kind of work, and draw a hard and fast line which takes from the workman all possibility of betterment of earnings if he felt able and inclined to extend his hours of labour.

It would appear more practical to refer the fixing of the hours of labour to a Board or Commission, who could appoint assessors possessing a practicable knowledge of the colliery or trade under consideration, and take evidence as to the limit of the hours of labour which ought to be determined on. As far as miners are concerned, there is an almost general opinion that eight hours' work underground is a sufficient strain on the physical powers of human beings.

If we turn from the colliers to the collieries we find a marked improvement in the safety of the underground workings.

The following table shows the number of lives lost per million tons of coal raised, and averaged by decades:—

10 years ending 1860, average 13.90 deaths per million tons raised.			
10	1870	10.70	" "
10	1880	8.70	" "
9	1889	5.80	" "

According to the Parliamentary summaries, the death-rate per 1,000 persons employed have been as follows:—

1851 death-rate per 1,000 persons employed	= 4.56
1861	= 3.38
1871	= 2.89
1881	= 1.92
1889	= 1.85

These figures show a gradual diminution of the loss of life underground, but this improvement has not been realised at the expense of an increase of labour, for, if we take into consideration the mineral produced per person employed, we find that the productive power of the miner has not decreased.

Table

Table showing the number of tons of coal raised per man employed:—

1851 to 1860 average.....	= 280 tons
1861 „ 1870 „	= 308 „
1871 „ 1880 „	= 366 „
1881 „ 1890 „	= 380 „

These figures are not absolutely correct, because the Parliamentary summaries under the later Acts comprise all mines classed under the Coal Mines Acts, such as iron-ore, fireclay, and shale, but they are sufficiently so to show that the productive power of the collier has not diminished.

In confirmation of the last table, the figures of Mr. Greenwell, in a paper read at the North of England Institution of Mining Engineers, can be quoted. He there states that in the year 1873 the production of coal per man amounted to 332½ tons, and in 1881 to 406½ tons.

The following table, taken from the Parliamentary summaries, shows that by far the greater number of deaths are caused by the falling of roof and sides. This table is divided into periods corresponding with the passing of the Acts of Parliament. From 1851 to 1855 and from 1856 to 1860 only coal-mines are included; but from 1861 to 1872 ironstone mines worked in connection with coal are comprised, and from 1873 to 1887 stratified ironstones, hematites, and all ores worked in connection with coal, as well as the mines in Ireland. The Act of 1887 includes mines of stratified ironstone, mines of shale, and mines of fireclay, but as the output of coal is greatly preponderating, the result may be expected as sufficiently approximate to accuracy.

AVERAGE NUMBER OF LIVES LOST.

1851 to 1855.		Per annum.	Per cent	
Explosions.....	231	23.40		
Falls of roof and sides	368	37.40		
In shafts	236	23.80		
Miscellaneous underground	102	10.30		
„ surface.....	48	5.10		
Total	985	100.00		
1856 to 1860.				
Explosions.....	257	25.25		
Falls of roof and sides	385	37.80		
In shafts	187	18.30		
Miscellaneous underground	136	13.35		
„ surface.....	53	5.30		
Total	1,018	100.00		
1861 to 1872.				
Explosions	224	21.00		
Falls of roof and sides	421	39.60		
In shafts	149	14.10		
Miscellaneous underground	192	18.10		
„ surface.....	77	7.20		
Total.....	1,063	100.00		
1873 to 1887.				
Explosions.....	230	21.00		
Falls of roof and sides	457	41.85		
In shafts	115	10.55		
Miscellaneous underground	199	18.30		
„ surface.....	91	8.30		
Total.....	1,092	100.00		
1888 to 1891.*				
	1888	1889	1890	1891
Explosions.....	49	138	290	51
Falls of roof and sides	471	465	434	476
„ in shafts	75	74	88	119
Miscellaneous underground	209	292	245	236
„ surface.....	84	95	103	97
Totals.....	888	1,064	1,160	979
Total employed	534,945	563,735	613,233	648,450
Ratio of employed to deaths.....	602	530	528	622

* The returns since 1887 are not averaged. The previous years were averaged in periods of 10 or 15 years. The returns from 1888 inclusive are headed as being "Under the Coal Mines Regulation Act, 1887, 50 and 51 Vict. cap. 58."

These figures show most satisfactory results as far as deaths from explosions, and abundantly prove that the greatest danger in mining lies in the fall of roof and sides. The miscellaneous accidents underground are remarkable, and are caused in great part by the machinery now so extensively used for hauling.

It would be futile to hope for anything like a complete immunity from accident in a dangerous calling like coal-mining. Work has to be carried on under difficulties such as are not to be found in any avocation on the surface. The want of light, the confined space, the insecurity of the walls and roof of the working chamber, and the presence of an explosive gas in the air, are sufficient to account for a considerable loss of life, and the returns which the inspectors are able to make compare favourably, under the circumstances, with the experience of any other avocation where the element of danger exists, such as shipping, railways, or ironworks. To assert that this comparative safety is entirely due to the regulations of the Mining Acts would be going too far. The men themselves have contributed enormously to the safety of the mines, and this appears to be fully appreciated by all those who have studied the question. For instance, the Royal Commissioners who reported in 1886 point to the clause in the Act (1872) giving the men employed at a colliery power to inspect the workings from time to time as one of the best safeguards against accidents. With reference to this we have an expression of opinion from Sir George Elliot, M.P., who told a deputation of colliers, with reference to accidents, that he attributed the improvement in collieries in part to the men, and that "no technical management or good inspection could operate with anything like the strength and force which the workmen themselves were able to supply." This is, of course, all very well, but the workmen would never have had an opportunity of doing anything for the safety of the mines if they had not obtained the encouragement and protection of the legislature. Certainly no one can take the same interest, or have such a stake in a colliery, as the man who works in it at the risk of his life.

G.

VENTILATION OF COAL MINES.

(CORRESPONDENCE AND REPORTS.)

Newcastle-Wallsend Colliery.

SCHEDULE.

NO.	PAGE.
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2. The Examiner of Coal-fields to Mr. James Curley, in reply to No 1, with result of Mr. Dixon's inspection. 16 January, 1883	85
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9. Minute of the Honorable the Secretary for Mines, re ventilation of Newcastle-Wallsend Colliery, with minutes. 26 February, 1883	87

No. 1.

Mr. James Curley, Miners' General Secretary, to The Examiner of Coal-fields.

Sir,

Hamilton, 8 January, 1883.

I have the honor, by direction of the representatives of the Miners' Association, to invite your attention to the number of men working in one split or current of fresh air in the Lambton headings, at the Wallsend mine. This question originated at a monthly meeting of the Wallsend miners some time ago, concerning which there was much discussion and dissatisfaction expressed. The dissatisfaction referred to was founded not only upon the check inspectors' report, but the practical daily experience of the workmen. The subject was therefore referred to the Delegate Board.

And while admitting that temporary advantages are occasionally secured by calling your attention to apparent defects and want of compliance with the Coal Mines Regulation Act, the miners regret, through their representatives, that there is not more permanent and satisfactory ventilation throughout the mines.

I am, &c.,

JAS. CURLEY,
Miners' General Secretary.

No. 2.

No. 2.

The Examiner of Coal-fields to The Miners' General Secretary.

Sir,

Coal-fields Office, Newcastle, 16 January, 1883.

See No. 1.

I beg to acknowledge the receipt of your letter of the 8th inst., written by direction of the Representatives of the Miners' Association, and inviting my attention to the number of men working in one split or current of fresh air in the Lambton headings at the Wallsend mine, a question which you inform me originated at a monthly meeting of the Wallsend miners some time ago, concerning which there was some discussion and dissatisfaction expressed.

In reply, I beg to state that I forwarded your letter to Mr. Inspector Dixon for his report, which I received yesterday, and from which it appears to me that the 4th General Rule, section 12 of the Coal Mines Regulation Act, 1876, is complied with in the Lambton headings in the Wallsend mine.

2. Mr. Dixon's report is as follows:—"I entered the front heading from the main tunnel, Bossfield's side of the mine. Here I measured the air, and found it entering the heading at the rate of 7,680 cubic feet per minute. This current of air supplies 66 men, 5 boys, and 3 horses: total, 74—that is, when the men are all in together; but as some of the front shift men had gone home, I found only 50 men, 5 boys, and 3 horses; total, 58. I measured the current of air again at the far end of the front heading, and found it to be 7,000 cubic feet per minute. This current of air now leaves the front heading and passes through a stenton, where it is met in the middle heading by a current of fresh air, about 8,000 cubic feet per minute, coming along the middle heading from the main engine bank. The two currents—that is, the 7,000 cubic feet of air from the front heading, and the 8,000 cubic feet in the middle heading—now mingle together and form one current of about 15,000 cubic feet of air per minute. This current of air passes through another stenton into the back heading workings, where it serves about 45 men, boys, and horses, after which it passes to the furnace."

3. With respect to the concluding portion of your letter, in which you call my attention to apparent defects and want of compliance with the Coal Mines Regulation Act, and say that the miners regret, through their representatives, that there is not more permanent and satisfactory ventilation throughout the mines, I have to request that you will as early as possible be so good as to specifically mention the collieries in this district which you refer to.

I have, &c.,

JOHN MACKENZIE,
Examiner of Coal-fields.

No. 3.

Mr. James Curley, Miners' General Secretary, to The Secretary for Mines.

Sir,

Hamilton, 31 January, 1883.

I have the honor to respectfully submit the enclosed correspondence for your consideration. In conjunction with the Chairman and Treasurer of the Coal-miners' Association, I may state that this course is adopted owing to the expressed opinion of the Government Examiner of Coal-fields regarding alleged deficient ventilation at the Wallsend Colliery, and more men working in a district or split of air than what is provided for by the Coal Mines Regulation Act of 1876. In connection with the correspondence, it will be observed that Mr. Inspector Dixon's report is given, and in reference to which the Government Examiner of Coal-fields states:—"It appears to me that the 4th general rule, section 12, of the Coal Mines Regulation Act, 1876, is complied with in the Lambton heading in the Wallsend mine." It may be presumed that this opinion is based upon Mr. Inspector Dixon's report, and if so, we respectfully submit that such an opinion is contradictory to the report, and is also at variance with the 4th general rule, section 12, of the Coal Mines Regulation Act, 1876, to which reference is made. A brief quotation will at once make this apparent:—"Every mine shall be divided into districts or splits of not more than seventy men, and each district shall be supplied with a separate current of fresh air." It will be observed that the Inspector's report makes reference to two separate currents of air, but unfortunately the "7,680 cubic feet" referred to, and that supplies 66 men, 5 boys, and 3 horses; total, 74. After it has done its work, instead of being carried by an overcast into the return, continues onward and "now mingles" with the second current, "8,000 cubic feet," and the two combined, "15,000 cubic feet," passes into another district and serves 45 men, boys, and horses, after which it passes to the furnace. Here, then, it is quite evident that the 8,000 cubic feet of air, or second separate current, is allowed to be polluted with 7,000 cubic feet of air that serves another district, and which the Inspector in his report states "now mingles together"—that is, the 7,000 and 8,000—"and form one current of about 15,000 cubic feet of air per minute." This being so, very naturally, there is a bulky, polluted, and most unwholesome atmosphere for these forty-five men, boys, and horses to work in. The 8,000 cubic feet of itself, if a separate current at all, is of itself amply sufficient to supply forty-five men, boys, and horses. This cannot have escaped the notice of either the Inspector or the Examiner of Coal-fields. The cost of an overcast to the Company to carry off the 7,000 cubic feet appears to be the sequel. And why this was not directed to be done, instead of the apparent erroneous conclusion arrived at by the Examiner of Coal-fields, we leave the Honorable Minister to judge.

Mr. Inspector Dixon, in the former part of his report, alludes to the total in one instance as seventy-four, and then again as fifty-eight, through some of the front-shift men having gone home. This we contend may possibly give rise to complications, and should, if possible, be avoided. The Inspector might have said it was owing to the time his inspection was made that it is certainly better to confine himself to the number of men working in a district, without the qualification of either front or back shift. This can be obviated if the inspections are made when both shifts are in, for it must be well known to the Inspector that the most of the miners are in the mines during the major part of the day.

In conclusion, having brought these matters under the notice of the Honorable Minister, we are confident that he will deem them of sufficient importance as to require immediate attention, and by giving an early reply will greatly oblige.—

Yours, &c.,

JAMES CURLEY,
Miners' General Secretary.

No. 4.

Minute of the Under Secretary for Mines.

Complaint *re* Ventilation at the Wallsend Colliery.

THE complaint made by the Miners' General Secretary appears to be not that a sufficient quantity of fresh air is not brought into the mine, but that one of the currents, sufficient in itself both as to quantity and quality, is allowed to be polluted by mingling with contaminated air before it reaches the men for whom it is intended, and that consequently these men, contrary to the provisions of the Coal Mines Regulation Act, are not supplied with fresh air. The papers may be forwarded to the Examiner of Coal-fields for report; and the Miners' General Secretary may be informed that the complaint will receive due consideration.

H.W., 2/2/83.

Submitted. Approved.—J. P. ABBOTT, 3/2/83. The Examiner of Coal-fields.—H.W., B.C. 6/2/83.

No. 5.

The Examiner of Coal-fields on Minute dated 2 February, 1883.

To enable the Minister to more clearly understand this case, I forward a tracing* showing where the men were at work, and a statement of the number and names of the front and back shift men in the Lambton headings on the 10th ultimo, the day Mr. Dixon inspected it, from which it will be perceived that the number of men getting coal was fifty-seven in the front shift and fifty-seven in the back shift; and each set of fifty-seven men were supplied with two currents of air of 7,000 and 8,000 cubic feet per minute, both of which were fresh intake air currents when they entered the Lambton heading district; and that the 7,000 cubic feet of air per minute current was of itself more than was required by the provisions of the Act for the fifty-seven men.

* See Appendix
Plan No. 10.

The hour at which the front and back shift men enter and leave the mine, and the time they are in together, is as follows:—About 2 a.m. sometimes a few of the front-shift men enter the mine; at about 4 a.m. more than half of the front-shift men are in their working places, and at about 6 a.m. the whole of them. At 8 to 9 a.m. the back-shift men go in to relieve the front shift, and they work together for about two and a half hours. The front-shift men are supposed to be all out by noon, and the back shift remain in until 5 p.m. Thus we find that for about ten and a half hours out of thirteen (say from 4 a.m. to 5 p.m.), on the 10th ultimo, only fifty-seven men were in the Lambton heading district, and for two and a half hours out of thirteen there were 114 men. I do not consider therefore that the spirit of the Act has been infringed in this instance; but if its enforcement to the letter is thought necessary, the men appear to have a remedy in their own hands when changing shifts, by the "front-shift men" leaving off work when the "back-shift men" enter.

J.M., 16/2/83.

NAMES and numbers of miners working Lambton heading on Mr. Inspector Dixon's last visit:—

201 Lenn and Smith	220 Hughes and Christo	239 Davison and Graves
202 Muthee and Merchan	221 Broadhead and Buxton	240 Shaw and Sims
203 Two Robinsons	222 Hay and Storie	241 Thornton and Davis
204 Fisher and Wallace	223 Boyle and Adamson	242 Firth and Davis
205 Two Eringtons	224 Palmer and Ouston	243 George and Morgan
206 MacLaughlan and Mate	225 Lonsdale	244 Jones and Edwards
207 Two Youngs	226 Ougtram and Ougton	245 Two Horubes
208 Screen and Hopkins	227 Jones and Howel	246 Bray and Wilson
209 Dunstan and Goodwin	228 Lewis and Thomas	247 Two Nelsons
210 Oswald and Holland	229 Two Conns	248 Conney and Dawson
211 Two Metcalfs	230 Two Oswalds	249 Hindmarsh and Taylor
212 Metcalf and Ziplady	231 Two Peels	250 Jones and Williams
213 Two Horsefields	232 Evans and Meelant	251 Two Gibsons
214 Frederic and Evans	233 Two Morgans	252 Tilley and Drummond
215 Two Keegans	234 Sherlock and Dunlop	253 Two Masons
216 Two Keegans	235 Two Kings	254 Two Hopkins
217 Two Jarretts	236 King and Taylor	255 Two Simpsons
218 Reece and Davis	237 Two Hamiltons	256 Simpson and Gibbons
219 Britt and Joyce	238 Two Walkers	257 Two Websters

Under Secretary for Mines, B.C., 16/2/83. Submitted. The remedy might inflict loss.—H.W., 19/2/83.

No. 6.

The Examiner of Coal-fields to Mr. J. Y. Neilson.

Sir,

Coal-fields Office, Newcastle, 8 March, 1883.

In pursuance of the provisions contained in the 31st section of the Coal Mines Regulation Act, 1876, I hereby give you notice that on the 13th January last the 4th subsection of the 12th section of the said Act was not carried out in the Lambton heading districts at the Newcastle-Wallsend Colliery.

I have, &c.,

JOHN MACKENZIE,
Examiner of Coal-fields.

No. 7.

No. 7.

Mr. J. Y. Neilson to The Examiner of Coal-fields.

Sir,

Newcastle-Wallsend Coal Co., Wallsend, 15 March, 1883.

Your favour of the 8th instant only came to hand yesterday. In reply to which I may state that although I entirely differ with you in your interpretation of the Coal-fields Regulation Act, I will at once proceed to make the necessary alterations to comply with your request.

I have, &c.,

J. Y. NEILSON.

No. 8.

The Examiner of Coal-fields to Mr. J. Y. Neilson.

Sir,

Coal-fields Office, Newcastle, 20 March, 1883.

I beg to acknowledge the receipt of your letter of the 13th instant, informing me that you will at once proceed to make the necessary alterations to comply with the request contained in my letter of the 8th idem.

I have, &c.,

JOHN MACKENZIE,

Examiner of Coal-fields.

No. 9.

Minute of the Honorable The Secretary for Mines.

Ventilation of Wallsend Colliery.

I HAVE read the correspondence in reference to the complaint of the Miner's General Secretary, and I am forced to the conclusion that the 4th subsection of the 12th section of the Coal Mines Regulation Act of 1876 is not carried out in this mine.

The 3rd subsection of this clause of the Act states that "an adequate amount of ventilation shall mean not less (as a minimum) than 100 cubic feet of pure air per minute for each man, boy, and horse, which shall sweep undiminished along the airway past each working place."

The 4th subsection provides that "each district or split shall have not more than seventy men, and each district shall be supplied with a separate current of fresh air." I am satisfied that there being for two and a half hours 114 men in the mine, and during those two and a half hours there being an insufficient supply of fresh air in the terms of the Act, that there was not a compliance with the Act even in spirit. The remedy for this state of things is not in the hands of the men, but of the management, which is bound to supply the fresh air under the Act, as quoted. Where air which has served a district is then allowed to mingle with fresh air and serve another district, however great that supply may be, it is clearly not a compliance with the Act, which speaks of "pure air." This can only mean such air as is sent in fresh without having been used by the men. A copy of this minute may be sent to Mr. Curley, and the Examiner may be informed of it.

26/2/83.

Copy to Mr. Curley, 27 February, 1883. The Examiner of Coal-fields.—H.W., B.C., 27/2/83.

I forward for the Minister's information a copy of notice I have served on Mr. Neilson, and shall be obliged by your informing me what further action he may desire I should take in the matter.—J.M., 8/3/83. The Under Secretary for Mines, B.C., 8/3/83. Submitted.—H.W., 13/3/83.

The Examiner of Coal-fields may be asked to report if any further breaches of the law in the same respect happen, and then steps must be taken to prevent them in the future.—J. P. ABBOTT, 17/3/83. Copy of letter received from Mr. Neilson (the Manager) and my reply thereto forwarded herewith for the Minister's information. Will instruct Mr. Inspector Dixon to visit and report on the Lambton heading district.—J.M., 20/3/83. The Under Secretary for Mines, B.C., 20/3/83. Submitted.—H.W., 28/3/83. Seen.—J. P. ABBOTT, 31/3/83.

Co-operative Colliery.

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No. 1.

No. 1.

Mr. John Dixon, Inspector of Collieries, to Mr. James Fletcher, junr., Manager, Co-operative Colliery.

Sir,

Glebeland, 5 November, 1885.

I hereby notify you of the very defective state of the ventilation in certain districts in the Co-operative Colliery, as found by me on my inspection of said colliery yesterday (Wednesday), 4th instant, as follows:—

1. In the first split, brattice heading, the total current of air was only about 6,000 cubic feet per minute, for about 62 men, 3 boys, and 3 horses—total, 68.

2. In the third split, brattice heading, the total intake current of air was only 7,560 cubic feet per minute, for 76 men, 6 boys, and 6 horses—total, 88. There are too many men on this split, and the current of air is not well sustained, as in one working heading I only got a result of about 4,200 cubic feet per minute, and in the return from this split, 12,580 cubic feet per minute.

In No. 1 district the only available current of air for 56 men, 10 boys, and 7 horses was about 4,080 cubic feet per minute.

3. I have therefore to urge that you would give immediate attention to the above matters, with a view of having them remedied as soon as possible; and in my opinion the only way to effect a proper remedy would be to sink a shaft, and erect a furnace inside of the fault, which furnace would avail for many years to come.

I have, &c.,

JOHN DIXON,

Inspector of Collieries.

No. 2.

Mr. John Dixon, Inspector of Collieries, to The Examiner of Coal-fields.
Co-operative Colliery Inspection.

Sir,

Glebeland, 5 November, 1885.

I have the honor to report inspection of the above colliery yesterday, Wednesday, 4th instant, as follows:—

In the 1st split, brattice heading, the current of air was only about 6,000 cubic feet of air per minute, for about 62 men, 3 boys, and 3 horses—total, 68.

In the 2nd split the intake current of air was about 7,980 cubic feet per minute, for about 52 men, 5 boys, and 4 horses—total, 61.

In the 3rd split the total intake current of air was only about 7,560 cubic feet per minute, for about 76 men, 6 boys, and 6 horses—total, 88. There are too many men on this split, and the overman (Mr. Davidson) informed me that this was caused by recent alterations made to relieve the 2nd split, where the ventilation had been defective. The current of air in this 3rd split was not well sustained in the working headings, for in one heading it was only about 4,200 cubic feet per minute, and in the return from this split the total current of air was about 12,580 cubic feet per minute.

In No. 4 split, at the top end of No. 3, the total current of intake air was about 7,800 cubic feet per minute for about 26 men, 2 boys, and 2 horses.

In the No. 1. district the total available current of intake air in the working headings was only about 4,080 cubic feet per minute, for about 56 men, 10 boys, and 7 horses, and at the same time the return current of air at the furnace for this district alone was about 20,000 cubic feet per minute.

The overman (Mr. R. Davidson) was with me the whole of the time, and I drew his attention to the above matters in every instance. In addition to this, I have notified the manager, Mr. J. Fletcher, junior, by registered notification, a copy of which I beg to forward along with this report.

Seeing the state of the ventilation in the brattice heading section of workings in the Co-operative Colliery on my inspection yesterday, I am more than ever convinced that the opinion I expressed in my report on 9th May last was a correct one, viz., that the brattice heading sections would never be properly ventilated, unless by having an up-cast shaft and furnace inside the fault; and on two occasions during this year I have urged on the manager the necessity of having this done before the summer months came, but as far as I know nothing has yet been done in the matter.

The main roads and wheeling roads were in good order, and a good supply of timber at the various stations ready for use.

I have, &c.,

JOHN DIXON,

Inspector of Collieries.

No. 3.

The Examiner of Coal-fields to Mr. James Fletcher, junior, Manager, Co-operative Colliery.

Sir,

Department of Mines, Sydney, 24 November, 1885.

In view of a recent report of Mr. Inspector Dixon on the ventilation of the Co-operative Colliery, and in pursuance of the provisions contained in the 31st section of the Coal Mines Regulation Act, 1876, I hereby give you notice that you have failed to comply with subsections 2 and 3, section 12 of the said Act.

I have, &c.,

JOHN MACKENZIE,

Examiner of Coal-fields.

No. 4.

The Examiner of Coal-fields to The Under Secretary for Mines.

Sir,

Mines Department, Sydney, 24 November, 1885.

I beg to forward reports, received from Mr. Inspector Dixon, respecting a deficiency of ventilation at the Co-operative Colliery, and copy of a notice I have served upon Mr. James Fletcher, junr., and shall feel obliged by your informing me what further action the Minister desires me to take in the matter.

I have, &c.,

JOHN MACKENZIE,

Examiner of Coal-fields.

The Examiner may take the necessary steps to enforce the penalty provided in this case, unless the owners comply with the law before such proceedings have been commenced.—H. W., 30/11/85.

Submitted. Approved.—G. T., 1/12/85. The Examiner of Coal-fields.—H. W., U.S., B.C., 2 Dec., 1885. Mr. Inspector Dixon for report as to whether the law is now complied with.—J. M., 22/12/85. Further report forwarded.—J. D., 23/12/85.

Mr. Inspector Dixon's report, forwarded herewith, from which it will be seen that the matters complained of have been remedied, and that there is only a slight deficiency of the required current of air in No. 6 split, which, in all probability, will be rectified in the course of a week, as the overman informed him it was the intention of the manager to have the furnace repaired during the week end, so as to get a better result throughout the split. Also that there are several shiftsmen constantly employed in this colliery at present in connection with the ventilation, and tenders have been called for the sinking of another shaft for the fault section of workings.—J. M., 24/12/85.

Under Secretary for Mines—B. C., 24/12/85. In view of this report further proceedings do not appear to be necessary.—H. W., 4/1/86. Submitted. Approved.—R. M. V., 9/1/86.

[Enclosure to No. 4.]

Mr. John Dixon, Inspector of Collieries, to The Examiner of Coal-fields.

Co-operative Colliery Inspection.

Sir,

Glebecland, 23 December, 1885.

I have the honor to report inspection of the above colliery to-day, Wednesday, as follows:—

1st split.—In this split the current of air was about 10,000 cubic feet per minute, for about 62 men, 5 boys, and 3 horses—total, 70. The current of air was well sustained throughout the split.

No. 2 split.—The current of air in this split was about 9,200 cubic feet per minute, for about 57 men, 8 boys, and 4 horses. The main current of air in this split was fairly well sustained, being about 8,610 cubic feet per minute at 36 bord, 6,000 cubic feet per minute at 44 bord, 6,975 cubic feet per minute at 63 bord, 8,400 cubic feet per minute at 68 bord.

No. 3 split.—In this split the current of air at the narrow bord was about 6,930 cubic feet per minute, for about 42 men, 4 boys, and 2 horses—total, 48. The current of air at 50 bord was about 4,630 cubic feet per minute at the stenton, 5,860 cubic feet per minute, and at the last bord about 5,500 cubic feet per minute.

No. 4 split.—The current of air in this split was about 9,000 cubic feet per minute, for about 52 men, 6 boys, and 3 horses—total, 61.

No. 5 split.—In the intake near shaft the current of air was about 5,040 cubic feet per minute for about 38 men, 4 boys, and 2 horses—total, about 44. The above current of air was well sustained past the first few working places, and I saw shiftmen at work building stoppings in order to conduct the current of air throughout the working headings.

No. 6 split.—The intake current of air in this split was about 7,300 cubic feet per minute for about 64 men, 6 boys and 4 horses—total, 74. The above result shows a slight deficiency in the total current, but I beg to state that in all probability the current of air for this split will be very much increased in the course of a week, as the overman, Mr. Davidson, informed me that it was the intention of the management to have the furnace repaired during the week end, so as to get a better result throughout the split.

There are several shiftmen constantly employed in this colliery at present in connection with the ventilation, and tenders have been called for the sinking of another shaft for the fault section of workings.

I have, &c.,
JOHN DIXON,
Inspector of Collieries,

[Enclosure to No. 4.]

Mr. John Dixon, Inspector of Collieries, to The Examiner of Coal-fields.

Sir,

Glebecland, 21 November, 1885.

For your information, I beg to state that on Thursday evening last, 19th instant, I received a telegram from Mr. H. Winchester, of the Coal-fields Office, informing me that Mr. A. Cook, secretary to the Co-operative miners, had wired concerning alleged deficient ventilation in that colliery, and that the miners had ceased work in consequence. I may here state that no particular part of the workings was specified as being defective in ventilation, and I did not see the Check Inspectors' last report, as I am not aware that it was entered in the book kept at the colliery office for that purpose when I was at said colliery yesterday.

However, acting on the message from Mr. Winchester, I went to the Co-operative Colliery yesterday (Friday), and judging that the splits complained of would be in the part of the workings known as "over the fault," I made an inspection of those splits and beg to report as follows:—

No. 1 split.—The total intake current of air for this split was about 6,620 cubic feet per minute. This current of air is coursed along the front heading, and at the far stenton between the two headings. I found it to be about 6,290 cubic feet per minute, and at No. 24 bord, in the back heading, the current of air was about the same as in the stenton. This split when at work contains about 67 men, 4 boys, and 2 horses—total, about 73,—thus showing a deficiency in the intake current of air for the above number of men, &c. (on the minimum quantity of air required by the Act), of about 700 cubic feet per minute. This is one of the splits complained of by me in my report of 5th instant, and of which I notified the manager, Mr. J. Fletcher, on the same day.

In No. 2 split the current of air was about 8,610 cubic feet per minute at the intake, and in the cut-through between Jarvie's bord and the Gannon bord it was about 6,600 cubic feet per minute. I saw men at work in this split erecting screen, &c., and when completed the ventilation will be sustained in the working headings throughout the split. When at work there are about 65 men, 7 boys, and 5 horses—total, 77 in this split.

No. 3 split.—In this split the total intake current of air was about 8,100 cubic feet per minute, but at 53 bord the current of air was reduced to about 4,320 cubic feet per minute. About 42 men, 4 boys, and 4 horses—total, 50 men, &c.—belong to this split.

In No. 4 split the total intake current of air was about 8,250 cubic feet per minute, and at No. 86 bord it was about 8,000 cubic feet per minute, and well sustained throughout the split. There are about 52 men, 4 boys, and 3 horses—total, 59 men, &c.—in this split when the mine is working.

I here beg to state that the last-mentioned split has been formed since my inspection on 4th instant, and notification of 5th instant, in order to relieve the 3rd split, which was then overcrowded.

Concerning the quality of the air supplied in the above splits, I can only say that I have no instrument wherewith to test it, and may add that each of the above-mentioned splits is supplied with air direct from the surface—in two of them from air shafts, in one from a little tunnel, and in another from the main tunnel.

On my inspection yesterday I noticed several men at work in various places erecting stoppings, putting up screens, &c., and at one place a gang of men were at work making an overcast. All this work was being done to further benefit the above-mentioned splits.

In conclusion, I beg to state that I have notified the manager (Mr. J. Fletcher, junr.) concerning the deficiency in No. 1 split, and also of the loss of air in the 3rd split.

I have, &c.,
JOHN DIXON,
Inspector of Collieries.

No 5.

No. 5.

Check Inspectors' Reports.

Plattsburg, 27 November, 1885.

THE last three inspections on the state of the ventilation in the Co-operative Collicry are as follows:—

26 JUNE, 1885.

Thermometer on top 60°.

Intake in tunnel, 17,094 cubic feet. Thermometer 58°.

No. 1 (timber shaft) intake.—No record; shaft in disuse.

No. 1 Split.

Intake at shaft, 7,920 cubic feet. Thermometer 64°

At No. 4 bord the current was 3,276 cubic feet. Thermometer 64°.

At No. 10 bord the current was 2,600 cubic feet. Thermometer 65°.

At No. 18 bord the current was 2,600 cubic feet. Thermometer 68°.

Return from No. 1 split, 8,015 cubic feet. Thermometer 70°.

Return from No. 2 split (in the cross-cut), 4,560 cubic feet. Thermometer 70°.

There are 49 men, 3 horses, and 5 boys working on this split of air.

No. 2 Split.

Back heading intake, 2,600 cubic feet. Thermometer 72°.

At Stenton, 2,050 cubic feet.

At No. 3 bord the current was 3,465 cubic feet. Thermometer 72°.

There are 50 men, 8 boys, and 10 horses working on this split of air.

No. 3 Split.

At No. 45 bord the current was 3,125 cubic feet. Thermometer 73°.

At Forester's narrow board the current was 7,800 cubic feet. Thermometer 73°.

At No. 55 bord (in the back heading) the current was 4,242 cubic feet. Thermometer 73°.

At Stenton the current was 6,240 cubic feet. Thermometer 74°.

Intake from narrow bord, 3,042 cubic feet. Thermometer 72°.

There are 66 men, 9 boys, and 5 horses working on this split of air. The return at the furnace was 12,168 cubic feet.

No. 4 Split.

Intake from shaft, 10,000 cubic feet. Thermometer 69°.

Intake from No. 3 shaft, 8,244 cubic feet. Thermometer 70°.

At the return the current was 11,700 cubic feet. Thermometer 72°.

There are 34 men, 6 boys, and 4 horses working on this split.

No. 5 Split.

At No. 92 bord the current was 5,720 cubic feet. Thermometer 72°.

From No. 92 to No. 98 bord the anemometer would not work.

At No. 101 bord the current was 4,500 cubic feet. Thermometer 75°.

Stoppings badly required in this split.

There are 30 men, 10 boys, and 8 horses working on this split.

Return at the big furnace was 44,330 cubic feet. Thermometer 76°.

Furnace in good working order.

27 JUNE, 1885 (Second Day).

Henderson's Tunnel—Intake, 11,655 cubic feet. Thermometer 61°.

No. 6 Split.

Intake from fall in, 6,300 cubic feet. Thermometer 60°. Intake from shaft, 6,480 cubic feet.

A door is badly required at the first cut-through.

At No. 112 bord the current was 5,656 cubic feet.

At the cut-through from narrow bord the current was 5,376 cubic feet.

At No. 131 bord the current was 5,616 cubic feet.

At No. 136 bord the current was 8,008 cubic feet.

Return from Little Furnace 27,630 cubic feet.

There are 58 men, 12 boys, and 8 horses working on this split.

Furnace in good working order, and there seemed to be a good supply of timber on the various flats.

GEORGE COOPER, }
 JOHN HOUSTON, } Inspectors.

24 JULY, 1885.

Thermometer on top 58°.

The tunnel intake, 13,650 cubic feet. Thermometer 59°.

No. 1 Split.

At No. 4 bord the current was 2,840 cubic feet. Thermometer 62°.

At No. 21 bord the current was 2,400 cubic feet. Thermometer 68°.

There are 44 men, 5 boys, and 3 horses working on this split.

Return from No. 1 split 8,000 cubic feet. Thermometer 69°.

Cross-cut return, 9,750 cubic feet. Thermometer 72°.

At No. 23 bord the current was 7,800 cubic feet. Thermometer 72°.

At No. 29 bord the current was 3,200 cubic feet. Thermometer 73°.

At.

At Wonder's cross-cut the current was 7,280 cubic feet. Thermometer 73°.
 At No. 34 bord the current was 7,386 cubic feet. Thermometer 73°.
 At No. 42 bord the current was 3,930 cubic feet. Thermometer 73°.
 At No. 49 bord the current was 6,006 cubic feet. Thermometer 72°.
 At No. 56 bord the current was 2,803 cubic feet. Thermometer 72°.
 There are 84 men, 8 boys, and 10 horses working on this split.
 Intake, 6,760 cubic feet. Thermometer 70°.
 No. 3 split (over the fault) 4,788 cubic feet. Thermometer 72°.
 At No. 65 bord the current was 2,520 cubic feet. Thermometer 74°.
 Cruickshank's narrow bord intake 9,360 cubic feet. Thermometer 73°.
 At No. 74 bord the current was 3,900 cubic feet. Thermometer 74°.
 At No. 77 bord the current was 2,080 cubic feet. Thermometer 74°.
 At Stenton to back heading the current was 7,200 cubic feet. Thermometer 74°.
 The anemometer would not work in the cut-through at Thomas' bord. Very hot and smoky.
 At No. 89 bord the current was 3,120 cubic feet. Thermometer 74°.
 At No. 93 bord the current was 5,200 cubic feet. Thermometer 74°.
 There are 70 men, 7 boys, and 4 horses working on this split.
 Return for big furnace was 50,765 cubic feet. Thermometer 74°. The furnace was in good working order.

25 JULY (Second Day).

Intake from fall in, 3,824 cubic feet. Thermometer 58°.
 Intake from air shaft, 4,680 cubic feet. Thermometer 58°.
 At No. 136 bord the current was 5,440 cubic feet. Thermometer 68°.
 Over the fault, 2,940 cubic feet. Thermometer 71°.
 At No. 142 bord the current was 6,656 cubic feet. Thermometer 71°.
 At No. 148 bord the current was 5,766 cubic feet. Thermometer 71°.
 There are 44 men, 10 boys, and 7 horses working on this split.
 Little furnace, 25,875 cubic feet. Thermometer 70°.
 Intake at Henderson's tunnel, 9,658 cubic feet. Thermometer 64°.

Over the Fault.

At No. 96 bord the current was 4,075 cubic feet. Thermometer 65°.
 At No. 100 bord the current was 5,025 cubic feet. Thermometer 65°.
 At No. 113 bord the current was 3,960 cubic feet. Thermometer 69°.
 At No. 117 bord the current was 3,150 cubic feet. Thermometer 70°.
 There are 42 men, 7 boys, and 5 horses working on this split.
 Return for furnace, 8,970 cubic feet. Thermometer 72°.
 Return for No. 3 split, 11,700 cubic feet. Thermometer 72°.

No. 5 Split.

At No. 118 bord the current was 3,936 cubic feet. Thermometer 72°.
 At Nos. 122 and 123 and on to the door the anemometer would not work.
 There are 26 men, 8 boys, and 6 horses working on this split.

GEORGE COOPER, }
 JOHN HOUSTON, } Inspectors.

26 OCTOBER, 1885.

No. 1 Split.

This split is aired from No. 1 timber shaft and main tunnel.
 At the time of our inspection there was not sufficient air coming down the main shaft or passing by the first thirteen (13) bords to work the anemometer, but the working places were cool, fresh, and clear. Thermometer ranging from 68° to 69°.
 At No. 14 bord (over the fault) there was a current of 2,805 cubic feet. Thermometer 69°.
 At the Stenton (near the face of the heading) the current of air was 5,742 cubic feet. Thermometer 69°.
 At No. 24 bord the current was 4,510 cubic feet. Thermometer 70°.
 At the return for this split at No. 23 bord the current was 5,760 cubic feet. Thermometer 72°.
 The air passing the last six or seven bords in this split was thick and sluggish.
 There are 64 men, 4 boys, and 3 horses working on this split.

No. 2 Split.

This split is aired from the main tunnel. The intake current at No. 2 Jenny Flat was 7,260 cubic feet. Thermometer 70°.
 The current at No. 68 bord was 4,000 cubic feet. Thermometer 72°.
 At No. 57 bord the current was 5,900 cubic feet. Thermometer 73°.
 At No. 53 bord (in the back heading) the current was 5,376 cubic feet. Thermometer 73°.
 The current at No. 47 bord was 4,025 cubic feet. Thermometer 73°.
 At No. 39 bord the current was 2,310 cubic feet. Thermometer 74°. The air at this place was very irregular; we had to wait for some time before we could get the anemometer to work.
 The current of air in the return for this split (in the back cross-cut) was 8,712 cubic feet. Thermometer 72°. The air from No. 47 bord back to the return needs improving very much. At the time of our inspection it was very hot and smoky; also from No. 63 to 68 bords the air needs improving. We were shown two doors that had just been fixed for the purpose of splitting the air at No. 47 bord. The fixing of these two doors should improve the air in this split.
 There are 78 men, 9 boys, and 4 horses working on this split.
 The return at the furnace for Nos. 1 and 2 splits was 33,900 cubic feet. Thermometer 74°.

No. 3 Split.

This split is aired from the main tunnel and Morgan's narrow bord; the current of air at the intake was 7,486 cubic feet. Thermometer 73°.
 From No. 80 to No. 88 bords the anemometer would not work, as the current was so slight.
 At No. 88 bord the current was 6,860 cubic feet. Thermometer 74°.
 At No. 93 bord, after waiting for a considerable time, we recorded a current of 4,255 cubic feet. Thermometer 74°.
 At No. 96 bord there was a current of 5,550 cubic feet. Thermometer 74°.
 At No. 101 bord the current was 5,445 cubic feet.
 At No. 105 bord (next to the return for this split) there was a current of 8,897 cubic feet. Thermometer 74°.
 The air all through this split was hot and smoky. The doors in this split require to be well attended. There are 54 men, 12 boys, and 6 horses working on this split.

No. 4 Split.

This split is aired from No. 2 timber shaft. Current of air at the intake was 5,280 cubic feet. Thermometer 67°.
 The current of air at No. 110 bord was 3,210 cubic feet. Thermometer 67°.
 The air in the remaining portion of this split was not confined for us to measure it; but the working places were cool and clear, the thermometer ranging from 67° to 70°.
 There are 40 men, 2 boys, and 2 horses working on this split.
 The current of air at the return of the furnace was 7,920 cubic feet. Thermometer 71°.
 This furnace also draws the air from No. 3 split, the return from which near the furnace was 10,300 cubic feet.

No. 5 Split.

This split is aired from No. 3 timber shaft, Henderson's tunnel, and the fall-ins. The air not being confined we could not measure it near the working places till we came to—
 No. 133 bord, where the current was 2,587 cubic feet. Thermometer 70°.
 At No. 140 bord the current was 2,100 cubic feet. Thermometer 70°.
 The current of air passing by the working places in the remaining part of this split was so slight that it could not turn the anemometer. Thermometer ranging from 70° to 72°.
 The current of air at the furnace was 19,135 cubic feet. Thermometer 70°. There are 64 men, 6 boys, and 3 horses working on this split.
 It is necessary that the air in this split should be confined and conducted by the working places as the men in the remaining portion of this split are badly off for air. There appeared to be a good supply of timber at the various flats. The travelling roads would be all the better for a cleaning, as there are some places nearly impassable for water and sludge.
 The total currents of air at the three (3) furnaces were 71,255 cubic feet per minute.

JOSEPH MIDDLEBY, }
 AMRAM LEWIS, } Inspectors.

No. 6.

The Miners' General Secretary to The Honorable the Secretary for Mines.

Sir,

Hamilton, 25 January, 1886.

I have the honor to respectfully refer you to the interview which took place on the 15th instant, by the Executive of the Miners' Association, and the subjects then brought officially under your notice by communication.

In furtherance of the object of the deputation, I am instructed by the Executive of the Mining Association to forward copies of check inspectors' reports made at several collieries for your perusal; and am requested to add that since the interview took place certain of the Co-operative miners have had to come out of the mine, not being able to work in consequence of alleged defective ventilation. This occurred on Tuesday, 19th instant.

Trusting that the subjects brought under notice on the 15th instant will receive immediate attention,—

I have, &c.,

JAMES CURLEY,
 Miners' General Secretary.

[Enclosure to No. 6.]

Lambton Colliery, 28 and 29 July, 1885.

We, the undersigned, having examined the workings and travelling roads of the above colliery, report as follows:—

New Tunnel—Farish Flat.

There are 62 men, 6 boys, 6 horses at this flat. Intake of air is 10,920 feet per minute; air passing the ends of 5 bords, from No. 1 to No. 5, is 6,840 feet per minute; air passing the ends of 7 bords, from No. 5 to No. 12, is 2,520 feet per minute, thermometer 68°; air passing the ends of 9 bords, from No. 12 to No. 21, is 3,240 feet per minute, thermometer 67°; air passing the ends of 5 bords, from No. 21 to No. 26, is 6,000 feet per minute, thermometer 67°; air passing the ends of 5 bords, from No. 26 to No. 31, is 4,290 feet per minute, thermometer 68°.

We also wish to call your attention to the cut-through that the men travel in, which is full of water, and requires something doing to it.

Far Flat No. 1.

There are 46 men, 6 boys, 5 horses at this flat. Intake of air, 7,560 feet per minute; air passing the ends of bords from No. 18 to No. 10 so slack that we were unable to test the quantity, thermometer 75°; air passing the ends of 7 and 8 bords, 2,840 feet per minute; there, 5 pillars with 20 men in them, we found the air to be very much heated, and were unable to test the quantity, thermometer 75°.

Far

Far Flat No. 2.

There are 42 men, 4 boys, 4 horses at this flat. Intake of air is 5,280 feet per minute; air passing the ends of 10 places on right hand side of bank so slack that we were unable to test the quantity, thermometer 70°; air passing the ends of 10 bords on left-hand side of flat, 2,640 feet per minute, thermometer 69°.

Straight-down Flat.

There are 60 men, 7 boys, 6 horses at this flat. Intake of air, 7,160 feet per minute; air passing the ends of 5 bords on right-hand side of flat is 2,400 feet per minute, thermometer 69°; air passing the ends of 4 bords on right-hand side of narrow bords is 2,400 feet per minute, thermometer 70°; air passing the ends of 5 bords on right-hand side of narrow bord cut-through higher up, 2,310 feet per minute, thermometer 71°; air passing the ends of 11 bords in Dent's heading, 3,465 feet per minute, thermometer 74°; air passing the ends of 6 bords on left-hand side of narrow bord, 2,800 feet per minute, thermometer 74°.

South Pit Flat.

There are 34 men, 3 boys, 3 horses at this flat; air passing the ends of Nos. 1 and 2 bords, 1,960 feet per minute; air passing the ends of 5 bords, from No. 2 to No. 7, so slack that we were unable to test the quantity; intake of air on right-hand side of bank, 2,640 feet per minute; air passing the ends of 10 bords here, 3,800 feet per minute, thermometer 70°.

Middle Pit Flat.

There are 54 men, 7 boys, 7 horses at this flat. No. 1 intake of air at New Chum, 8,320 feet per minute; air passing the ends of 4 bords, from No. 2 to No. 5, is 4,320 feet per minute, thermometer 65°; air passing the ends of 9 bords, from No. 6 to No. 14, is 4,512 feet per minute; air passing the ends of 4 bords, from No. 14 to No. 18, 2,871 feet per minute, thermometer 70°.

Intakes.	Returns at Furnace.
10,920	42,120
7,560	32,340
5,280	42,840
7,160	23,100
2,640	
8,320	
Total.....	140,400
Total.....	41,880

Travelling roads and furnaces in good order, with the exception of No. 1 return at furnace, which is partly blocked up.

WALTER KERR, }
E. CHARLTON, } Check Inspectors.

[Enclosure to No. 6.]

Lambton Colliery, 24 and 25 August, 1885.

We, the undersigned, having examined the workings and travelling roads of the above colliery, report as follows:—

New Tunnel—Farish Flat.

There are 62 men, 6 boys, 6 horses at this flat. Intake of air, 7,140 feet per minute.
Air passing the ends of 5 bords, from No. 1 to No. 5, is 3,300 feet per minute; thermometer 61°.
Air passing the ends of 10 bords, from No. 5 to No. 15, was so slack that we were unable to test the quantity; thermometer 64°.
Air passing the ends of 6 bords, from No. 16 to No. 21, is 1,470 feet per minute; thermometer 68°.
Air passing the ends of 10 bords, from No. 21 to No. 31, is 5,320 feet per minute; thermometer 70°.

Far Flat, No. 1.

There are 46 men, 6 boys, 5 horses at this flat. Intake of air, 5,005 feet per minute.
Air passing the ends of 5 bords, from No. 18 to No. 14, so slack that we were unable to test the quantity; thermometer 71°.
Air passing the ends of 7 bords, from No. 14 to No. 7, is 4,800 feet per minute; thermometer, 72°. We found the air to be more improved at the Pillars than last time.

Far Flat, No. 2.

There are 44 men, 4 boys, 4 horses at this flat.
Air passing the ends of all the bords on right-hand side of flat was so slack that we were unable to test the quantity; thermometer 70°. Intake of air on the bank, 3,960 feet per minute.
Air passing the ends of 10 bords on left-hand side of flat, 1,800 feet per minute; thermometer 67°.

Straight-down Flat,

There are 60 men, 7 boys, 6 horses at this flat. Intake of air on the bank, 3,960 feet per minute.
Air passing the ends of 5 bords on right-hand side of bank was so slack that we were unable to test the quantity; thermometer 72°.
Air passing the ends of 5 bords on right-hand side of narrow bord, 1,800 feet per minute; thermometer 72°.
Air passing the ends of 5 bords in top cut-through, 2,210 feet per minute; thermometer 72°.
Air passing the ends of 11 bords in Dent's heading, 4,050 feet per minute; thermometer 74°.
Air passing the ends of 5 bords on left-hand side of narrow bord, 3,300 feet per minute; thermometer 75°.

South Pit Flat.

There are 35 men, 4 boys, 4 horses at this flat. Intake of air on right hand side of flat, 3,630 feet per minute.
Air passing the ends of all the bords on right-hand side of flat, 3,630 feet per minute; thermometer 69°.
Air passing the ends of all the bords on left-hand side of flat so slack that we were unable to test the quantity; thermometer 74°.

We also wish to draw your attention to the want of timber at the South Pit, and also to the want of manholes in that portion of the bank from the old flat to the new one.

Middle Pit Flat.

There are 60 men, 6 boys, 6 horses at this flat. No. 1 intake of air, 6,490 feet per minute; No. 2 intake of air, 6,720 feet per minute.
Air passing the ends of 7 bords, from No. 1 to No. 7, is 3,360 feet per minute; thermometer 68°.
Air passing the ends of 12 bords, from No. 7 to No. 19, is 3,300 feet per minute; thermometer 69°.

Intakes.	Returns at Furnace.
7,140	41,760
5,005	36,770
3,960	33,330
3,960	24,360
3,630	
6,490	
5,720	
Total.....	135,280
Total.....	35,905

Travelling roads and furnace in good order.

WALTER KERR, }
E. CHARLTON, } Check Inspectors.

[Enclosure

[Enclosure to No. 6.]

Lambton Colliery, 23 and 24 September, 1885.

We, the undersigned, having examined the workings and travelling roads of the above colliery, report as follows:—

New Tunnel, Farish Flat.

There are 62 men, 6 boys, 6 horses at this flat. Intake of air for same, 5,460 feet per minute.
 Air passing the ends of 5 bords, from No. 1 to No. 5, is 2,340 feet per minute.
 Air passing the ends of 8 bords, from No. 6 to No. 13, is 2,730 feet per minute; thermometer 69°.
 Air passing the ends of 8 bords, from No. 13 to No. 21, is so slack that we were unable to test the quantity; thermometer 70°.
 Air passing the ends of 10 bords, from No. 21 to No. 31, is 2,400 feet per minute; thermometer 69°.

Far Flat No. 1.

There are 50 men, 3 boys, 3 horses at this flat. Intake of air for same, 4,680 feet per minute. We inspected all the pillars and found the air to be workable; thermometer 74°.

Far Flat No. 2.

There are 54 men, 6 boys, 6 horses at this flat. Intake of air for same, 4,800 feet per minute.
 Air passing all the bords on right-hand side of flat so slack that we were unable to test the quantity; thermometer 71°.
 Air passing the ends of 10 bords on left-hand side of flat, 1,650 feet per minute; thermometer 69°.
 Air passing the ends of 5 bords on right-hand side of Straight-down Flat, which is attached to Far Flat, was so slack that we were unable to test the quantity; thermometer 70°.

South Pit Flat.

There are 40 men, 6 boys, 6 horses at this flat. Intake of air for same, 4,650 feet per minute.
 Air passing the ends of 5 bords, from No. 11 to No. 7, is 4,650 feet per minute; thermometer 72°.
 Air passing the ends of 6 bords, from No. 7 to No. 1, so slack that we were unable to test the quantity; thermometer 72°.
 Intake of air on left-hand side of bank, 2,790 feet per minute.
 Air passing the ends of 8 bords, from No. 19 to No. 10, is 2,790 feet per minute; thermometer 72°.

Middle Pit Flat.

There are 56 men, 6 boys, 6 horses at this flat. No. 1 intake of air, 4,680 feet per minute; No. 2 intake of air, 5,985 feet per minute.
 Air passing the ends of 7 bords, from No. 1 to No. 7, 2,695 feet per minute; thermometer 67°.
 Air passing the ends of 12 bords, from No. 7 to No. 19, 2,475 feet per minute; thermometer 69°.
 We once more wish to draw your attention to the want of manholes on the South Pit Bank from the old flat to the present flat. We further want to draw your attention to the different parts of the roof which want attending to, as we think they are not safe.

Intakes.	Returns at Furnace.
5,460	- 45,360
4,680	38,220
4,800	34,965
4,650	25,200
2,790	
4,680	
5,985	
Total.....	143,745

Total.....33,045

Travelling roads and furnace in good order, with the exception of the air-course in front of the furnace, which is very much blocked up with coal and requires clearing away, and that portion of the South Pit Bank which we drew your attention to.

WALTER KERR, }
 ED. CHARLTON, } Check Inspectors.

No. 7.

The Under Secretary for Mines to The Examiner of Coal-fields.

Sir,

Department of Mines, Sydney, 30 January, 1886.

I am directed by the Secretary for Mines to inform you that a letter has been received from Mr. James Curley, Secretary of the Miners' Association, to the effect that the miners at the Co-operative Colliery had to come out of the mine on the 19th instant, not being able to work in consequence of defective ventilation, and I am to request that you will report on the matter without delay.

I have, &c.,

HARRIE WOOD,
 Under Secretary.

No. 8.

The Under Secretary for Mines to The Manager, Co-operative Colliery, Wallsend.

Sir,

Department of Mines, Sydney, 30 January, 1886.

I am directed by the Secretary for Mines to call your attention to a statement made by James Curley, Secretary of the Miners' Association, in a letter to this Department of the 25th instant, to the effect that the miners at the Co-operative Colliery, Wallsend, had to come out of the mine on the 19th instant, not being able to work in consequence of defective ventilation.

I have, &c.,

HARRIE WOOD,
 Under Secretary.

No. 9.

Mr. James Fletcher, jun., Manager, Co-operative Colliery, to The Honorable the Secretary for Mines.

Sir,

Wallsend, 1 February, 1886.

Your letter of 30th ultimo, informing me that Mr. Curley, Miners' General Secretary, had written to you on the 25th ultimo, that the miners employed at the Co-operative Colliery, Wallsend, had to come out of the mine on the 19th instant, not being able to work in consequence of defective ventilation, is duly to hand, and contents noted.

I

I do not say that Mr. Curley wrote intentionally to mislead you, but I venture to affirm that the wording of his letter could have no other effect than to convey the idea that the whole of the miners employed at this colliery had to leave the pit in consequence of defective ventilation. I am so much accustomed to hear of late of misleading statements being made that they would have to be extravagant indeed to surprise me. Mr. Curley, in his official capacity, could not of his own knowledge know anything but what was communicated by some or other of the miners here employed, and it is but another proof that men holding important positions should act with the greatest of caution on *ex parte* statements before making such serious charges against this or any other colliery.

It is true that some fourteen or fifteen men left their work in consequence of the air being slack in that particular part of the pit where they were working. The cause of the deficiency of air was discovered by the underground manager by 7 o'clock a.m., the time the drawing of coal commences, and was remedied in less time than it takes to write this. Briefly stated, the cause was the leaving of an air-door open which allowed the air to go direct to the furnace without passing over the men in this particular district, or any part of the pit, as the air passed through the doorway in question and went direct to the ventilation shaft. I may mention that this door was placed there as a convenience for the men, so that they might travel to and from their work in a shorter distance than by keeping the main road. It also served for the colliery officials to pass through when examining the airways.

Every practical coal-miner knows that air-doors are erected to check currents, and that the leaving of them open disarranges the whole of the ventilation in their locality; but notwithstanding this fact being universally understood, the miners in passing through this door, instead of closing it behind them, left it open, which I believe was done wilfully and designedly, with a view of creating a misunderstanding between us and the men.

When the defective state of the ventilation was detected by the underground manager and other colliery officials, they immediately examined the airways and ventilating furnace, and finding everything right with both they were at a loss to account for the slackness of air, never for one moment dreaming that the door in the travelling road for the men's convenience had been left open, and it was only by following up the return column of air that the cause was detected. This was at once explained to the men, who were about to go home, and they were assured that the air would shortly be all right, and within half an hour of their leaving and the door being closed the air was as good as it was before and is since.

It was no secret amongst the men that the door being left open caused the defective ventilation, and I have no hesitation in saying that Mr. Curley's informant knew it as well as we did.

At every air-door on the main roads of our mine a boy is kept specially to open and shut it each time a person or horse passes through, but the door in question only being there for the convenience of the men, and not on a main road, no boy was kept to attend it. Whoever left it open committed a gross abuse of a privilege established for their convenience; and to prevent a like occurrence it has since been nailed up.

We have several miles of airway in our mine, and no matter how careful we are, falls from the roof and similar accidents may occur which temporarily interfere with the ventilation, and to provide for this the airways are examined every day, either by the regular officials, or persons told off for that particular duty. If, however, the miners themselves, who are equally interested with the management in keeping up a proper supply of air, will either negligently or designedly leave air-doors open it is a difficulty of far greater magnitude than keeping the airways in proper order, notwithstanding their great length.

We have 340 to 350 miners employed in this colliery, and as only fourteen or fifteen of that number left their work on the day referred to by Mr. Curley, it is, I think, substantial proof that the deficient ventilation was confined to the district I refer to, and not the whole of the mine, as must be inferred by Mr. Curley's letter.

Where the Coal-fields Regulation Act is not carried out faithfully I do not, for one, complain at the miners seeking the Minister's assistance to insist on its being done, but I do complain of statements being made to the Minister calculated to mislead, when the miners themselves knew exactly the cause; and, further, that the cause was not brought about by any act or neglect of the management, but by the negligence or design of members of their own body.

I trust the explanation here given will put the matter brought under your notice by Mr. Curley in its proper light; and to still further prove the statements here made, I shall feel extremely obliged if you will instruct Messrs. Mackenzie and Dixon to visit the colliery and ascertain for themselves by actual experiment whether leaving open the air-door referred to will not bring about the result of which Mr. Curley complains.

I am, &c.,

JAMES FLETCHER, JUNIOR,

Manager.

No. 10.

The Examiner of Coal-fields to The Under Secretary for Mines.

Examiner of Coal-fields' Report on a complaint made to the Honorable the Secretary for Mines by the Miners' General Secretary, respecting alleged defective ventilation at the Co-operative Colliery, on 19th January, 1886.

Sir,

Coal-fields Office, Newcastle, 3 February, 1886.

In compliance with the instructions of the Honorable the Secretary for Mines, conveyed to me in your letter of the 30th ultimo, with respect to a letter he has received from Mr. Curley, Secretary of the Miners' Association, to the effect that the miners at the Co-operative Colliery had to come out of the mine on the 19th ultimo, not being able to work in consequence of defective ventilation, and asking me to report on the matter without delay,—I have the honor to state that I went to the colliery, accompanied by Mr. Inspector Dixon, yesterday, and report as follows:—

1. On arriving at the colliery I went in the mine with Mr. Inspector Dixon, Robert Davidson (overman), and John Houston (deputy), where I was met by the "Miners' Inspectors," who happened to be there for the purpose of making their monthly inspection, and who came and asked if I had any objection to their accompanying me, or would I let them check their anemometer with the Government one.

I replied I was only there that day inquiring into and ascertaining the cause of a deficiency of ventilation on the 19th ultimo, which Mr. Curley had complained of, at the request of the Executive of the Miners' Association. But after this was done, having before entering the mine seen the latest report made by them in the "book" kept at the colliery office for that purpose, I and Mr. Dixon, accompanied by them, would measure the quantity of air at the same places where they had measured it and reported a deficiency of ventilation.

Inquiry and Report.

1. John Houston (deputy), of the Co-operative Colliery, said as follows:—On the morning in question I was in No. 1 split at about 7 a.m., when some of the men then coming into that split said, "Houston, what is the matter in the cross-cuts; there are some of the men going away home on account of the air?" I replied that is the first I have heard of anything the matter with the air this morning, but will make my way there immediately. On going, with a view to making my way to the furnace, thinking there might be a fall in the return, I entered into it from No. 1 split, and when coming up the return and arriving at the door that enters into the cross-cut return, I immediately saw what was the matter, as the door was standing about three-parts open with a stone against it, keeping it open. That the door must have been opened by some of the men coming into work in No. 2 or 3 splits. Could not say whether the door had been propped open purposely, or a stone had fallen against it as some one had passed through it.

2. Robert Davidson (overman), of the Co-operative Colliery, stated:—When going to the mine from my breakfast I met Daniel Rees, John Rees, Samuel Rees, Daniel Rees (junior), William Gilpin, Alfred Upton, Thomas Lewis, Henry Forrester, Ezekiel Williams, and Alfred Patterson at the tunnel mouth, and asked them what was the matter. They replied "the air was bad." I told them I would go down immediately and see what was the matter, and that I could not understand how the air could be bad unless a door had been left open. They said they did not know. I then went to the bord where they had been at work and found the air as good as usual and nothing possible to complain of. Then I sent for the deputy (John Houston), who came and told me it was all right, and that he had found out where the fault was, "by a door being propped open by a stone," and that he believed it had been propped open on purpose. I then went to other miners who did not leave off working, and were still at work, in the same split, who said "their air was all right."

The "back shift" (second daily set of miners) never came to work that day, although the air was as good as ever in half an hour after the "front shift" had left the mine.

3. I got Houston to show me and Mr. Dixon how he found the door, and after taking the stone away which he put against the door to illustrate it I passed through it to see if it was possible that a stone could fall down and rest against the door in such a manner, whilst the door, which was a self-acting one, closed of its own accord. My opinion, and Mr. Dixon's, is that from the way the stone was placed, as shown us by Houston, it was most probably put there intentionally.

4. I annex a tracing (see Plan No. 11) showing the method adopted for the ventilation of the portion of the mine complained of, also the bords (lettered A) where the men left off work and those in which the men remained at work (lettered B) in the same split of air; and where the door (D) in red) was found open in the stenton between the intake and return air-ways. The arrows shown in blue denote how the intake air enters the split outside of the said door and circulates through the northern side of the split, crossing the heading almost opposite the door, near the top of which heading a temporary screen is fixed, from which it will be seen that when the door referred to (D) was opened the current (→) would sweep through the screen down the heading and through the open door into the main return airway, instead of circulating into the heading and bords where the men left off work, and that when the door is open the air would travel through it to the furnace, as it would be the shortest route.

5. In conclusion, I have only to state that the overman says the door was put where it is for the men's convenience in travelling in and out of this part of the mine, and that each person passing in and out was supposed to see it was closed, and that if it had been shut on the day in question the alleged defective ventilation would not have occurred. Also that the defect was rectified within half an hour of certain miners leaving the mine—they and others having been made acquainted with it immediately afterwards. Notwithstanding this, the complaint was made to the Minister after a lapse of five days, during which time the same miners had been at work in the places where they left off work. One of the miners who left off work with his three sons on the morning in question was Mr. Daniel Rees, of the Miners' Executive Committee, and District Chairman of the Hunter River Miners' Association.

I have, &c.,

JOHN MACKENZIE,
Examiner of Coal-fields.

From this report it appears there was no ground for the complaint of defective ventilation on the 19th January.—H.W., 8/2/86. Submitted. Approved.—R.N.V., 19/2/86. Mr Curley informed 25 February, 1886.

No. 11.

Report of a joint Inspection of Nos. 2 and 3 splits in the Co-operative Colliery made by the Examiner of Coal-fields, Inspector of Collieries, and Mr. Middleby and Mr. Lewis (Miners' Inspectors), on Tuesday, 2nd February, 1886.

Sir,

Coal-fields Office, Newcastle, 3 February, 1886.

The following are the results of measurements taken at the request of the Miners' Inspectors for the purpose of ascertaining what quantity of air was circulating in the Nos. 2 and 3 splits in which they had reported, in the book kept at the colliery office for that purpose, a deficiency of ventilation on the 6th and 7th of January last.

The measurements were taken at the same time, and the anemometers placed side by side.

No. 2 SPLIT.

At No. 80 bord the result was about 7,716 cubic feet of air per minute, the reading of both instruments in this instance being nearly the same.

At No. 71 bord the result was about 5,082 cubic feet of air per minute, and by the Miners' Inspectors' instrument about 3,880.

At

At No. 41 bord the result was 7,049 cubic feet by the Government instrument, and 6,829 by the Miners'; and at 38 bord 6,600 by the Government anemometer, and 5,500 cubic feet per minute by the Miners'.

The largest current of air measured in this No. 2 split was about 7,716 cubic feet per minute for about 56 miners, 2 wheelers, 2 drivers, 3 trappers, and 2 horses—total 65, giving about 118 cubic feet of air per minute for each man, boy, and horse.

The Miners' Inspectors at Co-operative Colliery, however, have lately adopted the plan of measuring the current of air in several places in each split, then adding the measurements together and striking an average for the result, and even by this method the result would be a little over 101 cubic feet of air per minute for each man, boy, and horse in the split.

No. 3 SPLIT.

The greatest current of air was got at the No. 65 bord end, being about 6,840 cubic feet per minute. The two anemometers registered about the same on this occasion, and in the far stenton in this split the current of air was about 5,800 cubic feet per minute, the instruments again giving nearly the same reading. At 52 bord, however, the current of air was about 6,435 cubic feet per minute by the Government anemometer, and about 6,184 by the Miners'.

The largest current of air in this split was about 6,840 cubic feet per minute for about 48 men, 5 boys, and 3 horses—total 56 men, &c., giving about 122 cubic feet of air per minute for each man, boy, and horse in this No. 3 split, and by the Co-operative Miners' Inspectors' method of average would give about 113 cubic feet of air per minute for each man, boy, and horse in the split.

It will thus be seen that the provisions of the Coal Mines Regulation Act are here complied with.

I have, &c.,

JOHN MACKENZIE,

Examiner of Coal-fields.

The result of the investigation appears to be satisfactory, and may be communicated to the Miners' Secretary.—H.W., 8/2/86. Submitted. Approved—R.N.V., 19/2/86.

No. 12.

The Under Secretary for Mines to The Miners' General Secretary, Hamilton.

Sir,

Department of Mines, Sydney, 25 February, 1886.

Referring to the complaint made by you respecting alleged defective ventilation at the Co-operative Colliery on the 19th ultimo, I am directed by the Secretary for Mines to inform you that, from the report of the Examiner of Coal-fields, there appears no ground for complaint as to the ventilation of the colliery on the day named.

I have, &c.,

HARRIE WOOD,

Under Secretary.

No. 13.

The Under Secretary for Mines to The Examiner of Coal-fields.

Sir,

Department of Mines, Sydney, 25 February, 1886.

Referring to the reports sent in by you—the one on a complaint by the Miners' General Secretary respecting alleged defective ventilation at the Co-operative Colliery, and the other as to the quantity of air circulating in Nos. 2 and 3 splits in the same colliery,—I have the honor to inform you that it has been intimated to Mr. Curley, the Miners' General Secretary, that both reports furnished by you as to the ventilation of the abovenamed colliery are considered satisfactory.

I have, &c.,

HARRIE WOOD,

Under Secretary.

Maryville Colliery.

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No.

No. 1.

Mr. John Wright to Mr. J. Dixon, Inspector of Collieries.

Sir,

Wickham, 9 November, 1885.

I am instructed by the Committee of our body to write to you calling your attention to the air in the Maryville Colliery, as there have been a great many complaints.

I have, &c.,

JOHN WRIGHT,

Secretary.

No. 2.

Mr. John Dixon, Inspector of Collieries, to Mr. H. Harper, Colliery Manager, Newcastle.

Sir,

Glebeland, 25 January, 1886.

I hereby have to notify you of the very defective state of the ventilation in the Maryville Colliery, as found by me on my inspection of said colliery to-day (Monday), inasmuch as the total current of air in the main return air-way near pit bottom was only about 1,885 cubic feet per minute, being over 3,000 cubic feet of air per minute short of the quantity required by sub-section 3, section 12, of the Coal Mines Regulation Act, 1876, for the number of men, &c., at work in the Maryville Colliery at the time of my inspection.

2. On my inspection this morning I noticed that the top coal had been cut up and, to some extent, worked in three bords. Therefore, in pursuance of the provisions contained in the 25th section of the Coal Mines Regulation Act, 1876, I hereby notify you that, in my opinion, owing to the soft nature of the strata above the seam at the Maryville Colliery, it is a dangerous practice to work the top coal at the present time, more especially as there is only one shaft, and consequently only one way of escape for the persons employed below in the event of a sudden inrush of water, sand, and gravel, which, in my opinion, may be liable to take place at any time after the removal of the top coal.

3. I have, therefore, to urge that the above matter may have your serious attention at once, with a view to the well-being and safety of all persons employed in the Maryville Colliery.

I have, &c.,

JOHN DIXON,

Inspector of Collieries.

No. 3.

Mr. John Dixon, Inspector of Collieries, to The Examiner of Coal-fields.

Maryville Colliery Inspection.

Sir,

Glebeland, 1 February, 1886.

I have the honor to report inspection of the above colliery on Monday (25th January ultimo), as follows:—

At the time of my inspection there were about 37 miners, 1 small-coal filler, 1 deputy, 5 wheelers, 2 water-balers, 1 onsetter, and 2 horses; total, about 49 men, &c., employed below.

The total current of air for the above number of men, &c., was only about 1,885 cubic feet per minute. This result was got in the main return air-way near the shaft bottom immediately after descending the shaft on the day of inspection. After going through the workings (where I could not get a result with the anemometer), I came back to the bottom of the shaft again, and got exactly the same result as before. Although none of the workings are a very great distance from the pit bottom, yet, owing to the very limited quantity of air descending the shaft, the ventilation throughout the working headings was sadly defective, as the total quantity of air was over 3,000 cubic feet per minute below the requirements of the Coal Mines Regulation Act for the number of men, &c., employed below.

At the time of my inspection there was a good fire in the furnace at the surface, but it seemed to have little or no power over the up-cast column of air behind the brattice in the shaft. I here beg to remark that on the 12th December last the manager (Mr. Harper) promised me that he would raise the up-cast portion of the shaft above the level of the landing-stage. This promise he (Mr. Harper) fulfilled by raising the furnace stack some 16 feet higher, but without any apparent beneficial results to the ventilation of the mine.

2. On my inspection of the Maryville Colliery on Monday last I also noticed that three bords had been cut up, and part of the top coal worked in each of the three. In the No. 2 heading there were two men cutting a bord up; they had reached the roof at about 5 feet, but had not got the bord cut all across when I saw it; this bord was about 6 yards wide. In No. 3 heading I saw two men working top coal in a bord about 7 yards wide; the tops in this bord were also about 5 feet in thickness, and had been worked for about 10 yards in length down the bord. In the adjoining bord, being No. 6 bord, No. 3 heading, I also saw two men at work in the tops; this bord was about 7½ yards wide, and the tops had been worked for a distance of about 11 yards. The roof in this bord was wet, as water was coming through in several places.

3. Seeing that as yet there is only one shaft in connection with the Maryville Colliery, and that the strata overlying the seam of coal is of an extremely soft nature throughout, I am of opinion that it is a highly dangerous practice to work the top portion of the seam in the Maryville Colliery until the dip-coal is worked, and a second shaft sunk to afford another means of escape for the persons employed below.

4. In conclusion, I beg to state that on Monday last, the day of inspection, I notified the manager (Mr. Harper), by registered notification, concerning the defective ventilation, and the top coal workings in the Maryville Colliery, a copy of which notification I herewith beg to forward.

I have, &c.,

JOHN DIXON,

Inspector of Collieries.

No.

No. 4.

The Examiner of Coal-fields to The Under Secretary for Mines.

Deficiency of Ventilation, &c., at the Maryville Colliery.

Sir,

Coal-fields Office, Newcastle, 5 February, 1886.

I have the honor to forward, for the information of the Honorable the Secretary for Mines, a report I have received from Mr. Inspector Dixon, dated the 1st instant, with respect to a deficiency of ventilation at the Maryville Colliery, the ventilation of which had been previously complained of by the Inspector to the manager on 12th December last, when the latter promised to raise the up-cast portion of the shaft above the level of the landing-stage. This promise was fulfilled by raising the furnace stack 16 feet higher, but without any beneficial results to the ventilation of the mine, there being a deficiency on 25th ultimo of over 3,000 cubic feet of air per minute for the number of men, &c., employed underground.

2. Mr. Dixon also reports that three 6-yard bords had been cut up and part of the top coal worked in each of them. In No. 3 heading two men working top coal in a bord about 7 yards wide, and in another 7½-yard bord, the top coal had been worked for a length of about 11 yards where the roof was wet, and water was coming through it in several places; and that, seeing there is only one shaft in connection with the colliery, and that the strata overlying the coal-seam is of an extremely soft nature throughout, he is of opinion that it is a highly dangerous practice to work the top portion of the seam in the Maryville Colliery until the dip coal is worked, and a second shaft sunk to afford another means of escape for the persons employed below, in which I fully agree, and forward for the Minister's information a letter I wrote to Mr. Dixon on the subject, on the 21st October last, and a copy of a letter to Mr. Dixon, dated 28th October, from the manager, saying he was putting down a borehole, in view of ascertaining the most suitable position for putting down a shaft. The bore was completed a short time afterwards, and nothing further has been done with a commencement of the second shaft, which Mr. Dixon and myself have told him we considered absolutely necessary, taking into consideration the extremely soft nature of the strata overlying the coal-seam, and the probability of a much larger influx of water flowing into the mine than has occurred on three previous occasions. I also enclose copy of notice Mr. Dixon has served on the manager.

3. I shall be obliged by your informing me, as early as practicable, what further steps the Minister desires me to take in the matter.

I have, &c.,

JOHN MACKENZIE,
Examiner of Coal-fields.

Unless the defects be at once remedied the Examiner may take proceedings to enforce the observance of the provisions of the Act.—H.W., 11/2/86. Submitted. Approved.—R.N.V., 12/2/86. The Examiner of Coal-fields.—G.E.H., B.C., 13/2/86.

In regard to the matter of the second opening referred to in the within report, the Examiner should instruct the Inspector to serve notice, in terms of section 25 of the Coal Mines Act, upon the owners of the Maryville Colliery.—H.W., 4/3/86.

Submitted. The Inspector served notice upon the manager on 25th January last.—J.M., 8/3/86. The Under Secretary for Mines, B.C., 8/3/86.

From the fact that the owner has not complied with the notice it may be inferred that he objects, in which case the matter will have to be referred to arbitration; but the Minister might perhaps desire that the owner's attention be called to the notice before taking further proceedings.—H.W., 8/3/86.

Submitted. Approved.—J.F., 10/3/86.

[Enclosures to No. 4.]

The Examiner of Coal-fields to Mr. John Dixon, Inspector of Collieries.

Sir,

Coal-fields Office, Newcastle, 21 October, 1885.

Since my inspection and examination with you of the heading and bord which caved in a short time since, where two men were at work at the Maryville Colliery, the caving in having taken place immediately after the heading and bord, being driven by the two men, reached a face of sand and gravel, when a tremendous rush of water and sand ran therefrom into the workings, which wash-out, consisting of sand and gravel, is now barred back by a barrier reaching to the roof of the coal-seam.

2. In consequence of the disturbed nature of the country at this colliery, and others in the neighbourhood, and the liability at any time of similar washes of sand and gravel, I have thought seriously as to the necessity of the owners of the Maryville, Wickham, and Bullock Island, and Stockton Coal Companies being compelled to keep boreholes at least 10 feet ahead in all exploring headings driven north, east, south, or west of their working shaft.

3. Do you not think it is a dangerous practice, knowing the disturbed nature of the country in which the Maryville and Stockton Collieries are, for them to be worked as they now are by one shaft, and consequently only one means of escape for the men, boys, &c., working therein, and that a second shaft should be commenced at once; if so, you had better serve the colliery managers with registered notices to that effect under section 25 of the Coal Mines Regulation Act, 1876?

I have, &c.,

JOHN MACKENZIE,
Examiner of Coal-fields.

Mr. John Dixon, Inspector of Collieries, to Mr. H. Harper, Colliery Manager, Newcastle.

Sir,

Glebeland, 24 October, 1885.

Knowing the disturbed nature of the ground in connection with the Maryville Colliery, I have, in pursuance of the provisions contained in the 25th section of the Coal Mines Regulation Act, 1876, to notify you that I consider the practice of only having one shaft (and consequently only one means of escape) to be dangerous; and therefore have to urge that a second shaft in connection with the Maryville Colliery be commenced at once, and carried on without delay, so that a second opening from the surface to the present workings may be completed as soon as possible.

2. Seeing that in the Maryville Colliery there exists a danger of tapping, at any time, loose ground liable to contain a heavy feeder of water, I am directed to draw your attention to the necessity of keeping a borehole at least 10 feet ahead of the working face in every exploring place or heading driven north, south, east, or west.

3. I have, therefore, to urge that you would give your serious attention to the above matters at once, with a view of having them carried out without delay.

I have, &c.,

JOHN DIXON,
Inspector of Collieries.

Mr.

Mr. Henry Harper to Mr. John Dixon, Inspector of Collieries.

Sir, Maryville Colliery, 28 October, 1885.

Your favour of the 24th instant came duly to hand, and your request I have carefully thought over. With regard to the second shaft, I have already put down one bore to the westward of our pit, with a view of ascertaining the most suitable position for putting down a shaft. I am also putting in a bore ahead of some of my headings, wherever I think there is the slightest necessity of doing so. As far as we can ascertain there are other collieries adjacent who are worse off in this respect than we are; but we will endeavour to comply with the various suggestions as far as practicable.

I have, &c.,
HENRY HARPER.

Mr. John Dixon, Inspector of Collieries, to The Examiner of Coal-fields.

Sir, Glebeland, 29 October, 1885.

I have the honor to acknowledge receipt of your communication of 21st instant, concerning the disturbed state of the country in connection with the Maryville, Stockton, and Bullock Island Collieries, and the necessity for the second shaft at Maryville and Stockton, &c.

In reply, I beg to state that I most fully endorse your views respecting the above-named collieries, and, according to your instructions, have notified the managers, under the 25th section of the Coal Mines Regulation Act, 1876, to commence at once the second shaft at Maryville and Stockton, and to keep a borehole at least 10 feet ahead of the face in every bord or heading driven north, east, south, or west, in the Maryville, Stockton, and Bullock Island Collieries, copies of which notifications I herewith beg to forward.

I have, &c.,
JOHN DIXON,
Inspector of Collieries.

No. 5.

Mr. John Dixon, Inspector of Collieries, to The Examiner of Coal-fields.

Special inspection of the Maryville Colliery to see if the ventilation had been improved since my inspection of that colliery on 25th January, last month.

Sir, Glebeland, 26 February, 1885.

I have the honor to report inspection of the above-named colliery on Wednesday last, 24th instant, as follows:—

Since my inspection on 25th ultimo, the manager (Mr. Harper) had caused a "fire-lamp" to be erected in the return air-way at the shaft bottom, in order to improve the ventilation of the mine; and although a slight increase in the main current of air had been effected by the fire-lamp, yet I regret to say that on the 24th instant the ventilation in the Maryville Colliery was not by any means up to the requirements of the Coal Mines Regulation Act, 1876, as the following results will show. At the time of my inspection there were about fifty men and boys and two horses at work in the mine. The first measurement of the air current was taken in the main return air-way, near the shaft bottom, at about 9:20 a.m., the total result being about 2,940 cubic feet of air per minute. After going through a portion of the workings, I again returned to the shaft bottom and measured the current of air at the same place as before. This was about 10:30 a.m., and the result was an improvement on the first measurement, being about 3,360 cubic feet of air per minute. The first and second measurements, as given above, were taken when the pump was working and exhausting into the up-cast behind the brattice in the shaft. The third measurement was taken about 11:30 a.m., when the pump was stopped, and the result was about 2,870 cubic feet of air per minute. For the fifty-two men, &c., employed in this colliery, on the day of inspection, the minimum quantity of air to comply with the Act ought to have been 5,200 cubic feet per minute. The first measurement, however, as taken by me shows a deficiency of about 2,260 cubic feet per minute; the second a deficiency of 1,840 cubic feet per minute; and the third a deficiency of about 2,330 cubic feet per minute.

In my previous report on this colliery I mentioned that top coal was being taken out in various places. I here beg to state that the same work is still being carried on; and since my inspection of 25th last month a top coal bord has given way, and the fall has extended to the surface. This is the bord I mentioned as having a wet roof.

On coming out of the mine on Wednesday last I saw Mr. Harper, and told him about the state of the ventilation in the Maryville Colliery, and he informed me that he was having a bore put down to test the ground with a view of commencing the second shaft as soon as possible.

I have, &c.,
JOHN DIXON,
Inspector of Collieries.

No. 6.

Mr. John Dixon, Inspector of Collieries, to The Examiner of Coal-fields.

Sir, Glebeland, 27 February, 1886.

For your information I beg to forward a letter which I received from Mr. Harper, manager, Maryville Colliery, this (Saturday) morning, by which is inferred that the ventilation at said colliery has been made considerably better since my inspection on Wednesday last.

I shall be obliged for instructions on this matter, as to whether I am to make another inspection of the Maryville Colliery prior to taking action in Court.

I have, &c.,
JOHN DIXON,
Inspector of Collieries.

Submitted for further instructions.—J.M., 4/3/86. The Under Secretary for Mines, B.C., 4/3/86.

A further inspection should be made, and if the ventilation is not in accordance with the provisions of the Act, the Inspector should at once take the necessary proceedings. Authority to take proceedings, under the Coal Mines Regulation Act, may be issued to Mr. Inspector Dixon.—H.W., 4/3/86.

Submitted. Approved.—J.F., 4/3/86. The Examiner of Coal-fields.—H.W., 4/3/86. Mr. Dixon instructed.—J.M., 4/3/86. Under Secretary for Mines, B.C., 4/3/86. Proceedings taken on 6th April, 1886, and a verdict obtained.—J.D., 16/4/86. The Crown Solicitor may be asked to prepare a form of authority to enforce the provisions of the Coal Mines Regulation Act, and to recover any penalties under the said Act.—H.W., 4/3/86. Submitted. Approved.—J.F., 10/3/86.

No.

No. 7.

The Under Secretary for Mines to The Crown Solicitor.

Sir,

Department of Mines, Sydney, 6 March, 1886.

I have the honor, by direction of the Secretary for Mines, to request that you will be so good as to prepare a form of authority to enforce the provisions of the Coal Mines Regulation Act, and to recover any penalties under the said Act.

I have, &c.,

HARRIE WOOD,
Under Secretary.

No. 8.

Authority to prosecute for the recovery of penalties under the Coal Mines
Regulation Act, 1876.

To all to whom these Presents shall come,—

GREETING :

Whereas by the Coal Mines Regulation Act 1876 it is provided that all penalties imposed by the said Act may be recovered summarily before two or more Justices of the Peace at the suit of the Examiner Inspector or other officer authorized in that behalf by the Minister Now know ye that I the Honourable the Secretary for Mines for the Colony of New South Wales do by this writing under my hand in pursuance of the power and authority given to me in this behalf by the said Act authorize and empower of in the said Colony to sue for and recover all every and any penalties and penalty imposed by the said Act And for that purpose to make and exhibit before any two or more Justices of the Peace for the said Colony all and every such informations or information charging any person or persons with a breach or breaches of the provisions of the said Act in respect of which breach or breaches a penalty or penalties is or are imposed by the said Act as the said may think fit And to proceed to judgment upon such information or informations or the same to withdraw and discontinue And for the purposes of suing for such penalties to employ any counsel solicitor or attorney And to take all proceedings necessary to recover, and obtain payment of the said penalties And I declare that this authority shall continue in force until a revocation hereof in writing under the hand of the Minister for Mines for the said Colony for the time being shall be received by the said And that same shall not be deemed or taken to be revoked by the appointment of another person or other persons to prosecute for the recovery of penalties under the said Act.

In witness whereof I have hereunto set my hand at Sydney in the said Colony this
day of in the year of Our Lord one thousand eight hundred and
eighty-

No. 9.

Telegram from The Examiner of Coal-fields to Mr. John Dixon, Inspector of
Collieries.

Sydney Club, Sydney, 6 March, 1886.

WHEN you were down Maryville Colliery yesterday were they working the top coal, or have they discontinued working it since you served notice on manager on 25th January?

JOHN MACKENZIE,
Examiner of Coal-fields.

No. 10.

Telegram from Mr. John Dixon, Inspector of Collieries, to The Examiner of
Coal-fields.

Hamilton, 8 March, 1886.

WERE working top coal in Maryville Colliery on my inspection in February. Pit not at work on Friday last; have forwarded last two reports on this colliery to Coal-fields Office, Newcastle.

JOHN DIXON,
Inspector of Collieries.

No. 11.

The Under Secretary for Mines to The Manager of the Maryville Colliery.

Sir,

Department of Mines, Sydney, 13 March, 1886.

I have the honor, by direction of the Secretary for Mines, to invite your attention to the notice which was served on you in terms of section 25 of the Coal Mines Act, in respect to the ventilation of the Maryville Colliery.

I have, &c.,

HARRIE WOOD,
Under Secretary.

No. 12.

The Manager, Maryville Colliery Company (Limited), to The Secretary for Mines.

Sir,

Newcastle, 19 March, 1886.

Referring to yours of the 13th instant, I am doing all that possibly can be done to carry out the provisions of the Coal-fields Act in the face of the most trying circumstances, to which, if it becomes necessary, I can refer you in detail.

So far I have had no complaint from the men under my charge.

I

I am glad to notice through the Press that you contemplate ordering a first-class anemometer from England, as such an instrument will enable the Inspectors to do justice to the masters as well as the men.

I have, &c.,

HENRY HARPER.

Submitted.—H.W., 20/3/86. The report of the officers must be acted upon.—J.F., 20/3/86. The Examiner of Coal-fields, Newcastle.—G.E.H., *pro* U.S., B.C., 22/3/86.

No. 13.

Mr. John Dixon, Inspector of Collicries, to The Examiner of Coal-fields.

Sir,

Glebeland, 16 April, 1886.

I do myself the honor to herewith return the papers in connection with the Maryville and Bullock Island Colliery cases, and at the same time to report that said cases came on for hearing at the Newcastle Court, before Mr. Mair, P.M., on Tuesday, 6th instant, and occupied the Bench nearly the whole of the day.

Messrs. Wallace and Sparke appeared for the prosecution, and Messrs. Thompson and Windeyer for the defence.

Much of the time during the day was taken up by Mr. Thompson's objections to the way in which the information had been laid; also to my authority to prosecute. On these points the arguments on both sides appeared most forcible, and, in my opinion, Mr. Wallace is deserving of great praise for the able manner in which he conducted both cases. For of one thing I am pretty certain, namely, had not Mr. Wallace been well posted up in the many objections which he no doubt anticipated could be taken to certain clauses in the Coal Mines Regulation Act, 1876, both cases would have fallen through. In the Maryville case I gave evidence as to the state of ventilation in that colliery on 24th February and 5th March last, and was cross-examined by Mr. Thompson at some length with a view of testing my knowledge of ventilation and the use of the anemometer, &c. The manager (Mr. Harper) was called for the defence, but failed to make a case, the consequence being that he (Mr. Harper) was fined the sum of £5 with costs of Court, and £2 2s. professional costs.

In the Wickham and Bullock Island case the information was laid against the owners, some of whom were present to answer the charge of neglecting to observe the provisions of sub-section 1, section 12, of the Coal Mines Regulation Act, 1876, which sub-section provides for the completion of at least two distinct openings to the day or surface intercommunicating with each other, by means of either of which openings all persons employed in the colliery might at all times pass in or out, &c.

On the reading of the information, Mr. Thompson raised a primary objection that action had not been taken within the eighteen months prescribed by the Act, and that the incorporation of the Company had not been proved. His Worship said he would reserve his decision on these points till after the hearing of the evidence. I was then called upon to give evidence as to the time when bords were first turned away in the Wickham workings, &c., after which, the manager, Mr. Gardiner, was called for the defence. This defence was that there were the usual means of getting in and out of the colliery—an engine and wire ropes. In cross-examination, however, the manager admitted that the slides were being taken out of the pit, and that the steam was not kept up at the Wickham shaft, and that it would take three or four hours to get steam up, &c.

This evidence closed the case, and the Magistrate in summing up remarked that there were some difficult points to decide, but on the whole he felt justified in finding defendant guilty. He thought, however, that a moderate fine would meet the case, and returned a verdict against defendants for £10 Court costs, and £2 2s. professional costs.

I have, &c.,

JOHN DIXON,

Inspector of Collicries.

Forwarded for the information of the Honorable the Secretary for Mines—J.M., 6/5/86. The Under Secretary for Mines.—B.C., 6/5/86. Submitted.—H.W., 10/5/86. Seen.—J.F., 14/5/86.

Wickham and Bullock Island Colliery.

SCHEDULE.

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No. 1.

The Examiner of Coal-fields to the Under Secretary for Mines.

Sir,

Mining Department, Sydney, 9 March, 1886.

I have the honor to forward a report received from Mr. Inspector Dixon with respect to sub-section 1, section 12, of the Coal Mines Regulation Act, 1876, not being complied with at the Wickham and Bullock Island Colliery; also copy of a notice served on the manager, and shall be obliged by your informing me what further action the Minister desires me to take.

I have, &c.

JOHN MACKENZIE,

Examiner of Coal-fields.

Has

Has the working of bords, stalls, or longwall workings been commenced more than one year and six months since?—H.W., 9/3/86. Yes.—J.M., 9/3/86. Unless within one week steps are taken to remedy the defect, proceedings may be taken to enforce the fine—H.W., 9/3/86. Submitted. Approved.—J.F., 9/3/86. The Examiner of Coal-fields.—H.W., B.C., 9/3/86. Mr. Inspector Dixon to take the necessary proceedings if matter complained of is not remedied within one week.—J.M., 10/3/86. Proceedings taken 6th April, 1886, and verdict obtained.—J.D., 16/4/86.

[Enclosure to No. 1.]

Mr. John Dixon, Inspector of Collieries, to the Examiner of Coal-fields.
Wickham and Bullock Island Colliery Inspection.

Sir,

Glebeland, 6 March, 1886.

I have the honor to report inspection of the abovenamed colliery yesterday, 5th instant, as follows:—

The number of men, &c., employed below on the day shift is about eighty-two, being about sixty miners, eight wheelers, four horses, ten shiftmen, and water balers. The total quantity of intake air from the Wickham shaft at the time of inspection was about an average current of 8,500 cubic feet per minute. The majority of the working places were well ventilated, but in Dunn's heading, where there were six men at work, the air was very slack. I noticed, however, that cuts-through were being driven from bord to bord, and, when holed, the matter of complaint would be remedied.

A good road has now been made between the two shafts, and an incline plane is being formed, in order to run the coal down from the workings on the Wickham side of the colliery. I went to the bottom of the Wickham shaft and looked up, and from the appearance of the shaft I arrived at the conclusion that a considerable amount of work would have to be done in it before it could be rendered safe for men to pass in or out, according to the requirements of the Coal Mines Regulation Act, 1876.

Seeing that sub-section 1 section 12 of said Act was not complied with at the Wickham and Bullock Island Colliery, I notified the manager (Mr. Gardiner) to that effect yesterday, a copy of which notification I beg herewith to forward, and shall be obliged for further instructions on this matter.

Throughout the workings there seemed to be a good supply of timber on hand ready for use.

I have, &c.,

JOHN DIXON,
Inspector of Collieries.

[Enclosure to No. 1.]

Mr. John Dixon, Inspector of Collieries, to Mr. A. Gardiner, Colliery Manager, Wickham.

Sir,

Glebeland, 5 March, 1886.

During my inspection of the Wickham and Bullock Island Colliery this day (Friday) I noticed that although there were two separate and distinct openings to the day or surface from such mine, intercommunicating with each other, yet there was only one opening available for the persons employed in the colliery to pass in or out. I therefore hereby notify you that sub-section 1 section 12 of the Coal Mines Regulation Act, 1876, is not complied with at the Wickham and Bullock Island Colliery, inasmuch as said sub-section provides for two separate and distinct openings to the day or surface, "by means of either of which openings all persons employed in the colliery may at all times whatsoever pass in or out."

2. I have therefore to urge that you would attend to the above matter at once, with a view to having it remedied as soon as possible.

I have, &c.,

JOHN DIXON,
Inspector of Collieries.

Burwood Colliery.

SCHEDULE.

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2. Mr. Samuel Birrell, Manager, Burwood Colliery, to the Examiner of Coal-fields, that he had reduced the number of men in mine, with minutes. 19 January, 1886	117
3. The Under Secretary for Mines to the same, in reply to No. 1. 25 February, 1886	118

No. 1.

The Examiner of Coal-fields to the Under Secretary for Mines.

Sir,

Coal-fields Office, Newcastle, 14 January, 1886.

I have the honor to forward reports I have received from Mr. Inspector Dixon respecting a deficiency of ventilation at the Burwood Colliery, and copy of a notice I have served upon Mr. Samuel Birrell, and shall be obliged by your informing me what further action the Minister desires me to take in the matter.

2. Mr. Dixon informs me to-day that Mr. Birrell has made a commencement with building up the top of the furnace shaft.

I have, &c.,

JOHN MACKENZIE,
Examiner of Coal-fields.

Proceedings should be taken to enforce the provisions of the Act, unless the defects be remedied before such proceedings can be taken.—H.W., 21/1/86. Submitted. Approved.—R.N.V., 25/1/86. The Examiner of Coal-fields.—H.W., U.S., B.C., 30 January, 1886. Mr. Inspector Dixon for report as to whether the defects are remedied.—J.M., 1/2/86.

I inspected the Burwood new tunnel to-day, Monday. The stalk on the furnace shaft has not yet been made higher, the bricks and mortar are on the ground, but the manager, Mr. Birrell, informed me that he could not get a bricklayer, although offering a great price for the work. However, the current of air to-day was about 5,580 cubic feet per minute for forty-two men, six boys, and three horses; total, fifty-one men, &c. The current of air in the new pit was about 7,200 cubic feet per minute for a total of sixty-two men, &c.—J.D., 1/2/86.

The Act is now complied with.—J.M., 2/2/86. The Under Secretary for Mines, B.C., 2/2/86. Under the circumstances now reported no proceedings need be taken.—H.W., 17/2/86. Submitted. Approved.—R.N.V., 18/2/86. Inform Examiner.—H.W., U.S., 18/2/86.

[Enclosure

[Enclosure to No. 1.]

Mr. John Dixon, Inspector of Collieries, to The Examiner of Coal-fields.
Burwood New Pit Inspection.

Sir,

Glebeland, 10 December, 1885.

I have the honor to report inspection of the abovenamed pit workings to day (Thursday) as follows :—
On the day shift in the New Pit workings there are about forty men, six wheelers, and two horses employed. About twenty of the miners are employed in ordinary 8-yard bords, and the others engaged in narrow work. When I inspected this place on the 28th of October last, there were only about fourteen men employed below, and the ventilation was good; but on my inspection to day, I regret to say that I found the ventilation very defective throughout the workings, as the total current of air was only about 2,750 cubic feet per minute for a total of about forty-eight men, &c., being a deficiency of over 2,000 cubic feet of air per minute.

The shaft is bratticed from the surface to the bottom, and from the upcast side of the shaft at the surface there is a wooden box 16 inches by 10 inches, by which a portion of the return air is conducted to the boiler stalk.

In addition to the above there is a small exhaust fan employed at the surface, and connected to the upcast by a box 10 inches square.

The manager (Mr. Birrell) was with me throughout the whole of the workings. I drew his attention to the defective ventilation, and he (Mr. Birrell) stated that he intended putting the exhaust steam from the pump into the upcast part of the shaft, and if that did not produce the required quantity of air he would connect the whole of the upcast with a spare boiler and stalk, and promised me that he would do his very best to remedy the matter as soon as possible.

I regret to state that slight signs of inflammable gas have been found in one of the headings in this pit, and two men were slightly burned by it early on Monday morning last. The manager (Mr. Birrell) reported the matter to the Coal-fields Office, and after investigating it to-day I found that neither of the men had been laid off work by the accident, and that it was not at all serious. The underground overman (Mr. Horsfield) was one of the men, and from him I gathered the following particulars concerning the explosion :—It appears that a shift of men commenced work at about 12 p.m. on Sunday night last, and about half-an-hour after one of the men, named Townsend, came to bank and reported to the overman that his heading had fallen in near the face and for some distance back. The overman went down the pit with the miner, and both went into the heading. The overman (Mr. Horsfield) gave orders for the removal of the fallen stuff, and was about to leave the heading when a slight explosion of gas took place, which burnt Horsfield a little on the forehead and Townsend very slightly on the hands.

I am informed that this is the first time that gas has been found in this pit workings; and I tried the same place to-day with a safety lamp, and could not detect the slightest trace of gas anywhere.

I cautioned the manager (Mr. Birrell) to strictly adhere to the 14th special rule, which provides for the deputy making an examination of the working-places before the miners are allowed to start work. This he (Mr. Birrell) promised to have carried out in future, and gave orders in my presence to that effect. In my opinion a more vigorous ventilation is required to ensure safety.

I have, &c.,
JOHN DIXON,
Inspector of Collieries.

Make another inspection early next month, and report whether the matters complained of have been remedied.
J.M., 12/11/85.

Mr. John Dixon, Inspector of Collieries, to The Examiner of Coal-fields.
Burwood Colliery Inspection.

Sir,

Glebeland, 9 January, 1886.

I have the honor to report inspection of the above colliery on Thursday last, 7th instant, as follows :—
In the New Tunnel the total current of air was about 5,600 cubic feet per minute for about sixty-six men, six boys, and three ponies; total, 75. The above result shows a deficiency of about 1,900 cubic feet of air per minute on the minimum quantity required by the Coal-fields Regulation Act, 1876. I drew the attention of the manager (Mr. Birrell) to this matter, and in reply he stated that he had been compelled to stop the "old tunnel" for a short time, and, not wishing to throw any of the men out of work, had to put six pairs, or twelve of the "old tunnel" miners into the new tunnel. He (Mr. Birrell) further stated that he was prepared to do anything to benefit the ventilation, and as I advised him to have the top of the furnace shaft built about 20 feet higher than at present he promised to have it done as soon as possible, which will be about three weeks or so.

New Pit.

In relation to this place, I am pleased to be able to state that since my inspection of 10th December (last month) I found a marked improvement in the ventilation. The total number of men, &c., employed in the New Pit is about 163. There are three shifts, and the greatest number employed on one shift is about sixty-four men, &c. This was about the number at work on the day of inspection, and the total current of air circulating in the mine was about 6,510 cubic feet per minute.

In both tunnel and pit I found the working places well timbered, and a good supply of timber on hand ready for use.

I have, &c.,
JOHN DIXON,
Inspector of Collieries.

The current of air in this new pit (lately sunk) has been increased from 2,750 cubic feet per minute, on 10th December, to 6,510 cubic feet on 9th January, 1886; vide Mr. Inspector Dixon's reports of 10th December, 1895, and 9th January, 1886.—J.M., 16/1/86.

The Under Secretary for Mines, B.C., 16/1/86.

The Examiner of Coal-fields to Mr. Samuel Birrell, Manager Burwood Colliery.

Sir,

Coal-fields Office, Newcastle, 14 January, 1886.

In view of a recent report received from Mr. Inspector Dixon on the ventilation of the Burwood Coal Company's "New Tunnel" workings, and in pursuance of the provisions contained in the 31st section of the Coal Mines Regulation Act, 1876, I hereby give you notice that you have failed to comply with sub-sections 2 and 3, section 12, of the said Act.

I have, &c.,
JOHN MACKENZIE,
Examiner of Coal-fields.

No. 2.

Mr. Samuel Birrell, Manager, Burwood Colliery, to The Examiner of Coal-fields.

Sir,

Burwood Colliery, 19 January, 1886.

I have reduced the number of men so as to comply with the Coal Mines Act of Parliament.

I have, &c.,
SAMUEL BIRRELL,
Colliery Manager.

Mr. Dixon for report as to whether the provisions of the Act are now complied with.—J.M., 20/1/86. The provisions of the Act are now complied with.—J.D., 1/2/86.

No. 3.

The Under Secretary for Mines to The Examiner of Coal-fields.

Sir,

Department of Mines, Sydney, 25 February, 1886.

Referring to your communication of the 2nd instant, to the effect that the provisions of the Act were being complied with in respect of ventilation at the Burwood Colliery, I am therefore directed by the Secretary for Mines to inform you that, under the circumstances now reported, no proceedings need be taken.

I have, &c.,

HARRIE WOOD,
Under Secretary.

Newcastle Coal-mining Company's Colliery.

SCHEDULE.

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No. 1.

Check Inspectors' Report.

Newcastle Coal-mining Company's Colliery, 11 January, 1886.

WE, the undersigned, having examined the workings and part of the travelling roads, &c., of the above-named colliery, report as follows:—

No. 8 Intake.

Amount of air passing in is 6,192 cubic feet per minute; thermometer 68°.

No. 8 Heading.

14 men, 2 boys, 1 horse. Air passing 7 bords is 4,896 cubic feet per minute, or 287 cubic feet per minute for each man, boy, and horse; thermometer 75°.

No. 7 Heading.

24 men, 2 boys, 2 horses. Air passing 12 bords is 4,400 cubic feet per minute, or 157 cubic feet for each man, boy, and horse; thermometer 74°.

Nos. 6 and 5 Headings.

57 men, 8 boys, 5 horses. Amount of air passing through these headings is 7,200 cubic feet per minute, or 102 cubic feet per minute for each man, boy, and horse; thermometer 75°.

No. 1 Heading.

46 men, 6 boys, 3 horses. Air passing 23 bords is 4,320 cubic feet per minute, or 78 cubic feet per minute for each man, boy, and horse; thermometer 75°.

No. 1 Return at Cut-through.

Amount of air passing through is 5,145 cubic feet per minute; thermometer 75°.

No. 2 Heading.

28 men, 3 boys, 3 horses. Air passing 14 bords is 3,241 cubic feet per minute, or 95 cubic feet per minute for each man, boy, and horse; thermometer 74°.

No. 1 Overcast.

Amount of air passing over from Nos. 5 and 6 headings is 9,635 cubic feet per minute; thermometer 73°.

No. 10 Fault.

Amount of air passing is 15,680 cubic feet per minute; thermometer 70°.

No. 10 Front Heading.

18 men, 1 boy, 1 horse. Air passing 9 bords is 3,045 cubic feet per minute, or 152 cubic feet per minute for each man, boy and horse; thermometer 75°.

No. 10 Middle Heading.

26 men, 1 boy, 1 horse. Air passing 13 bords is 2,592 cubic feet per minute, or 92 cubic feet per minute for each man, boy and horse; thermometer 76°.

No. 10 Back and No. 11 Headings.

28 men, 2 boys, 2 horses. Air passing 14 bords is 5,768 cubic feet per minute, or 180 cubic feet per minute for each man, boy, and horse; thermometer 76°.

No. 12 Heading.

20 men, 2 boys, 2 horses. Air passing 10 bords is 5,400 cubic feet per minute, or 225 cubic feet per minute for each man, boy, and horse; thermometer 73°.

At Furnace Shaft.

Total amount of air passing up the shaft is 63,080 cubic feet per minute; thermometer 77°.

Remarks.

Remarks.

We found the air very slack in the first three or four bords in No. 8 front heading; but the Deputy was busy putting up a canvas door on the mouth of the back heading which will drive a greater current of air to the men there. Complaints were being made to us in several flats with regard to the miners being unable to get timber brought in to them when required. Also, complaints were made about the door being left open the greater part of the day by the wheelers and drivers, thereby causing the air to be slack with some of the men. We would especially draw the manager's attention to these matters, and also to many—but through being left open between the two narrow bords in No. 6 flat, also between Nos. 10 and 11 headings, as some of the canvas doors were torn to pieces; found a good supply of timber on each flat.

Burwood, 12 January, 1886.

EDWARD BUXTON,
WILLIAM R. HARRISON, } Check Inspectors.

Mount Kembla Colliery.

SCHEDULE.

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No. 1.

The Examiner of Coal-fields to The Under Secretary for Mines.

Sir,

Coal-fields Office, Newcastle, 19 January, 1886.

I have the honor to forward reports I have received from Mr. Inspector Rowan, showing a deficiency of ventilation in the Nos. 1, 2, and 4 divisions, and the Nos. 2 and 3 west headings at the Mount Kembla Colliery, near Wollongong.

2. It appears that Mr. Green, the colliery manager, is driving a heading to improve the ventilation, which he expected would be completed in ten days from the 8th instant; but the inspector says he is of opinion it will be of little or no benefit, and that upon his offering suggestions to the colliery manager he was told that he could only act through Dr. Robertson, the directing manager. Such should not be the case in a matter of this nature.

3. I have wired Mr. Rowan to make another inspection to-morrow (*vide* copy of telegram herewith), and shall be obliged by your informing me what further action the Minister desires me to take in the matter, besides causing the notice to be served on the manager (copy enclosed).

I have, &c..

JOHN MACKENZIE,

Examiner of Coal-fields.

Proceedings must be taken unless the owners remedy the defects before such proceedings can be commenced.—H.W., 21/1/86. Submitted. Approved.—R.N.V., 22/1/86. The Examiner of Coal-fields.—H.W., U.S., B.C., 23/1/86. Mr. Inspector Rowan to take proceedings at once, as he wires me on the 29th that defects are not remedied.—J.M., 30/1/86. Proceedings were taken on 11th February by Mr. Inspector Rowan, and the manager fined £5 and professional costs. Report herewith.—J.M., 15/2/86. Under Secretary for Mines, B.C., 15/2/86.

[Enclosures to No. 1.]

Mr. James Rowan, Inspector of Collieries, to The Examiner of Coal-fields.

Sir,

Wollongong, 11 January, 1886.

For your information, I have the honor to inform you that on the 8th instant I inspected Mount Kembla Colliery. About 124 men and horses are employed underground, and supplied with about 9,000 cubic feet of air per minute, in four separate currents. No. 1 east division of workings, 36 men and horses are employed, and supplied with 2,500 cubic feet of air per minute. No. 2 east division, 18 men and horses are employed, and supplied with 1,500 cubic feet of air per minute. No. 4 division, 40 men and horses are employed, and supplied with 3,000 cubic feet of air per minute. In the No. 1 east division of workings the air was very weak as it approached the working faces; also, in No. 4 the ventilating current was very weak. In the centre and extreme end of the workings a slight current was going, but insufficient to put the air-meter in motion; the bords were also warm and uncomfortable. In the Nos. 2 and 3 west headings, 34 men are employed, and supplied with 2,000 cubic feet of air per minute, by means of two regulating doors from the main current, besides, a rush of air aids the ventilation, by the doors being opened to allow the full and empty sets to pass in and out.

I drew the manager's (Mr. Green's) attention to section 12, subsection 3, of the Coal Mines Regulation Act. Mr. Green pointed out a heading, which he was driving with three shifts of men, to improve the ventilation of the colliery, and which he expected would be finished in about 10 days from the date of my inspection. This air-course referred to will come on the mountain side about 300 yards east of the tunnel.

I may state I am of opinion that little or no benefit will result from this new air-course, except a furnace be built in connection with it—that is to say, a furnace built at the mountain side where the heading will be driven through, and to bring all the ventilating current down the main tunnel.

This new furnace, with the present one, would have the combined power of ventilating the east and west sides of the colliery; or otherwise to sink an air-shaft in the interior of the workings, as it is quite evident either of these or some other motive power is required to assist the present system of ventilation. On putting these suggestions before Mr. Green he stated he could only act through Dr. Robertson, the directing manager.

I have, &c.

JAMES ROWAN,

Inspector of Collieries.

Telegram

Telegram from The Examiner of Coal-fields to Mr. James Rowan, Inspector of Collieries.

Newcastle, 13 January, 1886.

THINKING that little or no benefit will result from Kembla new air-course, why don't you serve Mr. Green with registered notice for non-compliance with Act, sending me copy of same?

JOHN MACKENZIE,

Examiner of Coal-fields.

Mr. James Rowan, Inspector of Collieries, to Mr. W. B. Green, Manager, Mount Kembla Colliery.

Sir,

Wollongong, 13 January, 1886.

In reference to my inspection, made on the 8th instant, at Mount Kembla Colliery, I beg to inform you that I found the ventilation to be in a defective condition in No. 1 east and No. 4 division of workings. In the centre and extreme end of these workings I failed to get a register with the air-meter.

2. In accordance with the provisions contained in the 25th section of the Coal Mines Regulation Act, 1876, I hereby give you notice that you have failed to comply with section 12, subsection 3, of the Coal Mines Regulation Act. I have therefore to request you to remedy this matter forthwith.

I have, &c.,

JAMES ROWAN,

Inspector of Collieries.

Telegram from the Examiner of Coal-fields to Mr. James Rowan, Inspector of Collieries.

Newcastle, 19 January, 1886.

YOUR Kembla report says Mr. Green expected heading being driven to improve ventilation would be finished in about ten days, which would be 18th instant. Make another inspection to-morrow, and wire me if it is finished, and if subsection 2 and 3 of Act are now complied with.

JOHN MACKENZIE,

Examiner of Coal-fields.

No. 2.

The Examiner of Coal-fields to The Under Secretary for Mines.

Re Kembla Colliery deficient ventilation.

Sir,

Coal-fields Office, Newcastle, 21 January, 1886.

I herewith beg to forward a telegram and letter received from Mr. Inspector Rowan this day, from which it will be seen that there was no improvement in the ventilation yesterday.

I have, &c.,

JOHN MACKENZIE,

Examiner of Coal-fields.

[Enclosures.]

Mr. W. B. Green, Manager, Mount Kembla Colliery, to Mr. James Rowan, Inspector of Collieries.

Sir,

Mount Kembla Colliery, 16 January, 1886.

I herewith beg to inform you that we have now got the drive holed outside on the north side of our "main tunnel," and that we have also shifted our return airway to escape the water that you spoke to me about when you last visited the colliery. And I may state that all will be done that can be done on my part to improve the ventilation of the colliery in those places you complain of in your letter to me, date the 13th January.

I have, &c.,

W. B. GREEN.

Telegram from Mr. James Rowan, Inspector of Collieries, to The Examiner of Coal-fields.

Wollongong, 20 January, 1886.

Re Kembla Colliery.—The new air-course driven through to the mountain side: no improvement in ventilation. Section 12, subsection 3, of the Act not complied with in the No. 1 and two last, also No. 4 division of workings.

JAMES ROWAN.

No. 3.

Telegram from Mr. James Rowan, Inspector of Collieries, to the Examiner of Coal-fields.

Wollongong, 29 January, 1886.

MOUNT Kembla Colliery reinspected; defective ventilation not remedied. Shall legal proceedings be taken at once? Do you advise any solicitor in particular?

JAMES ROWAN,

Inspector of Collieries.

No. 4.

Telegram from the Examiner of Coal-fields to Mr. James Rowan, Inspector of Collieries.

Newcastle, 30 January, 1886.

INSTITUTE proceedings against Mr. Green for Kembla deficient ventilation at once, and employ whichever solicitor you think best. Great care is required in the way the information is drawn out.

JOHN MACKENZIE,

Examiner of Coal-fields.

No. 5.

Telegram from the Examiner of Coal-fields to The Under Secretary for Mines.

Newcastle, 30 January, 1886.

INSPECTOR Rowan wired yesterday that defective Kembla ventilation not yet remedied, shall he take proceedings at once, and what solicitor do I advise? Have replied that he must take proceedings at once, and the solicitor he thinks best.

J. MACKENZIE,

Examiner of Coal-fields.

The Examiners action may be approved.—G.E.H. (for the U.S.), 30/1/86. Submitted.
Approved.—R.N.V., 1/2/86.

No. 6.

Mr. James Rowan, Inspector of Collieries, to The Examiner of Coal-fields.

Sir,

Wollongong, 12 February, 1886.

In accordance with your instructions of the 30th ultimo, I have the honor to inform you that legal proceedings have been instituted against W. B. Green, manager of the Mount Kombla Colliery, for neglecting to have an adequate amount of ventilation sent into the mine.

The case was tried at Wollongong Petty Sessions on the 11th instant, before A. A. Turner P.M., and a Justice of the Peace; C. Russell, solicitor, for the defence, and F. Woodward for the prosecution. W. B. Green, manager of the Mount Kombla Colliery, was charged, under section 31 of the Coal Mines Act, for a breach of section 12, subsections 2 and 3. W. B. Green in answer to the charge pleaded "guilty in part."

In leading the prosecution I produced a sketch of the Mount Kombla Colliery showing the various districts where the ventilation was defective, giving dates and the result of each day's inspection, viz., the 8th, 20th, and 29th ultimo; also showed the air-meter by which the air currents were tested. Also three miners gave evidence as to the defective state of the ventilation, and that no improvement had taken place up to the 10th instant.

Defendant's counsel urged, much upon my assent, to the bad ventilation being caused by the condition of weather outside, also the blasting had increased through the workings of late on account of extra hard coal, &c., &c.

These arguments being reviewed before His Worship for the prosecution, showed the more need of a strict adherence to sections 2 and 3 of the Act.

The defendant's counsel, in summing up for his client, pleaded guilty to the whole charge, and strongly begged for a mitigation of the penalty on account that the manager had made strenuous efforts to improve the ventilation by the new air-course, although it had failed to produce the desired effect. Also produced a letter from Dr. Robertson, the directing manager for the Company, that a furnace would be built at the mountain side of the new air-course, and a fan also erected if necessary; and W. B. Green pledged himself to have the colliery as well ventilated in a few weeks as any other colliery in the district.

After a patient hearing of the case His Worship imposed a fine of £5 with all professional costs.

I have, &c.,

JAMES ROWAN,

Inspector of Collieries.

Forwarded for the information of the Hon. the Secretary for Mines.—J.M., 15/2/86. The Under Secretary for Mines.—B.C., 15/2/86. Submitted for the information of the Minister.—H.W. 17/2/86. Seen.—R.N.V., 18/2/86.

Australian Agricultural Company's Colliery.

SCHEDULE.

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No. 1.

Twenty-fourth Check Inspectors' Report of the A.A. Co.'s Collieries, at Newcastle, N.S.W.

COMMENCED this inspection of the above collieries on Monday, 1st December, 1884, starting at the Hamilton pit.

Measured the air passing into Cope's heading, and found by the anemometer 7,980 cubic feet per minute passing. The most of this air returns on to the main column by way of the Church heading.

Measured the air passing along the engine plane, with the result of 26,970 cubic feet per minute, which, added to the quantity passing into Cope's heading, makes a total of 34,950 cubic feet per minute passing into the workings of this pit.

We also measured the air passing into Bullerwell's heading at the bottom end of intake, and got for result 1,700 cubic feet per minute. There are 20 men, 2 wheelers, and 2 horses in this heading: 70 cubic feet per minute for each man, horse, and wheeler. Between the top end and bottom of this intake a deal of air escapes through the stoppings. Visited Gardiner's heading, and measured intake with result 5,544 cubic feet per minute. Cut-throughs want stopping in Collins's bord and also in No. 1 bord: 23 men, 1 boy, and 1 horse.

Stark's heading, 15 men, 1 boy, and 1 horse. The air coming into Gardiner's heading supplies it and also Stark's, thus giving to each man, horse, and boy, 132 cubic feet per minute.

Grant's heading, 4 men; Taylor's heading 12 men, 1 boy, and 1 horse; Donnison's heading, 22 men, 2 boys, and 2 horses; Sindle's heading, 6 men; Robinson's heading, on No. 1 bord the sheet is badly broken, and also the third bord wants a canvas hung: 12 men, 1 boy, 1 horse. In Tracey's heading there are 24 men, 2 boys, and 2 horses. The air in the five last-mentioned headings is very good. Men about the flats and pit bottom, 11.

Total quantity of air passing into this pit, 34,950. Total number of men, wheelers, and horses, 156, 11, and 11 respectively, thus giving to each 196 cubic feet per minute.

The

The several flats were well supplied with timber and travelling roads in good condition. Having completed our inspection of this pit we returned by way of the Old Galley horse-road to No. 2 pit bottom. Thermometer ranged from 79° to 71° Fahrenheit.

No. 2 Pit.

Measured the air at measuring place on engine plane, and found 37,170 cubic feet per minute passing. Air passing into No. 1 district from the above column, 24,500 cubic feet per minute. Visited the whole of the workings in this district. In the elbow there are 6 men, 1 boy, and 1 horse. In the second left-hand there are 40 men, 5 boys, and 5 horses. Sheet wanted on Wilson's bord; also on Riley's bord. Sheet wants repairing on Pascoe's bord. In the third left-hand there are 17 men, 2 boys, and 2 horses. There were complaints in this heading for want of timber. In fourth left-hand there are 28 men, 3 boys, and 3 horses. Sheet and stopping want attending to. In fifth left-hand, 12 men, 1 boy, and 1 horse. In sixth left-hand, 8 men; and in cross-cut and horse-road, 10 men, 1 boy, and 1 horse. In the sixth right-hand, 2 men. In fifth right-hand, 17 men, 1 boy, and 1 horse; and in fourth right-hand, 28 men, 2 boys, and 2 horses. The air in this heading is very dull. Sheet on Griffiths' bord wants attending to. We tried to measure the air in this heading in an area of 28 square feet, but got no result. In third right-hand there are 16 men, 2 boys, and 2 horses; in second right-hand, 9 men, 2 boys, and 2 horses; and in first right-hand, 2 men, 1 boy, and 1 horse.

The number of men, boys, and horses in this district is 195, 21, and 21 respectively.

Quantity of air, 104 cubic feet per minute.

We directed the overman's and other officials' attention to the several deficiencies, which they promised to rectify as speedily as possible.

No. 5 District.—Measured the air coming from Hamilton pit, by way of Griffith's narrow bord, with a result of 12,948 cubic feet per minute.

Quantity of air passing into No. 5 district, 18,972 cubic feet per minute.

In the first left-hand back horse-road there are 16 men, 3 boys, and 3 horses; second left-hand, 8 men, 1 boy, and 1 horse; first right-hand, 13 men, 2 boys, and 2 horses; back cross-cut, 6 men, 1 boy, and 1 horse; front cross-cut, 6 men. In the fourth right-hand, 14 men, 2 boys, and 2 horses; and in third right-hand, 21 men, 2 boys, and 2 horses. The air, at the time of our visit, was in a very bad state in the two last-mentioned headings, which we drew the attention of the deputy to. He promised to try and better it at once. In second right-hand there are 16 men, 2 boys, and 2 horses; in first right-hand, 20 men, 2 boys, and 2 horses. Canvas wants attending to. Men about the flats, 12.

Grand total in this district, 132 men, 15 boys, and 15 horses. Total quantity of air, 18,972, which gives to each 125 cubic feet per minute.

Visited No. 6 district. Measured the air passing, with result of 6,118 cubic feet per minute. There are 7 men, 1 boy, and 1 horse.

Visited fan shaft, the travelling road to which we found in very good condition.

Various flats throughout the pit we found well supplied with timber. Travelling roads in very good condition.

9th December, 1884.

GEO. JONES,
JAMES THOMPSON, } Check Inspectors.

No. 2.

Twenty-fifth Check Inspectors' Report of the A.A. Co.'s Collieries at Newcastle, New South Wales.

This inspection was commenced on 20th April, 1885.

Hamilton Pit.

Air passing into Cope's heading, 7,059 cubic feet per minute. Measured the air passing along engine plane with following result, viz., 34,914 cubic feet per minute, which, supplemented by the air passing into Cope's heading, makes a grand total of 42,000 cubic feet per minute passing into the workings of this pit.

Air passing into Bullerwell's heading, 11,000 cubic feet per minute; 22 men, 2 boys, and 2 horses in this heading. Canvas required on Christensen's bord, and also the canvas on Collins's bord wants repairing. We also visited Turnbull's heading, in which there are 14 men. In Gardiner's heading there are 30 men, 2 boys, and 2 horses. Canvas and stopping want attending to in Firth's bord. In M'Auliffe's and Stark's headings there are 6 men, 1 boy, and 1 horse collectively.

Visited the workings on the right-hand side of the horse-road, and found in Donnison's heading 16 men, 1 boy, and 1 horse; in Harding's heading, 14 men, 1 boy, and 1 horse; and in Murphy's heading, 6 men; in Robson's heading there are 23 men, 1 boy, and 1 horse; in Tracey's heading, 32 men, 2 boys, and 2 horses; and in Thomas's heading, 2 men.

The powder smoke in most of these headings hangs very bad, but at the time of our visit a number of men were employed making an overcast which when finished will divide these workings into two splits.

Total number of men, boys, and horses in this pit, 190, 12, and 12 respectively. Total quantity of air, 196 cubic feet each.

There were no complaints, for timber and travelling roads were in good condition.

No. 2 Pit.

Commenced an inspection of this pit on Tuesday, 21st April, 1885.

Measured the air passing below engine bank, and got for result 43,360 cubic feet per minute.

No. 1 District.—Air passing in, 31,920 cubic feet per minute. We tried to get a measurement at the intake to No. 3 flat, but the area being so large the instrument would not revolve. In this flat there are 44 men, 7 boys, and 7 horses. In the fourth left-hand heading there are 20 men, 2 boys, and 2 horses. At the top end of the heading the air was very slack. The canvas on Walker's and Dawes' bords wants repairing, as in their present state they allow a large quantity of air to escape that should go round the heading. In the split heading there are 12 men, 1 boy, and 1 horse; in the fifth left-hand there are 14 men,

men, 1 boy, and 1 horse. The air returning from the two latter headings mixes with the air coming into No. 3 flat, but the overman informed us that he intended having an overcast put in across the No. 3 road, so that the air returning from the fourth and fifth left-hands will pass into the main return without interfering with any other. In the sixth left-hand, 11 men, 1 boy, and 1 horse; in cross-cut, 6 men; and in seventh right-hand, 6 men, 1 boy, and 1 horse. The air was very dull at the time of our visit in this latter heading. In the sixth right-hand, 10 men, 1 boy, and 1 horse; failed to get a measurement in the return from this heading. In the fifth right-hand, 16 men, 1 boy, and 1 horse; could get no result in this heading. In the fourth right-hand, 34 men, 2 boys, and 2 horses; this heading is supplied with air from its entrance, and also by the fifth right-hand. We tried to measure the air passing down this heading, but got no result.

Taking into consideration measurements taken in similar areas to those obtainable in this heading, and the number of men, we are of the opinion that there is a great deficiency of air. A narrow bord has been driven down from the third right-hand, a distance of about 114 yards, for the purpose of easing the friction on the air, but the heading is not down far enough to meet it. We would respectfully urge on the management to push on this heading with all possible despatch, as the men complain bitterly of the bad air.

In the third right-hand there are 14 men, 2 boys, and 2 horses. In the second right-hand, 5 men; and first right-hand, 2 men. These three headings are aired from No. 5 district.

Total number of men, boys, and horses in this district is 193 men, 18 boys, and 18 horses. Total quantity of air, 31,920, equal to 140 cubic feet each.

No. 5 District.—Measured the air coming from Hamilton pit by way of Griffith's narrow bord, with the following result—13,552 cubic feet per minute. Measured the air passing into this district, and found 18,650 cubic feet per minute.

Back Horse-road.—First left-hand, 4 men; second left-hand, 8 men, 1 boy, and 1 horse; third left-hand, 4 men; third right-hand, 2 men, 1 boy, and 1 horse. In first right-hand, 16 men, 2 boys, and 2 horses; and in second right-hand, 2 men, 1 boy, and 1 horse. The air in most of these headings was very dull.

Back Cross-cut.—First left-hand, 6 men; and 10 men, 1 boy, and 1 horse in cross-cuts. In the fifth right-hand there are 14 men, 2 boys, and 2 horses; in fourth right-hand, 20 men, 2 boys, and 2 horses. This heading is one of the main intakes for the No. 5 district, but the current being so slow we failed to get a measurement. In the third right-hand there are 24 men, 2 boys, and 2 horses. This heading with the fourth are the only two splits in this district, but we failed to get a measurement in either of them. Failing to get a result at the intakes, we tried the return from the third right-hand in a 19-feet area, and got for a result 2,508 cubic feet per minute. In the second right-hand there are 16 men, 2 boys, and 2 horses; and in the first right-hand, 14 men, 1 boy, and 1 horse. These headings are aired from the third right-hand, consequently the air is very bad. There were no complaints for want of timber, and the travelling roads were in very good order. Number of men, boys, and horses aired from this district, 171, 19, and 19 respectively; quantity of air for each, 89 cubic feet per minute.

No. 6 District.—10 men, 1 boy, and 1 horse; quantity of air passing in, 6,000 cubic feet per minute; grand total quantity of air passing into workings of this pit, inclusive of air coming from Hamilton pit, 56,912 cubic feet per minute. Total men, boys, and horses, 448, 32, and 32 respectively; quantity of air for each, 127 cubic feet per minute.

We would most respectfully request men to refrain from committing nuisances in the airways, as it has a great tendency to render the air impure.

We, the undersigned, hereby certify that the foregoing is correct.

24th April, 1885.

GEO. JONES, }
JAS. THOMSON, } Check Inspectors.

No. 3.

Twenty-sixth Report of the ventilation of the A.A. Co's Collieries at Newcastle, New South Wales.

We commenced an inspection of Hamilton pit on 30th July, 1885.

Measured the air passing into Cope's heading with following result, 8,190 cubic feet per minute; most of this air returns again on to the main column by way of Church heading. Measured the air passing along engine plane, at measuring place below engine bank, and found 29,148 cubic feet per minute passing.

Bullerwell's Heading.—Quantity of air passing, 8,400 cubic feet per minute. There are 20 men, 1 boy, and 1 horse in this heading; in Turnbull's heading, 12 men; in Sneddon's heading, 4 men, 1 boy, 1 horse; visited Gardiner's heading; there are 30 men, 4 boys, and 4 horses; in Stark's and M'Auliffe's there are 4 men, 1 boy, and 1 horse, collectively; in Harding's heading there are 6 men; in Donnison's, 12 men, 2 boys, and 2 horses; in Johnston's, 12 men, 1 boy, and 1 horse; in cross-cut, 14 men, 1 boy, and 1 horse; and in Murphy's heading, 10 men, 1 boy, and 1 horse; canvas wants replacing on Dixon's bord; the air at the time of our visit in the latter heading and the cross-cut was very bad; visited Robson's heading, where there were 20 men, 1 boy, and 1 horse; also Tracey's heading, where there were 36 men, 2 boys, and 2 horses; these two headings are aired from one intake; we measured the air passing along Tracey's heading and found 11,000 cubic feet per minute.

There are 15 men about the roads and flats; total quantity of air passing in this pit, 37,330 cubic feet per minute, which, divided amongst 190 men, 19 boys, and 19 horses, gives a result of 164 cubic feet per minute.

Travelling roads in very good order and no complaints for timber.

We saw very little to complain of in the ventilation of this pit, with the exception of those places mentioned.

No. 2 Pit.

Quantity of air passing at measuring place, 47,250 cubic feet per minute; air passing into No. 1 district, 25,000 cubic feet per minute; visited the various headings in No. 3 district; we tried to measure the air passing into this district, but could get no result; there are 59 men, 7 boys, and 7 horses in this split; although getting no result in this split, still we are of the opinion that there is a great deficiency,

in fact less than one-half of the minimum quantity required; in the higher portions of this split the heat was intense, the thermometer ranging from 79° to 84° Fahrenheit; in the 4th left-hand there are 30 men, 3 boys, and 3 horses; canvas wants repairing on the 1st bord; in the 5th left-hand, 16 men, 2 boys, and 2 horses; canvas wants hanging on Oswald's bord; measured the air coming in this heading and found 2,312 cubic feet per minute, which, divided between these two headings, falls far short of the required quantity; in the 6th left-hand there are 16 men, 2 boys, and 2 horses; thermometer, 81° Fahrenheit at face of the heading; in cross-cut, including horse-road, 10 men, 1 boy, and 1 horse. This side being concluded, we visited the several headings on the right-hand side, where, in the 7th heading, there were 6 men; in the 6th, 16 men, 1 boy, and 1 horse; canvas was required on Reid's bord; in the 5th right-hand there were 22 men, 1 boy, 1 horse; and in the 4th right-hand, 32 men, 2 boys, and 2 horses; canvas wants attending to on John Duke's bord; we found little improvement in this heading to that we reported on our last visit, and our opinion is that it will never be any better so long as skips are allowed to block up the entrance. Our reason for affirming this is from experiments made on the main road opposite. We tested the instrument at 5 feet from the floor, and the air passing there was not sufficient to work the fan, but on testing it at 1 foot from the floor the air passing there caused it to revolve very rapidly.

In the 1st, 2nd, and 3rd right-hand headings there are 18 men, 2 boys, and 2 horses, collectively; these headings are ventilated from No. 5 district; there are 221 men, 20 wheelers, and 20 horses, inclusive of those about the roads, flats, &c.; total quantity of air, 25,000 cubic feet per minute, which, divided amongst the above, gives 95 cubic feet each; travelling roads in very good order, and no complaints for timber.

No. 5 District.—Measured the air at intake, with following result:—20,100 cubic feet per minute, but upon again measuring it in the drift we only got 14,500 cubic feet per minute, so that the difference must be allowed to leak between the two places into the returns. We visited the first split in this district, which comprises the first, second, and third right-hand headings. The air in the first right-hand was very bad, but in the other headings mentioned it was very fair, especially in the third. We failed to get a result in this split, but that was owing to the area being so large. There are 58 men, 5 boys, and 5 horses in this split. In the fourth right-hand the canvasses on the first and second bords want replacing with stoppings. There are 20 men, 2 boys, and 2 horses in this heading. The air at the far end was very bad. In the fifth right-hand there are 18 men, 3 boys, and 3 horses; and in the sixth right-hand, 10 men, 1 boy, and 1 horse.

Front cross-cut, 4 men; third left-hand, 4 men, 1 boy, and 1 horse; second left-hand, 10 men, 1 boy, and 1 horse. Canvas required on Davis's bord.

Back Horse-road.—Third right-hand, 8 men, 1 boy, and 1 horse. Canvas wanted on the heading. Second left-hand, 10 men, 1 boy, and 1 horse. Second bord wants canvas hung. Second right-hand, 4 men; first left-hand, 6 men; and in first right-hand, 10 men, 1 boy, and 1 horse. Total number of men, inclusive of those about the roads and flats, 177; boys, 19; and horses, 19. Total quantity of air passing in being 20,100, gives to each 93 cubic feet per minute.

Visited No. 6 district, where there are 9 men, 1 boy, and 1 horse; quantity of air passing in, 4,000 cubic feet per minute. On the whole, we found a marked improvement, but we saw room for still greater improvement, especially in the first and fourth right-hand headings.

Total quantity of air passing into the workings of this pit, 58,000 cubic feet per minute, which, divided amongst 412 men, 40 boys, and 40 horses, gives to each 118 cubic feet per minute.

We found the travelling roads in good order, except one place in Griffiths' narrow bord, to which we would direct the overman's attention. The place in question was in the roof, a short distance from the entrance to No. 5.

We, the undersigned, hereby certify that the foregoing is a true report.

8th August, 1885.

GEO. JONES, }
JAS. THOMSON, } Check Inspectors.

No. 4.

Twenty-seventh Check Inspectors' Report of the Australian Agricultural Collieries, at Newcastle, N.S.W.

We commenced this inspection on Monday, January 4th, 1886, starting at the Hamilton Pit. Measured the air passing into Cope's heading, and got for result 10,760 cubic feet per minute. Measured the air passing along the engine plane, below engine bank, and got for result 31,500 cubic feet per minute.

Measured the air passing into Bullerwell's heading, with result of 10,475 cubic feet per minute. There are 4 men in this heading, 4 men in Wilson's heading, and 2 men working in the cross-cut. There are 12 men, 1 boy, and 1 horse in Sneddon's heading, and 18 men, 1 boy, and 1 horse in Turnbull's heading. The air in this latter heading was very slack. In Gardiner's heading there are 22 men, 4 boys, and 4 horses. Visited Harding's heading, where there are 18 men, 2 boys, and 2 horses. In Bishop's heading, 4 men, and in the cross-cut, 18 men, 2 boys, and 2 horses. The canvas on the first bord was so badly torn that we found by the air-meter that about 1,000 cubic feet per minute was escaping that should travel around the face of the cross-cut. In Johnson's heading there are 6 men. The air in this heading was very bad at the time of our visit. With reference to the torn canvas in the cross-cut, we directed the deputy's attention to it, and he promised us he would attend to it as early as possible. In Murphy's heading there are 14 men, 1 boy, and 1 horse. Visited Robson's heading, in which there are 26 men, 2 boys, and 2 horses; and also Tracey's heading, where there are 30 men, 2 boys, and 2 horses—making a total of 56 men, 4 boys, and 4 horses. The air in this split was very good. We were pleased to notice in travelling along the engine plane in this pit that the greater part of the old stoppings had been replaced by brick stoppings.

The total number of men, boys, and horses in this pit is 102, 26, and 26 respectively. Total quantity of air, inclusive of air passing into Cope's heading, which returns on to the main column, is 42,260 cubic feet per minute.

There were no complaints for timber, and the travelling roads were in very good condition.

No.

No. 2 Pit.

Measured the air coming down this pit, and got for result 40,000 cubic feet per minute. Quantity of air passing into No. 1 district from this column is 31,000 feet per minute. Visited various headings in No. 3 flat of this district. Measured the air coming in, and found by the air-meter 7,500 cubic feet per minute. In this flat there are 82 men, 14 boys, and 14 horses. The quantity of air is only 68 cubic feet per minute each. In the fourth and fifth left-hand headings in this district there are 20 men, 2 boys, and 2 horses. Quantity of air, 2,200 cubic feet per minute. In the sixth left-hand, 10 men, 1 boy, and 1 horse. In the sixth right-hand there are 16 men, 1 boy, and 1 horse. The air in this heading was very slack. Quantity of air, 1,400 cubic feet, thus giving to each 78 cubic feet per minute. In the horse-road, eighth right-hand, and seventh there are 34 men, 3 boys, and 3 horses. Quantity of air, 4,300 cubic feet per minute, which gives to each man, horse, and boy 107 cubic feet per minute. In the fifth right-hand, 20 men, 1 boy, and 1 horse. The air was very dull in this heading. In the fourth right-hand 18 men, 3 boys, and 3 horses; and in the second right-hand, 2 men; about the roads, 10; making a total of 212 men, 25 boys, and 25 horses. Quantity of air, 31,000 cubic feet, giving to each of the above 118 cubic feet per minute.

No. 5 District.—Quantity of air passing into this district, 23,780 cubic feet per minute.

Back Horse-road.—First left-hand, 18 men, 1 boy, and 1 horse. There are 22 men, 1 boy, and 1 horse in the fourth right-hand heading of No. 1 district which are aired from this district. In the horse-roads there are 4 men, and 2 men lifting bottoms; and in the first right-hand there are 6 men, 1 boy, and 1 horse.

Back Cross-cut.—First left-hand, 10 men, 1 boy, and 1 horse. Second left-hand, 6 men; cut-through wants cleaning out. In third left-hand, 4 men, and 6 men in the cross-cuts. In the seventh right-hand there are 6 men, 1 boy, and 1 horse. The air is very dull in this heading. In the sixth right-hand there are 14 men, 1 boy, and 1 horse. In the fifth right-hand there were two of the canvasses badly torn, which we called the attention of the deputy to. There are 22 men, 1 boy, and 1 horse in this heading. In the fourth right-hand there are 20 men, 1 boy, and 1 horse. These three headings comprise one split. Measured the air returning from these headings, over overcast, 8,250 cubic feet per minute. Several of the canvasses in these headings were allowing a considerable quantity of air to escape which should travel around the top end of the heading; but the system now being pursued by the management will prevent a recurrence of this, as they are substituting stoppings for the canvas, which is the only effectual remedy. In the first, second, and third right-hand headings there are 62 men, 6 boys, and 6 horses. The air in the upper parts of this split was very hot.

Total number of men, boys, and horses, inclusive of those about the roads and flats, is 215, 15, and 15 respectively. Total quantity of air, 23,780 cubic feet per minute, which gives to each 97 cubic feet per minute. In No. 6 district there are 12 men, 1 boy, and 1 horse.

We travelled the returns from No. 5, which we found in splendid condition, the management having of late expended a considerable sum in improving them. Total number of men, boys, and horses in the whole of this pit is 453, 41, and 41 respectively. Total quantity of air, inclusive of 14,700 cubic feet per minute coming from Hamilton pit by way of Griffiths' narrow bord, is 54,700 cubic feet per minute, giving to each man, horse, and boy 102 cubic feet per minute.

There were no complaints for timber, and the travelling roads were in very good condition.

Before concluding this report we wish to thank the officials for their courtesy, and also their readiness in supplying any information that we required during this inspection.

12th January, 1886.

GEO. JONES,
WM. AITCHESON, } Check Inspectors.

Ferndale Colliery.

SCHEDULE.

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No. 1.

Copies of the three last Check Inspectors' Reports.

Ferndale Lodge, 1 December, 1885.

No. 1 REPORT.

10 April, 1885.

WE, the undersigned, having examined the several workings and airways, &c., of the Ferndale Colliery, report as follows:—

Intake of air on engine bank, 9,250 cubic feet per minute; thermometer, 68°. Intake from the old furnace shaft, 1,800 cubic feet per minute; thermometer, 63°. Air passing from old furnace shaft to No. 1 heading, 1,800 cubic feet. Air passing from engine bank to No. 1 heading, 4,600 cubic feet. The top part of No. 1 heading the anemometer gave 2,550 cubic feet of air per minute for 19 men, 4 boys, and 2 horses, being 102 cubic feet per minute for each man, boy, and horse; thermometer, 71°. Middle part of No. 1 heading: Air passing from narrow bord at cut-through, 4,138 cubic feet per minute for 29 men, 4 boys, and 2 horses, being a fraction over 118 cubic feet per minute for each man, boy, and horse; thermometer, 71°. Lower part No. 1 heading, at cut-through from narrow bord, the anemometer gave 2,844 cubic feet of air per minute; thermometer registering 74°. After passing seven bords, anemometer gave 4,260 cubic feet of air per minute. There are 22 men, 5 boys, and 2 horses employed here. There is a vast improvement in this part since our last inspection. We never visited No. 3 heading, but at the cut-through from No. 8 narrow bord the area was so large that there was not sufficient air to move the anemometer. The cut-throughs have been cleared, and there were no complaints about the air; there were 8 men, 2 boys, and 1 horse working there; thermometer, 74°. No. 4 heading: 2 men, with a fair

supply of air. No. 5 heading: Intake from engine brow, 575 cubic feet of air per minute. There were 6 men, 2 boys, and 1 horse employed here, giving each 64 cubic feet of air per minute; thermometer, 72°. Returns from No. 4 heading gave 3,032 cubic feet per minute. Returns from main flat, 5,402 cubic feet per minute, but all the returns cannot be taken here. Each was well supplied with timber.

JOSEPH BOWDITCH, }
WILLIAM LLOYD, } Check Inspectors.

No. 2 REPORT.

Ferndale Colliery, 2 July, 1885.

WE, the undersigned, having examined the several workings, airways, &c., report as follows:—

Intake of air on the engine bank, 14,450 cubic feet per minute; thermometer, 61°. Intake from old furnace shaft, 1,800 cubic feet per minute; thermometer, 61°. Air passing from engine bank into No. 1 heading, 6,346 cubic feet per minute; thermometer, 68°. At the top part of No. 1 heading the anemometer registered 4,070 cubic feet per minute; thermometer, 72°. This gives 185 cubic feet of air per minute to each man, boy, and horse,—15 men, 5 boys, and 2 horses. At the cut-throughs from No. 27 narrow bord, the anemometer registered 5,730 cubic feet per minute; thermometer, 71°. At the two cut-throughs from No. 13 narrow bord, the current of air had increased to 6,320 cubic feet per minute. This current of air has to supply 59 men, 13 boys, and 6 horses, giving a fraction over 83 cubic feet per minute for each. There were 29 men, 8 boys, and 4 horses, from No. 27 to No. 13 bords inclusive, and 23 men, 5 boys, and 2 horses, from No. 12 to No. 1 bords, both inclusive, and 4 men in two bords in No. 3 and No. 4 headings, and 1 man pumping, making in all 57 men, 13 boys, and 6 horses supplied from the above current. In Nos. 1 and 2 bords the air was very slack; the thermometer registered 78°. The bord in No. 3 heading is in before the air nearly 60 yards without a cut-through; thermometer registered 76°. Our attention was called to the road in No. 19 bord being dangerous for the boys wheeling there, but a cut-through being nearly holed through will remedy that in a day or two. At No. 5 heading the air passing through cut-through showed 744 cubic feet per minute. We were told that the other cut-through was closed, but on passing next morning I found a large current of air passing through; 9 men, 1 boy, and 1 horse are employed here. Returns from No. 4 heading, 3,485 cubic feet per minute; returns from furnace shaft, 10,030 cubic feet per minute; total returns, 13,515 cubic feet per minute, but in consequence of the manner it splits up here we were unable to get all the returns correctly. There was a plentiful supply of timber in the headings.

JOSEPH BOWDITCH, }
CHARLES WILLIAMS, } Check Inspectors.

No. 3 REPORT.

Ferndale Colliery, 28 October, 1885.

WE, the undersigned, having examined the several workings, airways, &c., of the above colliery, report as follows:—

Intake at engine bank, 12,960 cubic feet per minute; thermometer, 68°. Intake from old furnace shaft, 2,812 cubic feet per minute. From engine bank to No. 1 heading, 5,964 cubic feet per minute. Top part of No. 1 heading, anemometer registered 4,890 cubic feet per minute for 27 men, 6 boys, and 4 horses, being a fraction over 132 cubic feet per minute for each man, boy, and horse; thermometer, 72°. At the cut-through at the top, Gannon bord, the anemometer registered 4,050 cubic feet per minute for 18 men, 4 boys, and 2 horses, being 168½ cubic feet for each man, boy, and horse; thermometer, 75°. At the cut-through in No. 17 bord the anemometer registered 2,450 cubic feet per minute for 15 men, 4 boys, and 2 horses, being 116½ cubic feet per minute for each man, boy, and horse; thermometer, 78°. At the cut-through at the lower Gannon bord the anemometer registered 3,870 cubic feet per minute for 22 men, 6 boys, and 3 horses, a fraction over 124½ cubic feet per minute for each man, boy, and horse; thermometer, 75°. There were two men working off the right-hand of No. 8 heading, but the area being so large there was not sufficient air to move the anemometer. No. 5 heading, intake from engine bank, 1,633 cubic feet per minute for 8 men, 2 boys, and 1 horse, giving a fraction over 148½ cubic feet per minute for each man, boy, and horse; thermometer, 72°. Return from No. 4 heading, 2,940 cubic feet per minute. At the main flat, 8,525 cubic feet per minute, but all the returns cannot be taken here. Each place was well supplied with timber.

WILLIAM LLOYD, }
DAVID HOPKINS, } Check Inspectors.

Lambton Colliery.

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No. 1.

The Examiner of Coal-fields to the Under Secretary for Mines.

Sir,

Coal-fields Office, Newcastle, 6 October, 1885.

I have the honor to forward for the information of the Honorable the Secretary for Mines a report from Mr. Inspector Dixon and copy of a notice I have served upon Mr. Croudace, the Manager of the Lambton Colliery, for failing to comply with sub-sections 2 and 3, section 12, of the Coal Mines Regulation Act, 1876.

I have, &c.,

JOHN MACKENZIE,
Examiner of Coal-fields.

Unless

Unless within fourteen days from the date of the notice sent to the manager some effective steps are taken to remedy the matter complained of, steps may be taken to recover the penalty.—H.W., 9/10/85. Submitted. Approved.—F.A.W., 12/10/85. The Examiner of Coal-fields.—G.E.H. (for the U.S.), B.C., 14/10/85. Mr. Dixon, for a further report to be made, 24th October, as to whether the matters complained of are remedied.—J.M., 16/10/85. The Lambton miners being now on strike, further inspection is useless until work is resumed.—J.D., 23/10/85. The men are still out on strike, therefore nothing further has been done in the matter.—J.M., 30/1/86. The Under Secretary for Mines, B.C., 30/1/86. The Examiner of Coal-fields.—G.E.H. (for the U.S.), B.C., 8/2/86.

[Enclosure to No. 1.]

Mr. John Dixon, Inspector of Collieries, to the Examiner of Coal-fields.

Sir,

Glebeland, 5 October, 1885.

I have the honor to draw your attention to the defective ventilation in that portion of the workings in the Lambton Colliery known as the right-hand side of the No. 2 far flat main tunnel. In this part of the mine there are eight working bords, two men in each, and two working headings with three men in each, making a total of twenty-two men, besides two wheelers and two horses.

When on the 15th August last I reported this same place, there were about twenty men employed in it. At that time I found the ventilation defective, and drew Mr. Croudace's attention to the matter, and he (Mr. Croudace) at once promised to have it remedied. However, on the 23rd ultimo (Monday last) I again made an inspection of the place complained of, and regret to report that I found matters in a similar position to that reported by me on 15th August. But as the ventilation in the whole of the far flat section was a little deranged on Monday last, owing to a very large fall of roof in the pillar workings in No. 1 far flat, I thought it best to go back again at the end of the week, when the No. 1 part of the workings would be properly settled. Consequently, on Saturday last, 3rd instant, I made another inspection, and found that the No. 1 far flat was in no way interfering with the intake at No. 2 far flat, but the same state of affairs prevailed in the split complained of, and I could not detect the slightest difference from what I found on the Monday. The only time when I could find trace of an intake current of air was when the empty train was running into the flat; then, on the loaded train going out, the current of air would rush back—then, to all appearances, come to a standstill. In every working place the powder smoke was hanging thick, owing to there being no current of air to carry it away. I may here remark that a new overcast was being built, which, when completed, would connect the part complained of with another return, and may possibly be of benefit. I notified the Manager (Mr. Croudace) by registered letter on Saturday last, a copy of which I herewith beg to forward, and desire to be instructed as to further proceedings in relation to the matter complained of.

I have, &c.,

JOHN DIXON,

Inspector of Collieries.

Mr. John Dixon, Inspector of Collieries, to Mr. Thomas Croudace, Colliery Manager, Lambton.

Sir,

Glebeland, 3 October, 1885.

Referring to our several conversations concerning the deficient ventilation in the workings at the right-hand side of No. 2 far flat in the Lambton Colliery, and your repeated promises to have the matter remedied, and notwithstanding the fact that sufficient time has elapsed to have had the matter put right since you were first notified, I regret to state that on Monday last, 23rd ultimo, and to-day (Saturday), I found the abovenamed split in a deplorable state.

In this split there are eight working bords, besides the two headings, two wheelers, and two horses, making a total of twenty-six men, &c. For this number (at the time of my inspection) there was no perceptible steady current of air, and as a consequence, the powder smoke was hanging in dense clouds in every working place. The only time that there appeared to be any air entering the split was when the empty train was running into the flat; but the loaded train going out overcame this to such an extent that the current of air would return with the same velocity as it entered the split.

2. I have therefore to request that you would give attention to this matter at once, with a view of having it remedied as speedily as possible.

I have, &c.,

JOHN DIXON,

Inspector of Collieries.

The Examiner of Coal-fields to Mr. T. Croudace, Manager, Lambton Colliery.

Sir,

Coal-fields Office, Newcastle, 6 October, 1885.

In view of a recent report of Inspector Dixon's on the ventilation of the Lambton Colliery (No. 2 far flat), and in pursuance of the provisions contained in the 31st section of the Coal Mines Regulation Act, 1876, I hereby give you notice that you have failed to comply with sub-sections 2 and 3, section 12, of the said Act.

I have, &c.,

JOHN MACKENZIE,

Examiner of Coal-fields

No. 2.

Mr. T. Croudace, Manager, Lambton Colliery, to The Examiner of Coal-fields.

Sir,

Lambton Colliery, Lambton, 7 October, 1885.

In reply to yours of yesterday, I can only say that Mr. Dixon's complaint is quite justifiable, and that he has complained two or three times about the same place.

I am making alterations to-day, which I will not be able to complete for a fortnight, but I hope even by Friday to have it materially improved.

I have, &c.,

THOMAS CROUDACE.

The above communication, *re* Lambton Colliery deficient ventilation, has been received by me to-day, and I enclose you copy of my reply for the information of the Honorable the Secretary for Mines.—J.M., 8/10/85. The Under Secretary for Mines, B.C., 8/10/85.

Under the circumstances, proceedings may be stayed till the expiration of the fortnight.—H.W., 22/10/85. Submitted. Approved.—J. P. ABBOTT, 31/10/85. The Examiner of Coal-fields.—H.W., B.C., 3/11/85. Seen and noted.—J.M., 3/11/85.

No. 3.

Mr. John Dixon, Inspector of Collieries, to The Examiner of Coal-fields.

Sir,

Glebeland, 8 October, 1885.

For your information, I beg to forward enclosed letter, received this morning from Mr. Croudace, *re* No. 2 far flat, &c.

I also beg to state that I have been notified to-day concerning the accident to John Hinds in Minimi on Monday last, also an accident to a boy in Brown's Colliery yesterday, and in consequence of such notification I intend going to Minimi to-morrow (Friday).

I have, &c.,

JOHN DIXON,
Inspector of Collieries.

[Enclosure to No. 3.]

Mr. Thomas Croudace, Manager, Lambton Colliery, to Mr. John Dixon, Inspector of Collieries.

Sir,

Lambton Colliery, Lambton, 7 October, 1885.

I have to acknowledge receipt of yours of 3rd, complaining of deficient ventilation at No. 2 far flat. In justice to you, and not wishing in the least to shield myself, I must admit that this is neither the first nor the second time that you have complained, and that I have promised to have it put right; but, as you know, there have been many other matters to attend to. I inspected the district complained of yesterday, and found it very bad—worse than I have ever seen it; but, upon closer inspection, I found two or three important in-bye stoppings completely blown down by the recent heavy fall from the pillars which occurred when you were there one day last week. I am now pushing ahead such alterations as I hope will improve it by Friday, and very materially improve it in about a fortnight, when we get a long wall holed over into back cross-cut.

I am so confident of having it improved by Friday that I would ask you to come up and inspect it.

I have to thank you for the tolerant manner in which you have dealt with this complaint, and trust you will not consider my neglect in any way intentional.

I have, &c.,

THOMAS CROUDACE.

No. 4.

The Examiner of Coal-fields to Mr. T. Croudace, Manager, Lambton Colliery.

Sir,

Coal-fields Office, Newcastle, 8 October, 1885.

I beg to acknowledge the receipt of yours of the 7th instant, informing me that Mr. Inspector Dixon's complaint is quite justifiable, &c., and that you are making alterations, which will not be completed for a fortnight, but hope by Friday next to have matters materially improved.

Trusting such will be the case,—

I have, &c.,

JOHN MACKENZIE,
Examiner of Coal-fields.

No. 5.

Mr. Melville, M.P., to The Secretary for Mines.

Department of Mines. Legislative Assembly.

Question for this day. Proof, No. 19. Thursday, 4 February, 1886.

QUESTION NO. 4:—

MR. MELVILLE to ask THE SECRETARY FOR MINES,—

- (1.) Has Mr. Mackenzie at any time made any complaints concerning the ventilation of the Lambton mine, of which Mr. Croudace is manager?
- (2.) Were such complaints, if any, made during Mr. Croudace's management?
- (3.) If such complaints were made, what steps were taken to remedy them, and what time elapsed between the making of complaints and the remedying of them?
- (4.) Has Mr. Mackenzie at any time called the Minister's attention to the extensive falling in of the surface of the Newcastle Pasturage Reserve, under which the Lambton Company, of which Mr. Croudace is manager, are mining for coal?
- (5.) When and on what dates did Mr. Mackenzie report that the main Northern Road, near Tighe's Hill was being undermined?
- (6.) How long afterwards was such undermining stopped?
- (7.) Who was the owner of the coal so taken?
- (8.) Was any sum of money placed upon the Estimates for the repair of such road by the Minister for Mines, and what amount?

ANSWERS:—

- (1.) Yes.
- (2.) Yes.
- (3.) Immediate steps.
- (4.) No.
- (5.) The information asked for was fully dealt with in Mr. Mackenzie's report to Mr. Secretary Abbott, dated 12th June, 1884.
- (6.) No coal was got after June, 1884.
- (7.) The Crown.
- (8.) No.

Wallsend Colliery.

SCHEDULE.

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No. 1.

Mr. James Curley, Miners' General Secretary, to The Secretary for Mines.

Sir,

Hamilton, 1 December, 1883.

I have the honor, by direction of the Executive Committee of the Miners' Association, to invite your attention to copy of Check Inspectors' report, made at Wallsend Colliery, on November 5th, 6th, and 7th respectively, and which was forwarded to you on the 27th November. This report, in connection with previous ones, goes to show that the provisions of the Act are not complied with in matters of detail. The proper conducting of the air and its necessary distribution will at once appear evident to the most casual observation; for instance, in some parts of the mine there is over double the quantity of air required by the Act, and in other districts no record can be obtained, as there is not sufficient air to work the anemometer, while in others 50 or 60 cubic feet per minute is all that is passing. This is most unsatisfactory, and it is to be regretted that a remedy is not urged by either the Inspector for Colliceries or the Examiner for Coal-fields. And it is further to be regretted that more uniformity is not obtained in establishing a systematic method of ventilation in the several mines throughout the district. The health of miners is far too often impaired and seriously injured owing to such a cause, all because there is a manifest indifference regarding the carrying out of some simple detail, such as the erection of stoppings at old bord ends, the erection of a door, or it may be that an engine-rope works through a wood stopping, and it is splintered for want of a small pipe to confine the action of the rope, and thousands of feet of air lost to the miners, and otherwise by not erecting an air-crossing where required.

Having again brought this subject under the Honorable Minister's attention, the miners trust he will urge a more uniform compliance with the provisions of the Coal-mines Regulation Act, 1876, not only at the Wallsend Colliery, but the Newcastle Company's Colliery as well, where recent complaints have been made.

I have, &c.,

JAMES CURLEY,

Miners' General Secretary.

May be referred to the Examiner for report.—H.W., 6/12/83. Submitted. Approved.
Acknowledge.—J. P. AMOTT, 7/12/83. The Examiner of Coal-fields.—H.W., B.C., 11/12/83. Mr.
Inspector Dixon for report.—J.M., 21/12/83. Returned. The Examiner of Coal-fields.—J.D., 27/12/83.

No. 2.

The Under Secretary for Mines to Mr. James Curley, Miners' General Secretary.

Sir,

Department of Mines, Sydney, 11 December, 1883. See No. 1.

I am directed by the Secretary for Mines to acknowledge receipt of your letter of the 1st instant, on the matter of enforcing a more uniform compliance with the provisions of the Coal-mines Regulation Act, 1876, and to inform you that a report will be obtained upon the subject without delay.

I have, &c.,

HARRIE WOOD,

Under Secretary.

No. 3.

Mr. James Curley, Miners' General Secretary, to The Secretary for Mines.

Sir,

Hamilton, 22 November, 1883.

I have the honor, in conjunction with the Chairman and Treasurer of the Miners' Union, to invite your attention to the undermentioned subjects, which are deemed of sufficient importance for interview, and which has been asked for in a letter to Messrs. N. Melville and A. A. P. Tighe, M.S.P.:—

1st. Recent Check Inspectors' report at Wallsend Colliery, showing very defective ventilation.

2nd. Correspondence from Examiner of Coal-fields, dated October 18th, 1883.

3rd. A means of egress from mines other than the furnace shaft in case of accident to the main down-cast shaft.

I have, &c.,

JAMES CURLEY,

Miners' General Secretary.

This probably refers to the deputation recently received by the Minister.—Noted to await further communication.—H.W., 1/12/83.

[Enclosures

[Enclosures to No. 3.]

Special Inspection—Check Inspectors' Report.

Mr. T. Bonsfield's District.

	Wallsend Colliery, 5 and 6 November, 1883.
Engine Bank, intake air-current	31,490 cubic feet per minute.
Swamp Oak " " " " " " " " " "	11,500 " "
Chinaman's Shaft, Chinaman's Split intake air-current	5,520 " "
" " Magpie and Donnolly's intake air-current	9,690 " "
B Pit, intake air-current	9,500 " "
	67,700

B Pit, Chinaman's Flat, Nos. 111 to 116.—The air is very slack, and with 9,500 cubic feet registered at the intake we could only find 585 cubic feet per minute near the faces for the supply of 8 men, 1 boy, and 1 horse, giving each 53 cubic feet per minute; thermometer, 78°.

Chinaman's Flat, from No. 117 to 130.—Air-current, 5,520 cubic feet per minute for 22 men, 1 boy, 1 horse, giving each 230 cubic feet per minute; thermometer, 68°.

Magpie and Donnolly's Flats, from Nos. 130 to 176.—The air-current is 9,690 cubic feet per minute for 62 men, 5 boys, 4 horses at Magpie, and 24 men, 2 boys, 1 horse at Donnolly's, giving each a fraction over 93 cubic feet per minute, the last numbers at Donnolly's ranging from 70' to 76'.

Lambton back and part of front headings, from Nos. 177 to 215.—Air-current, 11,040 cubic feet per minute. This split includes Nos. 265 and 266, making 80 men, 10 boys, 5 horses, the air-current giving each a fraction over 116 cubic feet per minute; thermometer, 76°. The air from No. 171 to 189 would not register, as the anemometer would not work on the heading.

Lambton front heading, from No. 216 to 255.—Air-current, 6,000 cubic feet per minute for 78 men, 8 boys, 4 horses giving each 66½ cubic feet per minute; thermometer 72°.

Up-casts, Main Furnace	48,384 cubic feet per minute.
" No. 1 Split	16,020 " "
" No. 2 " " " " " " " " " "	19,080 " "
Total Up-cast	83,484 " "

Mr. W. Willis's District.

7 November, 1883.

No. 2 Tunnel, from No. 1 to 34.—The air-current is too unsteady to work the anemometer; thermometer, 72°. There were some complaints about short supply of timber.

Front heading intake.—Air-current, 15,750 cubic feet per minute for Nos. 59 to 85, making 54 men, 8 boys, 6 horses, giving each a fraction over 231 cubic feet. From 75 to 85 the air is very slack, but the management is busy sinking a shaft, which will give the required ventilation; thermometer, 74° to 76°.

Cemetery Flat, from No. 86 to 104.—The air-current is 2,975 cubic feet per minute for 38 men, 4 boys, 2 horses, giving each 67½ cubic feet per minute; thermometer 73°. We suggest a stopping be put in the stenton opposite No. 104 bord end.

Old water pit, Nos. 105, 106, and 107.—There was no regular air-current, and old water pit Nos. 108, 109, and 110 there was no regular air-current.

Travelling road intake.—The air-current is 8,280 cubic feet per minute for Nos. 35 to 38, making 48 men, 4 boys, 2 horses, giving to each 153½ cubic feet per minute.

Up-cast tunnel furnace, 33,620 cubic feet per minute. A good supply of timber on all stations excepting Little tunnel, previously referred to, and the travelling road is very dangerous between the door and the main horse-road in Mr. Willis's district.

J. SUMMERS, }
J. LEVER, } Check Inspectors.

The Examiner of Coal-fields to Mr. James Curley, Miners' General Secretary.

Sir,

Coal-fields Office, Newcastle, 18 October, 1883.

In reply to your telegram of this morning, asking if I consider Dackenfield Colliery ventilation is now in compliance with the Coal Mines Regulation Act, I beg to inform you, from a report I have received from Mr. Inspector Dixon, dated 16th instant, and a telegram from Mr. Croft, in reply to one from me asking how many men, boys, and horses were at work in the mine to-day, that I am of opinion there must be more than an adequate amount of ventilation for the men, boys, and horses now at work there.

I have, &c.,
JOHN MACKENZIE,
Examiner of Coal-fields.

No. 4.

The Examiner of Coal-fields to The Under Secretary for Mines.

I FORWARD for the Minister's information a report I have received from Mr. Inspector Dixon with reference to the Miners' Executive and Mr. Curley's complaint, that the provisions of the Coal Mines Regulation Act are not complied with *in matters of detail* at the Wallsend Colliery, Newcastle Co., and others, where recent complaints have been made, I beg to state that nothing more can be done than has been done by myself and Mr. Dixon, and that it should not be expected that extensive mines like the Wallsend Colliery and others can *daily comply in detail* with the provisions of the Act, which require the erection of stoppings, doors, &c., to ensure an adequate amount of ventilation.

2. With regard to the charges made, of Mr. Inspector Dixon's neglect of duty in not urging remedies when he sees that the provisions of the Act are not complied with, I beg to say that I believe they cannot be substantiated, that the statement made is incorrect, and very great improvements have been made in the ventilation of the northern collieries since he received the appointment of Inspector of Collieries.

J.M., 15/1/84.

The Under Secretary for Mines.—B.C., 15/1/84.

[Enclosure to No. 4.]

Mr. John Dixon, Inspector of Collieries, to The Examiner of Coal-fields.

Sir,

Glebeland, 24 December, 1883.

I beg to acknowledge receipt of correspondence forwarded by the Miners' General Secretary to the Honorable the Secretary for Mines, re the ventilation in the Wallsend and Newcastle Co.'s Collieries, &c.

In reply thereto, in reference to Wallsend Colliery, I have the honor to state that I made an inspection of that colliery during last month, and, with the exception of a few matters of detail, I found the ventilation good. A few days after the inspection I saw Mr. Neilson, manager, and drew his attention to those matters. I also notified him (Mr. Neilson) by letter and

and in reply he wrote me expressing surprise that I should deem such matters worthy of official complaint, and desires that at an early date an inspection of the whole of Wallsend Colliery be made by the Examiner, Inspector, Check Inspectors, and Manager, so that the exact state of the mine may be ascertained for the information of the Honorable the Secretary for Mines and the miners of Wallsend Colliery. I beg to state that I quite agree with the suggestion as being the only means to thoroughly sift the matter, and put an end to the complaints concerning the ventilation at that colliery. It is clear to anyone in the least degree acquainted with the working of a colliery, that in an extensive mine like Wallsend, with such an extraordinary output, and with such a length of air-ways, there will occasionally be a derangement of the ventilation, caused by circumstances over which there is no control; for instance, a heavy fall of roof, such as I saw in one part of the Wallsend workings on my last inspection; but as soon as I called the attention of the Manager to the matter, he caused a small shaft to be sunk, which at once effected a remedy. Seeing that such things do occur, it is highly necessary to inquire into the cause and extent of any defective ventilation before sweeping assertions are made concerning any colliery.

2. Newcastle Co.'s Colliery.—The place complained of in this colliery is, I suppose, the No. 6 district, where the ventilation was completely deranged by a heavy crush which took place a considerable time since. This No. 6 heading has had to be forewon in order to reach the No. 5 narrow bord. Lately there have been about 38 men, 2 boys, and 2 horses in this split.

It has been a most difficult place to ventilate, as a door had to be hung on the No. 1 main road, and one on the main road in No. 6, so that all possible pressure might be brought to bear on this split to ensure a sufficient quantity of air. On my several inspections of this district I have found a variation in the current, as the following results will show:—1st, 4,720 cubic feet per minute; 2nd, 4,130 cubic feet per minute; 3rd, 3,960 cubic feet per minute; and the last result obtained was during last month, 4,060 cubic feet per minute. But I observe by the report of the Check Inspectors for this month that they got a result of 5,670 cubic feet of air per minute, or 134 cubic feet per minute for every man, boy, and horse in the split.

It is expected that the No. 6 heading will be holed through into No. 5 narrow bord during this week; then the ventilation will be even better than it is at present.

Taking the Newcastle Co.'s Mine throughout, I am of opinion that the ventilation is first-class.

Regret is expressed by the Executive Committee that a remedy is not urged by me in cases of non-compliance with the Act.

In reply, I fearlessly state that during the time I have had the honor to hold the position of Inspector of Collieries, whenever I have seen anything wrong in any mine I have drawn immediate attention to the matter with a view to having it remedied at once, and have never passed by anything, even down to the smallest detail, in a mine which I thought likely to militate against the health or safety of anyone employed in the mine.

Standing as I do, with employers on one hand and the employed on the other, my study hitherto has been to steer a steady course in my official capacity, knowing neither master nor man, but honestly and conscientiously giving a report of each mine as I have found it on my several inspections.

In conclusion, I desire to say that notwithstanding the enormous output of coal from the collieries in this district, and the continual changes which are taking place owing to the large output, in my opinion the present state of said collieries will bear favourable comparison with any part of their past history, both regarding the quantity of air circulating and its distribution in the various parts of the workings.

I have, &c.,

JOHN DIXON,

Inspector of Collieries.

Submitted.—H.W., 18/1/84. If it is the practice to do so, a copy of this report may be sent to Mr. Curley.—J. P. ABBOTT, 19/1/84. In view of the precedent on 82-7,586, the copy may be supplied.—H.W., 22/1/84.

No. 5.

The Under Secretary for Mines to Mr. James Curley, Miners' General Secretary.

Sir,

Department of Mines, Sydney, 28 January, 1884.

I have the honor, by direction of the Secretary for Mines, to forward a copy of the report furnished by Mr. John Dixon, one of the Inspectors of Collieries, upon the ventilation at the Wallsend and Newcastle Company's Collieries.

I have, &c.,

HARRIE WOOD,

Under Secretary.

Duckenfield Colliery.

NO.

SCHEDULE.

PAGE.

1. Copies of Check Inspectors' Report in connection with ventilation of Duckenfield Colliery. 20 October, 1885 131

Report of the Duckenfield Tunnel, taken on 20 October, 1885.

We, the undersigned, have examined the air-ways and workings of the Duckenfield Colliery, and certify our report as follows:—

Intake of air taken in the engine brow below first flat, 12,210 cubic feet of air per minute; intake of air from Fault heading shaft, 6,565 cubic feet of air per minute; 7 men in the Fault heading. West heading, No. 7 cut-through, 3,520 cubic feet of air per minute; 6 men in this cut-through. No. 2 cut-through, 4,480 cubic feet of air per minute; 4 men in this cut-through. No. 3 cut-through, 4,620 cubic feet of air per minute; 3 men in this cut-through. There are 4 wheelers, 2 horses, and 20 men in the West heading cut-throughs and Fault heading. Average heat in the bords in West heading district—Thermometer registered 71°. Return air from Fault heading and West heading to Furnace shaft, 23,760 cubic feet of air per minute. Dip Workings.—Split of air from the shaft at the foot of the engine brow to the B and D heading district: Result taken in B heading, 7,315 cubic feet of air per minute; 10 men in this heading. D heading, 5,940 cubic feet of air per minute; 10 men in this heading. D heading, No. 1 cut-through, 4,437 cubic feet of air per minute; 10 men in this cut-through. No. 2 cut-through, 3,812 cubic feet of air per minute; 7 men in this cut-through. No. 3 cut-through, 3,948 cubic feet of air per minute; 8 men in this cut-through. No. 4 cut-through, 4,770 cubic feet of air per minute; 4 men in this cut-through. No. 5 cut-through, 4,617 cubic feet of air per minute; 10 men in this cut-through. No. 6 cut-through, not sufficient air to take any result with anemometer (P.S.—The overseer informed us that he would put a door on No. 5 cut-through to remedy the air in this cut-through); 10 men in this cut-through. There are 69 miners, 12 wheelers, and 6 horses in the B and D heading district. Return air from this district, 15,105 cubic feet of air per minute.

Intake

Intake of air from engine brow shaft to the E heading district, 4,235 cubic feet of air per minute. No. 7 cut-through, not sufficient air to take any result with anemometer (P.S.—The overseer said in a few days he would put a door on No. 6 cut-through to remedy the air); 15 men in this cut-through. No. 6 cut-through, 3,780 cubic feet of air per minute; 17 men in this cut-through. No. 5 cut-through, 4,307 cubic feet of air per minute; 8 men in this cut-through. No. 4 cut-through; 2 men in this cut-through. Return air from E heading, 8,325 cubic feet of air per minute. There are 42 miners, 6 wheelers, and 3 horses in this heading.

M heading is supplied with the return air from E heading—2,827 cubic feet of air per minute; 12 miners, 1 wheeler, and 1 horse for this heading. Return air from dip workings to West heading furnace, 19,125 cubic feet of air per minute. Return from West heading district and dip workings at furnace, 53,560 cubic feet of air per minute.

We also find that there is a good supply of timber on the flats for the various sections.

JAMES SNEDDEN, } Check
GEORGE NIX, } Inspectors.

Report of the Back Creek Tunnel on 21 October, 1885.

WE, the undersigned, have examined the air-ways and workings of the Back Creek Colliery, as certify our report, as follows:—

Cross-cut pillars.—We find a sufficient supply of air travelling in this district. There are 10 miners, 2 wheelers, and 1 horse. Thermometer registered 68°. Intake of air in engine brow below turn for the No. 10 heading district, 24,890 cubic feet of air per minute.

First section in No. 10 heading.—Intake for No. 11 cut-through, 6,037 cubic feet of air per minute; 14 miners, 2 wheelers, and 1 horse in this cut-through. No. 8 cut-through, 5,759 cubic feet of air per minute; 20 miners, 2 wheelers, and 1 horse. No. 7 cut-through, 7,684 cubic feet of air per minute; 12 miners, 2 wheelers, and 1 horse. Return air from first section in No. 10 heading, 16,632 cubic feet of air per minute.

Second section in No. 10 heading.—No. 4 cut-through, 6,578 cubic feet of air per minute; 30 miners, 4 wheelers, and 2 horses in this cut-through. No. 3 cut-through, 12,358 cubic feet of air per minute; 20 miners, 2 wheelers, and 1 horse in this cut-through. Return air from No. 10 heading sections, result taken at furnace, 30,485 cubic feet of air per minute.

Intake.—First split of air from No. 12 shaft to A heading, 5,445 cubic feet of air per minute; 22 miners, 3 wheelers, and 1 horse in this district. Return air from A heading, 4,162 cubic feet of air per minute.

Engine brow, 3,465 cubic feet of air per minute; 3 miners, 1 wheeler, and 1 horse.

Second split of air from No. 12 shaft to No. 12 heading district—Result taken in No. 4 cut-through, 4,312 cubic feet of air per minute; 32 miners, 5 wheelers, and 2 horses for this current of air. Return air from No. 12 heading district, 6,138 cubic feet of air per minute. Return air from engine brow, A heading, and No. 12 heading, result taken at No. 4 furnace, 19,720 cubic feet of air per minute.

We also find a good supply of timber on the flats for the various sections.

JAS. SNEDDEN, } Check
GEORGE NIX, } Inspectors.

Australian Agricultural Company's Colliery.

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No. 1.

Minute of The Secretary for Mines.

Re Deputation of Miners at Newcastle.

A DEPUTATION of miners introduced by Messrs. Melville and Tighe, Ms.P., waited on me at Newcastle on Saturday, the 24th February, 1883, in reference to the matters mentioned in the annexed letter, and I desire that Messrs. Tighe and Melville should be informed of my decision in the several matters therein mentioned.

- 1st. Send them copy of my minute on the Wallsend Colliery.
- 2nd. The number of men allowed in a district to my mind is very clearly defined as being not more than seventy men.
- 3rd. The Examiner of Coal-fields will at once be asked to report upon the charge of the air being bad in the Lambton Commonage Coal Tunnel.
- 4th. The same as to scarcity of timber at the A.A. Company's Mine.
- 5th. The Examiner has also been asked to report as to two shafts at the Newcastle Coal-mining Company's Mine.

J. P. ABBOTT.

26/2/83.
[Enclosure

[Enclosure to No. 1.]

Mr. J. Curley and others to The Secretary for Mines.

THE undersigned deputation desire respectively, on behalf of the Coal Miners' Association, to bring under your notice for consideration the following subjects:—

- 1st. The apparent erroneous opinion of the Examiner of Coal-fields regarding the Act of 1876, and a recent inspection at the Wallsend Colliery.
- 2nd. The advisability of a definition as to the computed number of men in a district.
- 3rd. Report of Lambton miners' meeting which appeared in last Saturday's *Herald* and *Advocate*.
- 4th. Scarcity of timber at the A.A. Company's Mine and timber of proper lengths.
- 5th. Last year's Annual Mining Report disclosing great indifference both on the part of colliery management and Inspector.
- 6th. The question of two shafts at the Newcastle Coal-mining Company's Mine.

DAVID MITCHELL,
JOHN McFADYEN,
JAMES CURLEY.

No. 2.

Minute of The Secretary for Mines.

The Deputation of Coal-miners at Newcastle.

THE Examiner of Coal-fields will cause an inquiry to be made whether there is at all times a sufficient supply of timber kept at the A.A. Company's Mine, and of proper lengths.—J. P. ABBOTT, 28/2/83.

The Examiner of Coal-fields.—G.E.H. (for the U.S.), B.C., 28/2/83. Mr. Inspector Dixon for report.—J.M., 1/3/83.

The deficiency of timber in the A.A. Company's Mine was only in one district, viz.:—No. 1 in No. 2 pit, where very long props are required. Owing to the heavy rains up the river, this particular class of timber was rather scarce for about three weeks. However, there is now a good supply, for I was in No. 1 district on Tuesday last, and saw a good supply on the engine flat ready for the miners' use. I cannot hear of any complaint concerning the timber from any other part of the A.A. Company's Mine.—J.D., 2/8/83.

Examiner of Coal-fields.—B.C., 2/3/83. The Under Secretary for Mines.—J.M., B.C., 3/3/83. Submitted.—H.W., 5/3/83. Approved. Inform Messrs. Melville and Tighe, Ms.P.—J. P. ABBOTT, 10/3/83.

No. 3.

The Under Secretary for Mines to Messrs. N. Melville and A. A. P. Tighe, Ms.P.

Gentlemen,

Department of Mines, Sydney, 1 March, 1883.

Referring to the several matters brought forward by the deputation introduced by you to the Secretary for Mines, on the 24th ultimo, I am directed to forward a copy of Mr. Abbott's decision in the matter of the ventilation of the Wallsend Colliery.

2. I am directed to state that in Mr. Abbott's opinion the number of men allowed in a district is very clearly defined as being not more than seventy (70) men.

3. The Examiner has been asked to report upon the charge of the air being bad in the Lambton Commonage tunnel; also,

4. As to the scarcity of timber at the Australasian Agricultural Company's Mine; and

5. As to two (2) shafts at the Newcastle Coal Company's Mine.

I have, &c.,

HARRIE WOOD,

Under Secretary.

No. 4.

The Under Secretary for Mines to Messrs. N. Melville and A. A. P. Tighe, Ms.P.

Gentlemen,

Department of Mines, Sydney, 12 March, 1883.

Referring to my letter of the 1st instant, I have the honor to inform you that it appears, from the report forwarded by the Examiner of Coal-fields, that the deficiency of timber in the Australian Agricultural Company's Mine occurred in No. 1 district, pit No. 2, where very long props are required, but that there is now a good supply, and there was no complaint as to the deficiency of timber from any other part of the mine when the Inspector visited it.

I have, &c.,

HARRIE WOOD,

Under Secretary.

Messrs. Browns' Colliery, Minmi.

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No. 1.

The Miners' General Secretary to The Secretary for Mines.

Sir,

Hamilton, 19 October, 1881.

I have the honor to bring under your notice the enclosed letter, which was delivered to the Government Examiner of Coal-fields on the 1st October, 1881, regarding the defective working of the Coal Mines Regulation Act of 1876, and referring to a number of accidents caused by explosions of gas at the Messrs. Browns' Colliery, Minmi. That there are just grounds for complaint will be admitted when I state that since the delivery of the letter herein mentioned another accident of a similar character has occurred at the same place, and in this instance has been officially reported, which, for some unexplained reason, has not been done in other cases equally serious.

There is, I may add, general complaint regarding defective ventilation at the principal mines in the district, not of the ventilation as a whole, but that in certain portions of the mines the ventilation is exceedingly bad, and believing it to be within the province of the Inspector of Collieries to effect some remedy in this direction, I would respectfully invite you to draw his attention to this very important subject, also the Examiner of Coal-fields.

Should you desire to have further information respecting this matter by deputation I shall be most happy to wait upon the Honorable Minister.

I have, &c.,

JAMES CURLEY,

Miners' General Secretary.

The Examiner of Coal-fields for explanation.—H.W., B.C., 22/10/81. The Under Secretary for Mines,—The correspondence with reference to this case was forwarded for the information of the Honorable the Secretary for Mines with my communication of the 22nd inst.—J.M., B.C., 24/10/81.

[Enclosure to No. 1.]

Messrs. J. Curley and others to The Examiner of Coal-fields.

Sir,

Hamilton, 30 September, 1881.

I beg respectfully to bring under your notice the defective working of the Coal Mines Regulation Act of 1876, and the apparent indifference of your Department in endeavouring to see that the provisions of the Bill are carried out. That the subject has assumed an important aspect you may infer when I state the miners of the district have placed myself and colleagues in a position to take all necessary steps towards a remedy. A series of questions have therefore been drafted to be placed in the hands of the Members for the county, upon which subject also the co-operation of the city Members will be invited, and an inquiry the most searching will thus be opened up, and will tend to show that on the part of the Inspector of Collieries there is a great indifference.

I have before me the Mines Report of 1880, wherein the admission is made that I have made previous complaints, with the assertion that they have been immediately remedied. What is the answer to this? Three miners have been burnt in the Minmi mine recently by explosions of gas. Two of these accidents were only three weeks or one month apart from each other, and at a time when no night furnacemen were employed. If atmospheric pressure has any influence (which you will admit) in generating gas and its accumulation in mines, surely in a climate like ours, of sudden atmospheric change, it is a first condition in ventilation that the apparatus be kept in motion. Minmi is not the only place where false economy requires your immediate attention, and, what is more, constant attention.

I will put the question thus, with your permission:—"It is better that accidents should be prevented by inspection, than that it should be said accidents, in the cases cited, are the inspectors."

The report of Inspector for Collieries requires attention, and, to those unacquainted with the Act, is very misleading. For instance, it is said of such a mine there are "280 men and horses, &c., in the mine, for whom 35,000 cubic feet of air per minute is introduced, which is in excess of the minimum quantity required by the Act."

The Inspector does not state whether the main current is divided into the requisite number of splits, and fresh air supplied to every section of seventy men, and it is certainly impossible to be so where the anemometer will not turn, which is recorded by the local inspectors in several recent examinations, some of which are in my possession.

In conclusion, we, the undersigned, request your immediate attention towards remedying the cause of complaint—defective ventilation—in some parts of the collieries in the district.

DAVID MITCHELL, Chairman.

J. M'FADYEN, Treasurer.

JAMES CURLEY, Secretary.

No.

No. 2.

The Examiner of Coal-fields to The Under Secretary for Mines.

Sir,

Coal-fields Office, Newcastle, 22 October, 1881.

I beg to forward herewith, for the information of the Honorable the Secretary for Mines, a letter received from the Chairman, Treasurer, and Secretary of the Hunter River District Coal-miners' Association, bringing under notice an alleged defective working of the Coal Mines Regulation Act, 1876, and the apparent indifference of this Department in endeavouring to see that the provisions of the Bill are carried out, with the Inspector's report thereon and a copy of my reply.

See Enclosures.

I have, &c.,

JOHN MACKENZIE,

Examiner of Coal-fields.

The Miners' General Secretary may be informed that the Examiner of Coal-fields having replied to the only specific charge made, and having asked for further information respecting the charges made in general terms, there does not appear to be any action for this Department to take until such information has been supplied.—H.W., 25/10/81. Submitted.—To be informed accordingly.—A.R., 26/10/81.

[Enclosures to No. 2.]

Messrs. Curley and others to The Examiner of Coal-fields.

Sir,

Hamilton, 30 September, 1881.

I beg respectfully to bring under your notice the defective working of the Coal Mines Regulation Act of 1876, and the apparent indifference of your Department in endeavouring to see that the provisions of the Bill are carried out. That the subject has assumed an important aspect you may infer when I state the miners of the district have placed myself and colleagues in a position to take all necessary steps towards a remedy. A series of questions have therefore been drafted to be placed in the hands of the Members for the county, upon which subject also the co-operation of the city Members will be invited, and an inquiry the most searching will thus be opened up, and will tend to show that on the part of the Inspector for Collieries there is great indifference.

I have before me the Mines Report of 1880, wherein the admission is made that I have made previous "complaints," with the assertion that they have been immediately remedied. What is the answer to this? Three miners have been burnt in the Miami mine recently by explosions of gas. Two of these accidents were only three weeks or one month apart from each other, and at a time when no night furnaceman was employed. If atmospheric pressure has any influence (which you will admit) in generating gas and its accumulation in mines, surely in a climate like ours, of sudden atmospheric change, it is a first condition in ventilation that the apparatus be kept in motion. Miami is not the only place where false economy requires your immediate attention, and, what is more, constant attention. I will put the question thus, with your permission:—"It is better that accidents should be prevented by inspection, than that it should be said accidents in the cases cited are the inspector." The report of the Inspector for Collieries requires attention, and to those unacquainted with the Act is very misleading. For instance, it is said of such a mine, there are "280 men and horses, &c., in the mine, for whom 35,000 cubic feet of air per minute is introduced, which is in excess of the minimum quantity required by the Act." The Inspector does not state whether the main current is divided into the requisite number of splits, and fresh air supplied to every section of seventy men; and it is certainly impossible to be so where the anemometer will not turn, which is recorded by the local Inspectors in several recent examinations, some of which are in my possession. In conclusion, we, the undersigned, request your immediate attention towards remedying the cause of complaint—defective ventilation—in some parts of the collieries in the district.

DAVID MITCHELL, Chairman.

JOHN M'FADYEN, Treasurer.

JAMES CURLEY, Secretary.

Urgent. The Inspector of Collieries for report. To be returned.—J.M., 4/10/81.

Being unable to understand the exact meaning of the statement in the letter, "The Inspector is indifferent, &c.," I can scarcely be expected to furnish a reply to it. As to the statement "That the Inspector's report does not state whether the main current is divided into the requisite number of splits, &c.," I reply that, although not so stated in the report, nevertheless such currents are divided into district currents; and the omission shall be made good in future.—T.L., 5/10/81.

The Examiner of Coal-fields to Mr. James Curley and others.

Gentlemen,

Coal-fields Office, Newcastle, 22 October, 1881.

I have the honor to acknowledge the receipt of your letter of the 30th ultimo, bringing under notice an alleged defective working of the Coal Mines Regulation Act of 1876, and the apparent indifference of this Department in endeavouring to see that the provisions of the Bill are carried out.

2. In reply, I beg to inform you that as the only specific complaint brought forward in your letter had reference to the Miami mine, I recently made it my business to make a thorough examination of Brown's colliery, by inspecting all the places where the men were at work, measuring the quantity of air circulating through the different districts or splits and the men's working places, as well as the quantity of intake and return air travelling through the mine, and found that the main current was divided into the required number of splits, and not only was there a far larger quantity of air passing through the mine than the Coal Mines Regulation Act requires, but it was properly circulated, and the mine well ventilated.

I asked each miner at work, amongst other questions, whether he considered the air he was working in was good or bad, and if he had been working in any badly ventilated places during the year, and they said they had no reason to complain of the air they were then or previously working in; that they had worked where the air was slack and deficient, when their boards, &c., had been driven past where a "cut-through" was about being "put through."

I also inspected the bords and headings where Hunter, Gilder, Hull, Davies, Bothwell, Duggan, and Andrews were burnt by explosive gas, and made inquiries as to their injuries. Hunter, Gilder, Davies, and Bothwell being only slightly burnt, it was not considered necessary by the manager to report their accidents, and the men themselves did not consider they received "serious personal injury," or that it was necessary for the manager to have reported their injuries.

The manager informed the Inspector that Duggan and Andrews had been burnt by explosive gas, and that officer reports to me that upon visiting Duggan he found he was apparently only very slightly burnt, and did not consider he had received serious personal injury.

On the 6th instant I went to the Newcastle Hospital to see Duggan, and found that his back, arms, face, and one hand had been severely scorched; and although the Inspector, when visiting him, formed the impression that no serious personal injury had been received, the case has, in my opinion, proved to be one of that character.

Dr. Harris says, whilst at the hospital, his life was for some days in danger, and Duggan says for over two weeks he was in such pain that he could not lie on his back to sleep; but, from his own account of the occurrence, I conclude that had he exercised ordinary caution the accident would not have happened.

4. In the No. 10 heading, where the seam of coal generates the most gas, and there were 42 men, boys, and horses at work (in the two shafts), I found there were 10,080 cubic feet of air per minute circulating through the working-places, and was informed that there was seldom a less quantity travelling through this part of the mine. I saw Davies, who was slightly scorched by an explosion of gas about eighteen months since, and he told me he did not consider his was a case which it was necessary to report; that he was working in a 6-foot heading at the time, and about 30 yards before the current of air. In No. 12 heading, where Andrews was burnt, there were 4,950 cubic feet of air per minute circulating through it, and only two men working in it. Mr. Brown has since my first visit appointed a fireman, whose special duty it will be to go round all the places known to contain explosive gas before the men go to work.

Previously

Previously it was John Morgan's (the deputy's) duty to go round the dip workings, wherever fire-damp was likely to exist. And as the quantity of gas generated by the seam of coal is at present small in quantity, and there is a good current of air circulating, it appears to be unnecessary for the manager to do more than he has promised for the prevention of accident from such a source—a view supported by the miners themselves, of whom inquiry was made on the spot.

5. In conclusion, I may observe, that if you will be so good as to mention specifically the other collieries in this district to which you refer, as not carrying out the provisions of the Act, I shall take effective steps for ascertaining whether the law is complied with in each case, for the reports received from the Inspector of Collieries for some time have led me to suppose that there were no causes for complaint.

I have, &c.,

JOHN MACKENZIE,

Examiner of Coal-fields.

No. 3.

The Under Secretary for Mines to Mr. James Curley, Miners' General Secretary.

Sir,

Department of Mines, Sydney, 28 October, 1881.

See No. 1.

Referring to your letter of the 19th instant, in which you bring under notice a communication made to the Examiner of Coal-fields, touching the alleged defective working of the Coal Mines Regulation Act, 1876, and the accidents caused by explosions of gas at Messrs. Browns' Minmi Colliery, I have the honor, by direction of the Secretary for Mines, to inform you, that as the Examiner has replied to the only specific charge made and has asked for further information respecting such charges as have been made in general terms, there does not appear to be any action for this Department to take until such information has been supplied.

I have, &c.,

HARRIE WOOD,

Under Secretary.

No. 4.

Mr. James Curley, Miners' General Secretary, to The Examiner of Coal-Fields.

Sir,

Hamilton, 7 November, 1881.

See No. 2

I have the honor to acknowledge the receipt of your communication dated 22nd October, and referring to the second clause therein, as to the answers given by the miners respecting the ventilation being of a generally satisfactory character; this was, as I am given to understand, when you were accompanied by Messrs. J. Brown, J. Croft, and G. Durie, all representing the management, while the miners were unrepresented by any of their number, exception being taken to Mr. J. Patrick, an experienced practical miner, now in the employ of the men as check-weigher, going down the mine in company with you, so that it is nothing unreasonable to conclude the inquiry and examination partook of a partial, one-sided, and unsatisfactory character, inasmuch that a sense of intimidation would under such circumstances be at once produced. This view of the case is supported by the fact that the delegate's two sons had been some days previous to this peremptorily discharged from their work in the fitting shops adjacent to and in connection with the colliery. Mr. W. M. Williams, the delegate, I know to be a man of exemplary character, while his sons had, by their industry, won the respect and esteem of the overseers in their department.

This is most inconsistent with the courtesy uniformly observed by the gentlemen representing the firm, whom I have met on several occasions at meetings between masters and men.

Admitting, however, the answers to have been given as stated, the evidence, judging from the number of accidents by explosions of gas and the time at which they occurred, it is quite evident that there has been grave indifference on the part of the management, and still more on the part of the Inspector for Collieries.

In clause 3 of your communication you state, "Hunter, Gilder, Hull, Davies, Bothwell, Duggan, and Andrews were burnt by explosive gas,"—"Hunter, Gilder, Davies, and Bothwell being only slightly burnt, it was not considered necessary by the manager to report their accidents, and the men themselves did not consider they received serious personal injury or that it was necessary for the manager to have reported their injuries." The opinion of both manager and men in reference to a report is perverse in the extreme, and probably was quite different on the dates when the accidents took place, and confirms what has been said regarding indifference. If the Inspector committed a mistake in the case of Duggan's accident, which you admit, neither the management nor men are more judicious (but the latter are not requested to report, and why you include them with the management I fail to understand). What is serious personal injury? When miners are knocked down and severely burnt by gas explosions, and incapacitated from following their employment for two or three weeks together. It must be serious personal injury when these accidents are concurrent and take place at intervals of a few weeks together. It is not the slight trifling matter represented. And more especially when you consider the time at which the accidents took place, when the men had been some hours at work, the air would then be in motion, however defective, and forced about by the skips in motion, and yet gas collected in sufficient quantity to explode, which explains two important facts—

1. That there was very defective ventilation at the time of these gas explosions, or
2. That there was that amount of gas collecting in the mine requiring vigilant attention, and, in case of an accident, rendering a report imperatively necessary.

The Colliery Inspector in Duggan's case showed not only indifference and a want of judgment, but is culpably negligent for not making an examination on the spot; and in reference to such examinations it would be more satisfactory if the miners were represented, and the press admitted. This would constitute something like an impartial Board of Inquiry. I cannot refrain from dissent regarding Duggan's want of caution as expressed by you. Did anyone warn him against going into his working-place on the morning of the explosion? No; and as he advanced into it the gas exploded about 15 yards from the working face. This was shortly after Hunter's accident. Duggan not only suffered serious personal injury, but, as you state, Doctor Harris considered his life was endangered; and yet the Colliery Inspector deemed this most serious case of such trifling importance that neither an inquiry was held nor an examination made. Is this in conformity with the Act? In attributing the accident to a want of ordinary caution there appears to be something strangely inconsistent, especially when you consider Hunter's, Gilder's, and other accidents in connection with it. Why not attribute it to careless management and indifferent inspection? The evidence in favour of this latter conclusion is overwhelming.

Both

Both Duggan's and Andrew's accidents were occasioned by gas explosions as they were advancing to the working face in the morning, which goes to show that no fireman had been in these places on the morning of the accidents, or he would have noticed the gas, and warned the miners against entering them, and thus have prevented all approach to danger.

Whatever may have been the state of the ventilation when the examination was made, or the quantity of air passing in the mine,—at the time of the whole of these seven accidents by gas explosions, the whole of which were more or less serious, there was not that quantity of air passing in the mine stipulated by the Act, wherein it is stated—(2) “An adequate amount of ventilation shall be constantly produced in every mine, to dilute and render harmless noxious gases to such an extent that the working places of the shafts, levels, stables, and workings of such mine and the travelling roads to and from such places shall be in a fit state for working and passing therein.”

I enclose you a copy of statement which I have taken from William Hunter, in the presence of Mr. Patrick, which confirms what I have stated relative to the whole question:—

1. Indifference on the part of the management regarding the ventilation of the mine.
2. Negligence in not using more precaution to prevent accidents by gas explosions, and when such accidents did occur, in not reporting the same to the Examiner for Coal-fields.
3. Indifference on the part of the Colliery Inspector, who must have seen from the local press, that miners were burnt by gas explosions at Messrs. Browns' Colliery, Minmi, and when informed of the same by report from the management to apparently treat the matter with contempt, as in Duggan's case.
4. The incorrectness of the Inspector's reports, in the face of the facts brought under notice.
5. That there is room for improvement regarding the way in which the inquiries and examinations are made.

With regard to clause 5 of your communication, before I refer to it, I would draw your attention to a mine abandoned, but inundated by water, in close proximity to the Messrs. Browns' Collieries now in work, and would ask you respectfully whether the Inspector has reported this matter to you, and whether any steps are taken as a safeguard in the event of the old tunnel workings piercing the abandoned workings of the inundated mine, and if there are efficient appliances in case of escape on account of any unexpected accident arising from such a source of danger.

In conclusion, respecting clause 5, and the specific naming of the other collieries in this district, I would mention Wallsend, Borchole, and Lambton, and for any reference to the state of ventilation being defective in these mines in any particular portions thereof, would refer you to the recent local Inspectors reports as entered in the book at the respective Colliery Offices named.

I am, &c.,

JAMES CURLEY,
Miners' General Secretary.

We the undersigned concur in the above statement.

DAVID MITCHELL, Chairman.
J. M'FADYEN, Treasurer.

[Enclosure to No. 4.]

William Hunter states as follows:—On the morning when I was burnt by an explosion of gas, I working in No. 14 front heading. The heading was about 27 yards in past the cut-through; my mate was working in back heading, which was about 6 yards past the cut-through; we had been working in these places about three weeks. Before commencing to work in them, we heard from report by the men there was fire-damp in these places; my mate, Alfred Conway, went to Mr. Thomas, the manager, and told him that we knew nothing about fire, and what the men had told us concerning these places. This was on the Monday morning before commencing to work them. Thomas, in reply, said there was no fire in the place, and if there was Durie would tell them. Durie at no time warned us about fire-damp. He said if we brushed the place with our shirts we would take no hurt. On the morning on which the accident occurred I brushed the place as usual, and had been working about two hours and a half—from half-past 6 to 9 o'clock. I had been back from the face of the heading about 25 yards, for breakfast, only a few minutes, and on returning to the face I was brushing the place, and, when about 5 yards from the face, an explosion of gas took place. I was struck on the breast, and knocked down by the force of the explosion, and fell on my breast.

I thought it was a serious matter at the time, and was unable to follow my work for two weeks after.

I think the accident should either have been reported or steps taken to clear the gas from the places.

Mr. Durie came to see me and offered me a place to work elsewhere in the mine, and said I would go back there no more. Neither Mr. Lewis, the Colliery Inspector, nor Mr. Mackenzie visited me at the time I was off work. When I answered Mr. Mackenzie's questions Mr. J. Brown, J. Croft, and G. Durie were present, and I felt somewhat intimidated by their presence, and did not care to say anything reflecting on the management, for fear I should be dismissed.

I am a practical miner, having worked in mines for eight years. The day on which Mr. Mackenzie visited us in one of the No. 6 headings and said the air was good enough, there were very few men in that part of the mine, as the pit was filling slack and nearly all the men were cleared out.

WILLIAM HUNTER.
JOHN PATRICK.
JAMES CURLEY, Miners' General Secretary.

“Burley's Hotel,” Minmi, 31 October 1881.

The Inspector of Collieries for explanation. Copy of my letter referred to in this communication forwarded herewith—J.M., B.C., 14/11/81.

In this statement I am blamed for indifference, but not knowing the meaning of the same as used herein, I am therefore unable to reply.

2. For the incorrectness of my report, to which I think that the result of the examination by the Examiner of Coal-fields is a sufficient answer.

3. For neglecting the accidents by explosions of fire-damp, to which I answer that I investigated each case brought under my notice.—T.L., 15/11/81.

No. 5.

The Miners' General Secretary to The Secretary for Mines.

Sir,

Hamilton, 8 November, 1881.

I have the honor to state that a further communication on the defective working of the Coal Mines Regulation Act, 1876, and recent accidents by explosions of gas at the Messrs. Browns' Colliery, Minmi, has been forwarded to the Examiner of Coal-fields.

A statement which I have taken from one of the miners burnt by explosive gas has also been forwarded, which confirms the allegations made respecting this important subject.

I have, &c.,

JAMES CURLEY,
Miners' General Secretary.

Ask the Examiner what has been done in this matter.—H.W., 2/12/81.

No. 6.

Mr. James Curley, Miners' General Secretary, to The Examiner of Coal-fields.

Sir,

Hamilton, 28 November, 1881.

I have the honor to respectfully call your attention to the defective state of ventilation in connection with the drive at Raspberry Gully, South Waratah. The drive is in 500 yards, more or less. Air is conveyed to the workmen by means of troughs laid on the floor of the drive, and when a change of shifts takes place water sometimes accumulates in certain places of the drive, so as to almost overflow the pipes and air current within. Gas is occasionally visible, so that the danger to the life of the workmen must be very great at times. At the time when the inspector visited the drive recently, the workmen had been withdrawn a half shift the day previous.

I have, &c.,

JAMES CURLEY,
Miners' General Secretary.

No 7.

The Examiner of Coal-fields to Mr. James Curley, Miners' General Secretary.

Sir,

Coal-fields Office, Newcastle, 1 December, 1881.

See No. 6.

With reference to your letter of the 28th ultimo, calling my attention to the defective state of ventilation in connection with the drive at Raspberry Gully, South Waratah Colliery, I beg to inform you that, upon going to the colliery on the 29th ultimo, I found that Mr. Green (the colliery manager) was connecting the trough with the Charles pit down-cast shaft, for the purpose of ascertaining whether the furnace would ventilate the drive better than the fan has lately done, and, as the men had not been at work the previous day, I arranged to go on the 30th idem, and see how the new method answered. Upon arriving there on the 30th ultimo, I found that the shaft which the men had to go down was full of smoke from the furnace. I then discussed with Mr. Green the advisability of remedying this, either by making Charles pit the up-cast or putting a landing at the 6-foot seam, in the present up-cast or furnace shaft, so that the men could go to their work down Charles pit and from thence to the bottom of the furnace shaft free of smoke, &c. This Mr. Green will do immediately, and, when completed, inform me of, and whether the ventilation is improved.

2. With respect to the gas, Mr. Green informs me that the overman is instructed, whenever the men leave the face of the drive, to examine the tunnel and see that it is free from gas, and safe to work in, before the men resume their work; and that whenever gas has been seen it has accumulated during the stopping of the "fan," from 2 o'clock on Saturday night to 6 o'clock on Sunday morning.

I have, &c.,

JOHN MACKENZIE,
Examiner of Coal-fields.

No. 8.

The Under Secretary for Mines to The Examiner of Coal-fields.

Sir,

Department of Mines, Sydney, 8 December, 1881.

I have the honor to inform you that a letter has been received from Mr. James Curley, the Miners' General Secretary, to the effect that a further communication has been made to you respecting the alleged defective working of the Coal Mines Regulation Act of 1876, and the recent accidents by explosions of gas at the Messrs. Browns' Colliery, Minmi, and I accordingly request that you will be so good as to state what has been done in the matter.

I have, &c.,

HARRIE WOOD,
Under Secretary.

Copy of Mr. Curley's letter, &c., forwarded herewith. Have visited the collieries complained of, and shall reply to his letter early next week. I also forward copies of letters respecting the Raspberry Gully drive.—J.M., 10/12/81. The Under Secretary for Mines.—B.C., 10/12/81.

No. 9.

The Examiner of Coal-fields to The Under Secretary for Mines.

Sir,

Coal-fields Office, Newcastle, 14 December, 1881.

See No. 8.

Adverting to your letter of the 8th instant, with reference to a letter received from Mr. James Curley, the Miners' General Secretary, and my blank cover communication of the 10th idem, I have the honor to forward you, for the information of the Honorable the Secretary for Mines, a copy of my reply to Mr. Curley and others' letter.

I have, &c.,

JOHN MACKENZIE,
Examiner of Coal-fields.

It does not seem necessary for the Department to take any further steps in this matter, unless further moved by the Miners' General Secretary, who is in possession of Mr. Mackenzie's report, copy of which is herewith.—H.W., U.S., 19/12/81. Await further communication.—A.R., 20/12/81.

[Enclosure to No. 9.]

The Examiner of Coal-fields to Mr. J. Curley and others.

Sir,

Coal-fields Office, Newcastle, 13 December, 1881.

In acknowledging the receipt of your letter of the 7th ultimo, referring to the second paragraph of my communication of the 22nd October last, with regard to the answers given to me by the miners at the Minmi Colliery, respecting the ventilation, and complaining that the inquiry and examination held on the occasion was of a partial, one-sided, and unsatisfactory character, owing to the men having been unrepresented, I beg to inform you that Mr. John Brown, the colliery manager, having objected to allow Mr. J. Patrick (who, I was informed, was the only person paid by the men at that colliery), to accompany

accompany me during my visit, I had no alternative but to make the examination without him, although I may state that the colliery manager was entitled, if he thought fit, to prevent Mr. Patrick from entering the mine. As stated in my letter of 22nd October last, the mine was, at the different days I examined it, well ventilated, whatever it may have been previously; and, as I also informed you, the reports from the Inspector of Collieries had for some time led me to suppose there were no causes of complaint.

2. With respect to your remarks about persons injured by explosive gas at the same colliery, I am of opinion that it would be better and more satisfactory if all such injuries, whether serious or not, were reported to the Examiner of Coal-fields by the owner or manager of the mine, although the Act does not make it imperative that such should be done.

I am also inclined to think that the presence of explosive gas, and the injuries received therefrom, were treated too lightly by the manager previous to my visiting the colliery on 4th October last, since which time a "fireman" has been appointed, whose special duty is to go around all the places known to contain explosive gas, before the men go to work. Duggan told me he was about 30 yards in his bord, past the district air current, and about 5 yards from the face, not 15 yards, when the gas fired, and where I was shown his lamp was found was about the distance stated by him to me.

3. Upon making inquiries at the mine, and examining Messrs. Browns colliery plans, I find that the nearest drives going towards the Minmi old abandoned workings inundated with water, are 35 chains, at least, distant from them, and consequently cannot be in close proximity thereto.

4. The proposal in the fourth paragraph of your letter, that the miners should be represented and the Press admitted at official examinations of collieries, is not provided for in the Act, and cannot, therefore, be complied with.

5. Adverting to the reference made in the concluding paragraph of your letter to the Wallsend, Borehole, and Lambton Collieries, I beg to inform you that I have recently made it my business to make a thorough examination of the Newcastle Wallsend Colliery, by inspecting nearly all the places where the men were at work, measuring the quantity of air circulating through the different districts (or splits) and the men's working places, as well as the quantity of intake and return air travelling through the mine.

6. On the first day, I was accompanied by William Willis (overseer), and John Naismith and David Beveridge (the men's check inspectors), whom the colliery manager permitted to accompany me through Mr. Willis' district.

In the engine bank road there were 21,600 cubic feet per minute of intake air travelling down it, and 13,860 cubic feet per minute of intake air circulating along the travelling road.

In the No. 1 district (or split) where the air enters it, near the travelling road heading, there were 5,910 cubic feet per minute of intake air for the supply of 70 men, boys, and horses at work; between Nos. 15 and 16 bords it measured 6,000, and between 18 and 19 bords 4,940 cubic feet per minute, thus showing the irregularity of the current of air circulating through this split, and that there is not the quantity of air circulating through it which the Coal Mines Regulation Act provides for, but Mr. Neilson expects that when the water shaft, now in course of being connected with the workings in this district is completed, the ventilation will be improved and exceed the requirements of the Act.

In the No. 2 district (split) there were only 11,040 cubic feet of intake air per minute coming down the "air shaft," for 133 men, boys, and horses at work there, and only 5,670 cubic feet per minute travelling along the air-way past the last working place in the split, which is far less than the Act requires. Mr. Neilson (the manager) informed me that there was and had been for some time cause for complaint with respect to a deficiency of air in this split, but anticipated that when the new "water shaft" in course of sinking is in a few days completed, it will add to the quantity of air at present supplied to men in this part of the mine. On the second day I was accompanied by Mr. Neilson (the manager), Thos. Boasfield (overseer), and John Naismith and David Beveridge (the men's check inspectors), who Mr. Neilson again permitted to accompany me through Mr. Boasfield's district, where I found there was the requisite quantity of air circulating through the different "splits," and the provisions of the Act complied with. The Lambton heading (or No. 1 district) having 6,031, 1,377 and 9,800, equal to 17,208 cubic feet of air per minute (by three intakes) for 141 men, boys, and horses working therein, and with respect to a complaint the men's check inspectors drew my attention to, which I examined, where six miners were working in bords where the air was supposed to have passed over "stagnant water." I am of opinion that as the manager is daily drawing large quantities of water away from it, and it is continually receiving fresh supplies, that the 4th general rule in section 12 of the Act, does not apply to it, and I would further add that I could not perceive any bad smells coming from it or the air passing over it. The quantity of return air passing through the furnace shaft was—

No. 1 Split	30,564	cubic feet per minute.
No. 2 Split	12,960	" "
No. 3 Split	34,280	" "
Total.....	77,804	

7. On my visit to the Borehole Colliery, where I met by appointment the colliery manager (Mr. Turnbull), and William Lee, and Samuel Selby (the men's check inspectors), and looked over their last reports. I found that the only places they had to complain of were in the south-east side of the south-east headings, and that since the Report dated 27th June last, W. H. Britton and Henry Turner had been appointed check inspectors in the place of Lee and Selby. The day previous to my visit Britton and Turner had come out of the mine and asked the manager if he would go down the pit and see if something could not be done to improve the ventilation where men were working in the south-east side of the south-east headings, as the air was heavily charged with "black-damp," so much so that in many places the men could not keep their lights burning. Mr. Turnbull immediately accompanied Britton and Turner to the places complained of, and after discussing the matter, he made such alterations, as not only gave the men a larger quantity of air, but also that of a better quality. Owing to the large quantity of "black-damp" which is given off and accumulates in this part of the A.A. Company's workings, when a hot north or north-west wind is blowing it makes it very difficult for the manager to always keep the ventilation in this district up to the requirements of the Act. When I examined this district with Mr. Turnbull and the check inspectors (Lee and Selby) the day after the alteration had been made, I found that the men were quite satisfied, and the places well ventilated.

8. I have been to the Lambton Colliery, and Mr. Croudace has marked for my guidance, &c., on the coal-fields record tracings, the different splits, doors, &c., and the way the air travels through and ventilates the mine, and also informed me that he was then busy making alterations and improvements in the ventilation. The check inspectors reports were lent me for my perusal, and to take copies of them if I wished to do so, and Mr. Croudace told me that he should have no objection to allow the check inspectors to accompany me in my examinations.

Upon seeing Mr. Jackson, on Saturday last, I find that the Lambton Colliery is not likely to be working this week, and I must therefore leave my examinations of it until my return from the western and southern districts, and completion of my

I have, &c.,
JOHN MACKENZIE,
Examiner of Coal-fields.

No. 10.

Mr. H. Winchester to Mr. J. Y. Neilson, Manager, Wallsend Collieries.

Sir, Coal-fields Office, Newcastle, 20 December, 1881.

With reference to your communication of the 19th instant, I beg to inform you that the Examiner of Coal-fields, who is now absent from Newcastle, anticipating your request, instructed me to furnish you with a copy of his report, if applied for, and accordingly have the honor to enclose the same herewith.

I will forward your letter to Mr. Mackenzie without delay.

I have, &c.,
HERBERT WINCHESTER.

No. 11.

Messrs. J. and A. Brown to Mr. James Curley, Secretary, Miners' Association.

Sir,

Newcastle, 23 December, 1881.

We are much astonished to find that you have written to the Examiner of Coal-fields in the following terms:—"I would draw your attention to a mine abandoned but inundated by water in close proximity to the Messrs. Brown's Collieries now in work, and would ask you respectfully whether the inspector has reported this matter to you, and whether any steps are taken as a safeguard in the event of the old tunnel workings piercing the abandoned workings of the inundated mine, and if there are appliances in case of escape on account of any unexpected accident arising from such a source of danger."

As the above statement is both malicious and untrue we would ask you to immediately furnish us with an explanation with respect to the same, and a withdrawal of the statement to the Examiner of Coal-fields.

In the event of this not being done we shall deal with the matter in whatever summary manner we may be advised.

We have, &c.,
J. & A. BROWN.

No. 12.

Mr. James Curley, Miners' General Secretary, to N. Melville, Esq., M.P.

Hamilton, 28 December, 1881.

CAN Minister Mines meet deputation Miners' Association on Friday. Arrange same and meet in Mines Office; reply paid.

JAMES CURLEY.

PRESENTED by Mr. Melville, M.P. In the absence of the Secretary for Mines I informed Mr. Melville that the deputation would be received on Friday at 11:30 a.m.—G.E.H. (for the U.S.), 29/12/81.

Submitted.—G.E.H. (for the U.S.), 31/12/81.

No. 13.

Minute of the Hon. The Secretary for Mines.

Re Deputation from Miners' Association, Hamilton and Newcastle.

INFORM the Examiner of Coal-fields that it is reported that a letter having been forwarded to him by the Secretary of the Miners' Association, he forwarded an extract from the letter to the proprietors of the coal mine (Messrs. Brown), regarding which the complaint was made. Inform further that in consequence of this action on the part of the Examiner the proprietors have threatened to take summary action against the Secretary of the Miners' Association.

The Minister requires a report from the Examiner on the subject.

A.R., 4/1/82.

The Examiner of Coal-fields.—B.C., 4/1/82., H.W.

No. 14.

The Examiner of Coal-fields to The Under Secretary for Mines.

MESSRS. J. and A. Brown's letter to me and my reply forwarded herewith, also letter from J. Y. Neilson and my answer thereto.—J.M., 11/1/82. The Under Secretary for Mines.—B.C., 11/1/82. Submitted.—H.W., 16/1/82. Read.—A.R., 16/1/82.

[Enclosure to No. 14.]

Messrs. J. and A. Brown to The Examiner of Coal-fields.

Sir,

Newcastle, 29 November, 1881.

Referring to your semi-official conversation with our Mr. Alexander Brown, relative to the near approach of our present workings at Brown's Colliery to some of the old Minni pit workings, and the probable consequences which might arise owing to any careless working, and of which careless working you had been informed by some person in authority, we should be very glad to know the name of your informant, as Mr. Brown when at the mines, made it his special business to inquire into the truthfulness or otherwise of the assertion, and we are glad to say, found it as uncalled for as it was untrue.

We have, &c.,
J. & A. BROWN.

The Examiner of Coal-fields to Messrs. J. and A. Brown.

Gentlemen,

Coal-fields Office, Newcastle, 7 December, 1881.

Referring to your letter of the 29th ultimo, asking me if I would tell you who it was informed me of the near approach of Brown's Colliery workings to some abandoned workings full of water in that neighbourhood, I beg to say that, in a communication received from Mr. Curley, the Miners' General Secretary, he states as follows:—"I would draw your attention to a mine abandoned but inundated by water in close proximity to the Messrs. Brown's Collieries now in work, and would ask you respectfully whether the inspector has reported this matter to you, and whether any steps are taken as a safeguard in the event of the old tunnel workings piercing the abandoned workings of the inundated mine, and if there are efficient appliances in case of escape on account of any unexpected accidents arising from such a source of danger."

I have, &c.,
JOHN MACKENZIE,
Examiner of Coal-fields.

Mr. J. Y. Neilson, Manager, Wallsend Collieries, to the Examiner of Coal-fields.

Sir,

Wallsend, 19 December, 1881.

I notice in to-day's issue of the *Newcastle Chronicle* a report of a Wallsend miners' meeting, wherein it is reported as follows:—

"Mr. Curley stated he had received a very lengthy report from Mr. Mackenzie, Examiner of Coal-fields, respecting the ventilation and stagnant water in the Wallsend workings, and on many things, &c.; and he, Mr. Curley, concludes by stating, if the meeting desired it, he would bring the report, and read it to the Committee."

In

In reference to the above, I think you will have a perfect recollection of the Wallsend check inspectors asking to make a special report, you stating that it was a special report, and you could only report to your superior officer or head of your Department; and they, the check inspectors, had only been allowed to accompany you round the works by the courtesy of the manager, who wished to give you (the Examiner) every information. You then asked me if I was going to make any special report. I at once replied, "Not until I see your official report."

Assuming the report in paper is correct, I do think that you have not acted in strict good faith, inasmuch as you have favoured the accuser with a report, and left the accused in ignorance of your conclusions; and to say the least, it is a most unfair and inequitable arrangement, and a position which you have taken without mature thought; and I shall be glad if you will give me the same copy of your report as you have given Mr. Curley, as I must now report this matter in full to my directors on the 21st inst., when I have no doubt but that they will be as much surprised as I have been to find that their Miners' Secretary has been furnished with information that has been withheld from the masters, the latter being equally interested and more responsible.

I am, &c.,
J. Y. NELSON,
Colliery Manager.

The Examiner of Coal-fields to Mr. J. Y. Neilson, Manager Wallsend Collieries.

Sir,

Lidsdale, 31 December, 1881.

I am very much surprised at your letter forwarded to me here, and in reply thereto, beg to state that I did exactly what I told you I should do, viz., reply to Mr. Curley's letter, and send you a copy of it (if you wrote for one), which I left instructions with Mr. Winchester to do in my absence; also, send a copy to the Honorable the Secretary for Mines.

I have, &c.,
JOHN MACKENZIE,
Examiner of Coal-fields.

Stockton Colliery.

SCHEDULE.

NO.		PAGE.
1.	The Examiner of Coal-fields to the Under Secretary for Mines, forwarding complaints by Mr. James Curley, and Mr. Inspector Dixon's report on the defective ventilation in Stockton Colliery; also, copy of notice served on the colliery manager, and minutes. 11 September, 1885	141

The Examiner of Coal-fields to The Under Secretary for Mines.

Sir,

Coal-fields Office, Newcastle, 11 September, 1885.

I have the honor to forward for the information of the Honorable the Secretary for Mines, a letter received from the Miners' General Secretary, and a report from Mr. Inspector Dixon, with respect to defective ventilation in the workings of the Stockton Colliery; also, copy of a notice I served upon the colliery manager, after having made an examination of the mine with Mr. Dixon, on the 9th instant.

2. I shall be obliged by you informing me what further action the Minister desires me to take in the matter. Whilst I was at the colliery on the 9th instant, a man came to make a commencement at putting a brattice down side of shaft, for the purpose of improving the ventilation, and complying with the requirements of the Coal Mines Regulation Act, 1876.

I have, &c.
JOHN MACKENZIE,
Examiner of Coal-fields.

Unless effective measures be adopted for improving the ventilation before he has time to initiate proceedings, he should proceed in terms of the Act to enforce compliance with its provisions.—H.W., 22/9/85. Submitted Approved—J. P. ABBOTT, 25/9/85. The Examiner of Coal-fields.—G.E.H. (for the U.S.), B.C., 28/9/85. The bratticeing down the side of shaft is now completed, and subsection 3, section 12, of the Coal Mines Regulation Act, 1876, is now complied with.—J.M., 30/9/85. The Under Secretary for Mines.—B.C., 30/9/85. No further action appears to be necessary.—H.W., 3/10/85.

[Enclosures.]

Mr. James Curley, Miners' General Secretary, to The Examiner of Coal-fields.

Sir,

Hamilton, 7 September, 1885.

I am instructed by the miners working at the Stockton Colliery, to respectfully draw your attention to the state of the ventilation, with a view that some improvement be effected.

I may add that the miners refused to enter the mine to-day, owing to alleged defective ventilation.

I have, &c.,
JAMES CURLEY,
Miners' General Secretary.

Mr. Inspector Dixon for report as early as possible.—J.M., 8/9/85. Seen and reported on.—J.D., 8/9/85.

Mr. John Dixon, Inspector of Collieries, to The Examiner of Coal-fields.

Sir,

Glebeland, 8 September, 1885.

According to your instructions sent by telegram, and also your verbal instructions when I saw you this afternoon, I went to the Stockton Colliery and made an inspection of the workings, and beg to report as follows:—

2. I got down into the workings a little before 4 o'clock p.m., and just at the time the miners were knocking off. There had been several shots fired prior to the men leaving their working places, and as a consequence I found the various headings almost filled with powder-smoke, and seemingly no current of air to clear the workings of said powder-smoke. I went through the various headings and bords and also into the return airway which has been holed into the shaft, but could nowhere find the current of air according to the Act, even for the twenty men employed below.

3. The cause of the above state of things is to be found in the fact that a tangye pump has been placed in the lower seam to force the water up the pit. It was found that owing to the steam having to be brought from the surface, the power was almost lost before reaching the pump, consequently the pump was not doing the work required, and the compressed air which had been used to ventilate the workings had to be used to work the pumps. When the the manager took the compressed

air from the workings and connected it to the pump, he endeavoured to make a provision for a supply of fresh air into the workings by connecting the back return airway with an 8-inch column of pipes into the shaft, and also connecting the pipes at the surface with the boiler stack. This arrangement, however, does not seem to act, and in my opinion is due partly to the contracted area of the pipes and partly to a portion of the surface connection being formed of canvas.

4. I saw the manager (Mr. Hardy), and urged on him the necessity of at once putting a quarter brattice in the shaft, which, in my opinion, would result in proper ventilation for the limited number of men employed. He (Mr. Hardy) informed me that it was his intention to put a brattice in, and that the timber for that purpose had been ordered several days since, but had not yet come to hand, and further added that to-morrow (Wednesday) morning, he would send a man on purpose and get the timber across if possible.

5. In conclusion, I beg to state, that it is about a week since the compressed air was put on the pump, but for the most part of last week the men were employed on the surface and there was very little work done below. The present arrangement to return the air was completed during yesterday (Monday) morning. I further beg to state that it is my intention to visit Stockton Colliery again to-morrow (Wednesday) morning, and I should very much like if you could make it convenient to accompany me and see the workings for yourself.

I have, &c.,

JOHN DIXON,
Inspector of Collieries.

The Examiner of Coal-fields to Mr. Joseph Hardy, Colliery Manager, Stockton Colliery.

Sir,

Referring to the inspection made by Mr. Inspector Dixon, on the 8th instant, and that made by Mr. Dixon and myself on the 9th instant, I hereby give you notice that you have neglected to comply with sub-section 3, section 12, of the Coal Mines Regulation Act, 1876.

I have &c.,

JOHN MACKENZIE,
Examiner of Coal-fields.

Great Western Zigzag Colliery.

SCHEDULE.

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No. 1.

The Examiner of Coal-fields to The Under Secretary for Mines

Sir,

Coal-fields Office, Newcastle, 8 April, 1884.

I beg to forward for the information of the Honorable the Secretary for Mines, correspondence, &c., and copy of a notice I have served on Mr. Wilson, of the Great Western Zigzag Colliery, Eskbank, for non-compliance with sub-sections 2 and 4, section 12, of the Coal Mines Regulation Act, 1876.

2. Mr. Wilson I have found to be an excellent promiser but a very bad performer in remedying any matters complained of when he was Manager of the Vale of Clwydd Colliery, and I shall be obliged by your informing me what further action the Minister desires me to take in the matter.

I have, &c.,

JOHN MACKENZIE,
Examiner of Coal-fields.

[Enclosures to No. 1.]

Mr. James Rowan, Inspector of Collieries, to the Examiner of Coal-fields.

Sir,

Eskbank, 9 February, 1884.

I have the honor to report for your information that I have inspected the Zigzag Colliery, and regret to state I found the ventilation not in a satisfactory condition.

I tested the ventilation in several parts of the mine, but did not get a register with the anemometer; there were slight currents of air passing at intervals caused by the action of the ascending and descending cages, but no proper method of ensuring a constant current of air through the workings. I called the manager's (Mr. Wilson's) attention to the upcast side of the shaft, where a small pumping engine and water tank are placed, not giving sufficient space for the ventilation to pass. I requested Mr. Wilson to remove the abovenamed tank and engine to the bottom of the shaft, or otherwise place them so as to allow a sufficient space for the ventilation to pass. Thus he promised to do.

I may state the above is a new colliery, commenced about two months ago, so the levels, and headings, &c., are not a great distance from the bottom of the shaft. Mr. Wilson desires a little time granted to enable him to make the necessary improvements in connection with the ventilation. He said in four weeks from date of inspection he would have the tank and engine removed from the upcast side of the shaft, and the ventilation made all right.

In conclusion, I beg to state, if the tank and engine referred to be removed, and a furnace or steam jet be placed at the bottom of the upcast, it will produce a plentiful supply of ventilation. About 30 men employed underground; distance from the bottom of the shaft to the working faces, about 90 yards.

I received no complaints from workmen.

I have, &c.,

JAMES ROWAN,
Inspector of Collieries.

Seen, and Mr. Wilson written to, 14 February, 1884—J.M., 14/2/84.

The Examiner of Coal-fields to Mr. W. Wilson.

Sir,

Coal-fields Office, Newcastle, 14 February, 1884.

I beg to acknowledge the receipt of yours of the 12th instant, and forward you three copies of special rules.

2. In reply to paragraph 2, I have to request that you will have the matters complained of remedied in four weeks from the time of Mr. Inspector Rowan's inspection, in accordance with the promise you made him.

3. Have you removed the tank and engine to the bottom of the shaft or placed them so as to allow a sufficient space for ventilation to pass according to promise.

I have, &c.,

JOHN MACKENZIE,
Examiner of Coal-fields.

Mr.

Mr. W. Wilson to The Examiner of Coal-fields.

Sir, Zigzag Colliery, 12 February, 1884.
I expected you to send me, according to promise, the colliery rules; kindly forward as soon as possible, as I am now in fairly working order; got about thirty miners employed.
I have not got the air return quite up to the Act, as all the places are close to the shaft, but will have everything completed one month from date. I have, &c.,
WM. WILSON.

Mr. James Rowan, Inspector of Collieries, to The Examiner of Coal-fields.

Sir, Eskbank, 3 April, 1884.
According to instructions received I have inspected the Zigzag Colliery, and regret to state I found the ventilation not satisfactory.
The small engine and water tank referred to in my last report are removed a small distance back in the shaft where they were stationery, making a space about 9 square feet for the upcast ventilation to pass; also a small furnace has been built at the bottom of the shaft. I tested the air current in four different places in the main airway, but there was not a sufficient current going to work the anemometer; the only place I got a register was in the return airway immediately before the air current passed through the furnace; I got a register of 5,400 cubic feet of air per minute.
I showed Mr. Wilson (manager) that nearly all the current was passing round the bottom of the shaft without going into the workings. On examining the working faces I found a large percentage of furnace smoke diffused through the workings caused by the mid-wall on the furnace side of the shaft being defective. I also examined the air stoppings, which consist of a mass of loose rubbish not sufficient to guide the ventilation into the working faces.
In conclusion, I beg to state the mid-wall on the furnace side of the shaft is defective, and ought to be thoroughly repaired to prevent the furnace smoke from mixing with the downcast current of air, also that proper stoppings should be put in and the air current brought forward to the working faces. I am further of opinion that 9 square feet is not a sufficient space for the ventilation of the colliery to pass through. Nevertheless, if the mid-wall and stoppings are thoroughly repaired, this space may do in the meantime, seeing a new shaft has to be sunk to meet the requirements of section 12, sub-section 1, of the Coal Mines Regulation Act. I have, &c.,
JAMES ROWAN,
Inspector of Collieries.

The Examiner of Coal-fields to Mr. W. Wilson, Great Western Zigzag Colliery, Eskbank.

Sir, Coal-fields Office, Newcastle, 8 April, 1884.
In view of a recent report I have received from Mr. Inspector Rowan on the Great Western Zigzag Colliery, and in accordance with the provisions contained in the 31st section of the Coal Mines Regulation Act, 1876, I hereby give you notice that you have failed to comply with sub-sections 2 and 4, section 12, of the said Act. I have, &c.,
JOHN MACKENZIE,
Examiner of Coal-fields.

[Minutes on above.]

The Examiner should give the manager notice that he will, on a certain day to be fixed in the notice, visit the Colliery, and, if he finds that the rules have not been complied with, he will at once proceed to enforce the penalty.—H.W., 16/4/84.

Submitted. Approved.—J. P. ABBOTT, 17/4/84. The Examiner of Coal-fields.—T.C.B. (for U.S.), B.C., 18/4/84.

No. 2.

The Examiner of Coal-fields to The Under Secretary for Mines.

Sir, Coal-fields Office, Newcastle, 7 May, 1884.
In compliance with the instructions of the Honorable the Secretary for Mines on my letter of 8th ultimo, conveyed to me under your blank cover of the 18th idem, I beg to enclose copy of a letter I wrote Mr. Wilson on 27th April last, and to state that Mr. Inspector Rowan having to visit the Colliery *re* hanging up of special rules, I instructed him to make a further report on the state of the ventilation.
2. I beg to forward Mr. Inspector Rowan's report, from which it appears that the provisions of the Coal Mines Regulation Act, 1876, are now complied with at that Colliery. I have, &c.,
JOHN MACKENZIE,
Examiner of Coal-fields.

Seen.—H.W., 12/5/84.

[Enclosures to No. 2.]

The Examiner of Coal-fields to Mr. W. Wilson, Great Western Zigzag Colliery, Eskbank.

Sir, Coal-fields Office, Newcastle, 27 April, 1884.
I hereby give you notice that, on or about the 10th proximo, I shall visit the Zigzag Colliery, and if I find that the provisions of the Coal Mines Regulation Act, 1876, referred to in my letter of the 8th instant, are not then complied with at that colliery I shall at once proceed to enforce the penalty.
2. I have also instructed Mr. Inspector Rowan, who is now in the West, to make another early inspection and report thereon. I have, &c.,
JOHN MACKENZIE,
Examiner of Coal-fields.

P.S.—Have received no reply from you to my letter of 9th April *re* hanging up of special rules.

Mr. W. Wilson to The Examiner of Coal-fields.

Sir, Zigzag Colliery, 30 April, 1884.
Yours of 28th to hand and contents noted. I have had copy of special rules hung up at the colliery and the miners' attention drawn thereto. The rules have been hung up over three weeks.
Hope to see you next month. I have, &c.,
W. WILSON.

Mr. James Rowan, Inspector of Collieries, to The Examiner of Coal-fields.

Sir, Eskbank, 2 May, 1884.
For your information, I have the honor to inform you that I have this day inspected the Zigzag Colliery *re* defective ventilation.
2. Since my last inspection, on April 2nd, an improvement has been made in the ventilation, viz., several air stoppings are put in, the mid-wall overhauled, and the air current brought forward to the working faces.

3. I tested the air-current and got a register with the anemometer of 2,310 cubic feet of air per minute in one current. About eighteen men employed underground.

4. I may also state, a copy of the special rules are hung up in a conspicuous place at the mine, and the attention of the miners called thereto.

5. In conclusion, I beg to state, the spirit of the Coal Mines Regulation Act in the abovenamed colliery has been complied with.

I have, &c.,

JAMES ROWAN,

Inspector of Collieries.

Telegram from Mr. James Rowan, Inspector of Collieries, to the Examiner of Coal-fields.

Wollongong, 7 May, 1884.

ZIGZAG Colliery. The provisions of the Coal Mines Regulation Act complied with.

JAMES ROWAN.

Katoomba Colliery.

SCHEDULE.

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No. 1.

Mr. G. Clark to The Secretary for Mines.

Sir,

Katoomba, 6 December, 1883.

Would you kindly inform the Chief Inspector of Mines to pay a visit to the mine of Katoomba, in regard to the air, as the place is in that sort of state that there is no air in it.

I have, &c.

GEORGE CLARK.

P.S.—I hope you will not let it be known as to who was the informer.—G.C.

The Chief Inspector for the Western District. Mr. Inspector Rowan's report hereon forwarded for the Minister's information.—J.M., 11/1/84. The Under Secretary for Mines, B.C., 11/1/84.

From the Inspector's report it appears the proper quantity of air is sent into the mine, and that steps were being taken to perfect the distribution. The Examiner should see that the work is carried on with proper expedition.—H. W., 17/1/84.

Submitted. Approved.—J. P. ABBOTT, 18/1/84. The Examiner of Coal-fields, B.C., 19/1/84.—H.W.

The work has been completed, and the defective ventilation remedied. *Vide* Mr. Inspector Rowan's report herewith.—J.M., 4/2/84. The Under Secretary for Mines, B.C., 4/2/84. Seen.—H.W., 6/2/84.

No. 2.

Telegram from The Examiner of Coal-fields to Mr. J. Rowan, Inspector of Collieries.

HAVING got telegram at "Imperial," dated 7th instant, from Mines, saying that complaint has reached that office that supply of air in Katoomba Colliery is insufficient, come and see me "Hayles' Hotel," Blackheath, six train to-morrow morning. Bring anemometer and your last report, so that you may inspect it that day, and see me Saturday after inspection.

JOHN MACKENZIE.

No. 3.

Telegram from the Examiner of Coal-fields to The Under Secretary for Mines.

Blackheath, 14 December, 1883.

Your letters, dated 6th, *re* Usher's appointment, and telegram of 7th, *re* Katoomba ventilation, only received by me when happening to be at Mount Victoria yesterday. Please forward me copy of Katoomba complaint and Mr. Usher's address, so that I may write him and appoint some day next week.

J. MACKENZIE.

Forward information asked for.—H.W., 14/12/83.

No. 4.

Mr. J. Rowan, Inspector of Collieries, to The Examiner of Coal-fields.

Sir,

Eskbank, Lithgow, 15 December, 1883.

By your instruction, I have carefully inspected Katoomba Colliery. I tested the air-current. Got a register of 3,000 cubic feet of air per minute in one current. This 3,000 cubic feet of air was well maintained through the workings, with the exception of two bords in the main cross-cut. Ventilation not very good.

Mr.

Mr. Hepburn, manager, showed me an air-passage he was driving and would be completed in about three days from date of inspection. This connection will bring the air-current up to the two bords above referred to. I went round every working face and inquired of every miner if he had any complaint to make about the ventilation. I received no complaint. About thirty men are employed in this colliery.

I have, &c.,
JAMES ROWAN,
Inspector of Collieries.

No. 5.

Mr. J. Rowan, Inspector of Collieries, to The Examiner of Coal-fields.

Sir, Katoomba, 1 February, 1884.

By your instruction I have re-examined Katoomba Colliery.

I may state, the manager has carried into effect the improvements promised on my last inspection, namely, the main cross-cut and heading are connected, and the air-current brought up to the two bords that were defective in ventilation.

I have, &c.,
JAMES ROWAN,
Inspector of Collieries.

Lambton Commonage Coal-mine.

SCHEDULE.

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No. 1.

Minute by The Secretary for Mines.

Re Deputation of Coal-miners at Newcastle.

26th February, 1883.

THE Examiner of Coal-fields should be asked to report whether the ventilation in the Lambton Commonage Coal-mine is sufficient, and whether men have to come out of the mine owing to the impure air.

J. P. ABBOTT.

The Examiner of Coal-fields, B.C., 28/2/83.—G.E.H. (for the U.S.) The Inspector of Collieries is requested to ascertain whether the ventilation in the Lambton Commonage Coal-mine is now sufficient, and say if men have had to come out of the mine owing to the impure air. Also whether the defects complained of in his report to me of 24th January last, and which I wrote to the manager about on the 20th ultimo, have been remedied.—J.M., 1/3/83. The Inspector of Collieries.—B.C., 1/3/83.

On the 21st ultimo fourteen miners came out of straight heading, Lambton Commonage Tunnel, on account of the air being impure in that heading. On the same day an air-shaft was started and is now down about 50 feet. Men have been employed at it day and night. The ground gone through has been hard—nearly the whole of it has had to be blasted. It is expected that the shaft will be through into the workings to-morrow (Saturday), when the defect will be remedied. The ventilation was much improved to-day, owing to a good breeze on the surface blowing directly into the mouth of main tunnel.—J.D., 2/3/83. The Examiner of Coal-fields, B.C., 2/3/83.

The Under Secretary for Mines.—J.M., B.C., 3/3/83. Submitted.—H.W., 5/3/83. Approved.—J. P. ABBOTT, 10/3/83.

No. 2.

The Under Secretary for Mines to Messrs. N. Melville and A. A. P. Tighe, Ms.P.

Gentlemen, Department of Mines, Sydney, 1 March, 1883.

Referring to the several matters brought forward by the deputation introduced by you to the Secretary for Mines on the 24th ultimo, I am directed to forward a copy of Mr. Abbott's decision in the matter of the ventilation of the Wallsend Colliery.

I am also directed to state that in Mr. Abbott's opinion the number of men allowed in a district is very clearly defined as being not more than seventy (70) men.

The Examiner has been asked to report upon the charge of the air being bad in the Lambton Commonage Tunnel.

I have, &c.,
HARRIE WOOD,
Under Secretary.

No.

No. 3.

The Under Secretary for Mines to Messrs. N. Melville and A. A. P. Tighe, Ms.P.

Gentlemen,

Department of Mines, Sydney, 12 March, 1883.

Referring to my letter of the 1st instant, I have the honor to inform you that it appears from the report forwarded by the Examiner of Coal-fields, that as regards the Lambton Commonage Tunnel some of the miners did, on the 21st ultimo, come out of the straight heading on account of the impure air in that heading.

That on the same day an air-shaft was commenced, which it was expected would reach the workings on Saturday last.

I have, &c.,

HARRIE WOOD,
Under Secretary.

Wallsend Colliery.

SCHEDULE.

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No. 1.

Mr. J. Curley, Miners' General Secretary, to The Secretary for Mines.

Sir,

Hamilton, 25 January, 1884.

I have the honor, by direction of the Executive Committee of the Miners' Association, and at the special request of the Wallsend miners, to again respectfully invite your attention to the defective state of the ventilation at Wallsend Colliery. This subject was brought under notice by deputation on November 27th of last year, and again by letter on December 1st. Upon the 11th December a report was promised on the subject, but up to the present date no further allusion has been made to the question, other than a reference to the Glebe Colliery.

The Honorable Minister's attention is again drawn to the enclosed Check Inspectors' reports, numbered 1 and 2 respectively, and which are forwarded at the request of the miners concerned, who have expressed themselves with much surprise that no apparent action has been taken with a view to improve the ventilation of the mine. Trusting immediate attention will be given to the subject-matter of complaint.

I have, &c.,

JAMES CURLEY,
Miners' General Secretary.

I wish to know what has been done.—J. P. ABBOTT, 28/1/84.

Acknowledge and inform Mr. Curley.—J. P. ABBOTT, 31/1/84.

[Enclosure No. 1.]

Check Inspectors' Reports.

Wallsend Colliery, 5 December, 1883.

Mr. T. Bonsfield's District.

	Cubic feet per min.
Intake Engine-bank	26,790
„ Magpie and Donnolly's	8,360
„ B Pit Travelling Road	12,880
„ Swamp Oak	9,500
	57,530

NOTE.—The figures following represent the velocity of air in cubic feet per minute, unless specified differently.

B. Pit, Chinaman's Flat, Nos. 111 to 117.—With 6 men extra, the air-current registered 540 in the same place where we got 585 last month, but we found a current, two cut-throughs from this, registering 1,984, making a total of 2,524 for 14 men, 1 boy, 1 horse, giving each 157½. Thermometer, 76°.

Chinaman's Shaft, from Nos. 117 to 130.—The air-current is very unsteady, and the anemometer would not work on account of improvements at present going on at the bottom of the shaft, and a door is required to convey the air to first numbers on this split, and this will account for about 5,000 cubic feet per man, regularly registered, not appearing among the intakes. There are 24 men, 1 boy, and 1 horse on this split. Thermometer, 71°.

Magpie

Magpie and Donnolly's Flat, from Nos. 130 to 176.—The air-current is 8,360 for 70 men, 5 boys, 4 horses at Magpie, and 22 men, 1 boy, 1 horse at Donnolly's, giving each 81½; but the men at Donnolly's receive only a small quantity of this air, as there are too many men on this split. Thermometer, 71° to 75°.

Lambton back and part of front headings, Nos. 179 to 215.—With 4 men extra, the air-current is 10,560 for 80 men, 7 boys, 4 horses, giving each 116¾. Thermometer, 76°.

NOTE.—There are too many men on this split, and we suggest a door be placed at the bottom of first heading, as the air is very bad from Nos. 180 to 190, and we think a general system of stoppering is necessary.

Lambton front heading, Nos. 216 to 256.—The air-current at main intake, off bank, is 6,240, which is supplemented with 520 at 246 cut-through, making 6,760 for 78 men, 7 boys, 4 horses, giving each 76½. Thermometer, 74° to 78°.

NOTE.—There are too many men on this split.

	Cubic feet.
Upcast Main Furnace.....	34,560
„ Left-hand split	14,400
„ Right-hand split	19,080
Total ..	68,040

Mr. W. Willis's District.

Wallsend Colliery, 6 December, 1883.

Little Tunnel, Nos. 1 to 35.—The air is very unsteady, and the air-meter would not work. There are complaints about the air supplying Nos. 1 to 16. Other parts of this station there was a fairly good current. Thermometer, 74° to 76°.

No. 1 Tunnel, Nos. 59 to 76.—The intake registers 11,340 for 38 men, 3 boys, 3 horses, giving each 257¾. Thermometer, 74°.

Brookstown Shaft, intake Nos. 77 to 90.—The air-current registered 12,250 for 30 men, 4 boys, 2 horses, giving each a fraction over 340. Thermometer, 76°.

Cemetery Shaft, Nos. 91 to 104.—The air-current is very unsteady, and after various tests we found 2,040 for 29 men, 3 boys, 2 horses, giving each 60 cubic feet per minute. Thermometer, 75°.

Old water pit, Nos. 105 to 110.—Anemometer would not work. Thermometer, 76°.

Furnace upcast, 33,210 cubic feet per minute. Travelling road intake, 5,220 for Nos. 35 to 59, making 48 men, 4 boys, 3 horses, and giving each nearly 95 cubic feet per minute. This is supplemented with two small shafts, which will no doubt give the requisite quantity. Thermometer, 70° to 74°.

The travelling road is in fair order, and a stopping has been put in the stenton opposite No. 104 bord end, and there are no complaints about the timber supply.

JOHN SUMMERS, }
JAMES LEVER, } Check Inspectors.

Mr. W. Willis's District.

Wallsend Colliery, 9 January, 1884.

Little Tunnel, Nos. 1 to 24.—The air-current would not work the anemometer in any part of this branch of the works, and in the faces of Nos. 17 to 22 inclusive, the air is very light. Thermometer, 72° to 76°.

No. 1 Tunnel, Nos. 42 to 62.—The intake registered 10,880 cubic feet per minute for 40 men, 3 boys, 3 horses, giving each 236¾. Thermometer, 72° to 76°. And we would urge upon the miners to in no case interfere with the stoppings, as there is one between Nos. 48 and 49 broken through, simply to save a little travelling, at the expense of health; and we suggest any miner seeing another commit such acts to immediately report offender to Manager.

Brookstown Shaft, supplying Nos. 63 to 71.—The air-current is 9,500 cubic feet per minute for 22 men, 3 boys, 3 horses, giving each 351¾ cubic feet per minute. Thermometer, 73°.

Sneddon's Dog and Rat intake for Cemetery Flat, Nos. 72 to 90 inclusive.—The air-current is 3,740 cubic feet per minute for 36 men, 2 boys, 2 horses, giving each 93¾. Thermometer, 75°.

A trapper is needed at the far indoor, as the men in Nos. 83 to 90 inclusive, complain, with reason, about the air.

Old water pit, Nos. 91 and 92.—There is no air travelling near the men. Thermometer, 76°.

Travelling road intake for Nos. 25 to 42.—The air-current registered 9,000 cubic feet per minute for 32 men, 3 boys, 3 horses, giving each over 236 cubic feet per minute. Thermometer, 75°.

Furnace upcast, 36,900 cubic feet per minute. Total intakes, 33,120 cubic feet per minute.

Mr. T. Bonsfield's District.

11 January, 1884.

Engine-bank intake.—25,380 cubic feet per minute.

Lambton front heading, Nos. 195 to 238 included.—The air-current is 6,120 cubic feet per minute, and at No. 227 bord end this is supplemented with 1,160 cubic feet per minute for 88 men, 7 boys, 6 horses, giving each 72 cubic feet per minute. Thermometer, 73° to 77°.

NOTE.—We again refer to too many men being on this split.

Lambton back and part of front headings, Nos. 157 to 194.—The air-current registered 10,560 cubic feet per minute, for 74 men, 6 boys, 4 horses, giving each a fraction over 125 cubic feet per minute. Thermometer, 76° to 77°.

Swamp Oak intake, 9,250 cubic feet per minute.

Furnace Upcasts—	Cubic feet per minute.
Main Furnace	38,880
Left-hand Furnace	18,000
Right-hand „	19,800
Total	76,680

Magpie and Donnolly's, Nos. 114 to 150 at Magpie, and Nos. 151 to 156 at Donnolly's.—The intake was 13,680 cubic feet per minute, giving each 138¾ cubic feet per minute for 84 men, 9 boys, 6 horses. Thermometer, 74° to 75°.

NOTE.—There are still too many men on this split.

Chinaman's Flat, Nos. 99 to 112.—The air-registered 3,780 cubic feet per minute for 28 men, 2 boys, 1 horse, giving each 122 cubic feet per minute. Thermometer, 72° to 74°.

Chinaman's B Pit Flat, Nos. 95, 96, 97, and 98.—The air-meter would not work, and after many attempts to find air supply we could not get anemometer to work, and the air at present is very bad, and requires immediate improvement. Thermometer, 77°.

B Pit, travelling road intake.—7,840 cubic feet per minute.

JOHN SUMMERS, }
JAMES LEVER, } Check Inspectors.

No. 2.

The Under Secretary for Mines to Mr. J. Curley.

Sir,

Department of Mines, Sydney, 5 February, 1884.

I have the honor, by direction of the Secretary for Mines, to acknowledge receipt of your letter of the 25th ultimo, in which attention is again invited to the alleged defects in the ventilation of the Wallsend Colliery, and in reply thereto to invite your attention to my letter of the 28th ultimo, covering a report by Mr. Inspector Dixon on the matter. See No. 1.

I have, &c.,
HARRJE WOOD,
Under Secretary.

No.

No. 3.

Telegram from The Examiner of Coal-fields to The Under Secretary for Mines.

Newcastle, 11 February, 1884.

PLEASE forward me to-night all the correspondence with respect to Miners' Secretary's complaint, *re* Wallsend ventilation, with Inspector Dixon's report thereon.

JOHN MACKENZIE,
Examiner of Coal-fields.

The Examiner of Coal-fields.—G.E.H. (for the U.S.), B.C., 11/2/84. Correspondence received to-day, and returned herewith.—J.M., 11/2/84. The Under Secretary for Mines, B.C., 12/2/84.

No. 4.

Mr. J. Curley, Miners' General Secretary, to The Secretary for Mines.

Sir,

Hamilton, 13 February, 1884.

I have the honor to acknowledge receipt of letter, dated 5th February, referring to ventilation of Wallsend Colliery, and drawing attention to a report from Mr. Inspector Dixon on the subject. The Executive Committee cannot regard the report of the Inspector as being anything like satisfactory. It is alleged that the ventilation was good in November, with the exception of a few matters of detail. The Inspector has not specified what he refers to as details; and if too many men and deficient quantity of air in various splits are to be considered as such, the Committee are of opinion the official interference of the Mines Department is required in a different manner to the present report.

The Inspector places great stress upon the large out-put, length of airways, falls, &c., but these are surely no reason why the management are justified in being behind the requirements of the Act. They are only so many proofs why uniformity should be maintained. If the Wallsend Colliery out-put is enormous, the Company have ample means at command. There are also natural facilities in connection with the mine that make it comparatively easy to remedy defects caused by falls. The shaft specially mentioned by the Inspector in his report would probably be sunk in three days by two men. The Committee drew attention to the Check Inspectors' report, and what it revealed concerning the ventilation of Wallsend Colliery. Subsequent to this report by the Inspector, other reports have been referred to by the Committee, all supporting, in the most substantial manner, the allegations made by them in the presence of the Minister. The Committee are not open to the charge of making "sweeping assertions" without inquiry, and as no reference is made by the Inspector in his report to the Wallsend Check Inspectors' report it must be evident it stands without any attempt having been made on his part to impugn it. The Check Inspectors' reports do not deal with "occasional derangements of the ventilation," but the permanent standing violation of the Act. The Committee desire to state that it is their wish to see the suggestion of the Wallsend Manager, "with which Mr. Inspector Dixon quite agrees," carried into effect as early as possible, regarding a joint inspection of the Wallsend Colliery, to consist of the Examiner of Coal-fields, Inspector, Manager of Wallsend Colliery, and Check Inspectors of Wallsend, and of which they will expect notification.

It must, however, appear to the Minister that arranged inspections of this character are not likely to give satisfaction, and cannot take the place of ordinary inspections.

Wallsend miners, quite recently, have come out of the mine because there was not sufficient air for them to work in.

Reference is made to the Newcastle Company's Colliery, and the ventilation is described as being "first-class." A partial report of this mine was made by the Check Inspector on 30th January, 1884. This report has been forwarded to the Committee for consideration, and they observe that in No. 7 heading the anemometer would not register, although tried in three or four different places.

In a part of No. 6 district the air-meter would not work, owing to insufficiency of air. This district the Inspector speaks of as being difficult to ventilate, and if difficult to ventilate, and is not properly ventilated, yet it must also be very difficult for miners to follow their employment, and the sooner some permanent remedy is effected the better.

Mr. Inspector Dixon alludes to the past and present history of the mines in this district, and states "their present state will bear favourable comparison with any part of their past history, both regarding the quantity of air circulating and its distribution in the various parts of the workings." The Committee can only state that, judging of the present state from reports which have been brought under their notice, they cannot do other than express their disappointment and dissatisfaction that the provisions of the Coal Mines Regulation Act, 1876, are not more faithfully enforced.

Trusting the Honorable Minister will deem this subject worthy of consideration,—

I have, &c.,

JAMES CURLEY,
Miners' General Secretary.

The Examiner of Coal-fields.—H.W., B.C., 3/3/84. Mr. Inspector Dixon for further report.—J.M., 8/3/84.

No. 5.

Mr. J. Dixon, Inspector of Collieries, to The Examiner of Coal-fields.

Sir,

Glebeland, 12 March, 1884.

I have the honor to acknowledge receipt of papers *re* the ventilation in the Wallsend and Newcastle Companies' Collieries.

In reply thereto, I beg to state that the matters complained of in the Wallsend Check Inspector's reports of November 5th and 6th, 1883, on Willis' side of the workings have since been remedied. In looking over the same report, on Bonsfield's side, I notice they (the Check Inspectors) give a result of 6,000 cubic feet of air per minute, for a total of 90 men, boys, and horses. On the 28th November, same month, I got a result of 9,240 cubic feet of air per minute for a total of 89 men, &c.

In

In the Check Inspection for 30th January, the result for the same split is given at 7,020 cubic feet per minute for a total of 102 men, &c., and in the second split in Lambton headings, 8,640 cubic feet per minute for 115 men, &c.

On the 1st February, I got a result of 9,600 cubic feet of air per minute in the first split for a total of 100 men, &c., or about 96 cubic feet of air per minute for each man, boy, and horse. On the same day, in the second split, Lambton headings, the result was about 11,550 cubic feet of air per minute for a total of about 115 men, &c.

On the 18th February, I again inspected the above-mentioned splits, and in the first split the result was about 10,800 cubic feet of air per minute for a total of 77 men, &c., and in the second split about 10,850 cubic feet of air per minute for about 110 men, &c., being over 98 cubic feet per minute for each man, boy, and horse.

On the 4th December last I wrote to Mr. Neilson about the extra men in the Lambton heading splits, and urging him to have another split made at once. This work was completed, and another split made on the 20th of last month, and, also at my request, preparations are being made to form another split in the Magpie district, which, at the present time, has more men in one split than the Act allows; at the same time I beg to state that the last two results got by me in the Magpie and Donnolly's split showed the quantity of air to be more than the Act requires for every man, boy, and horse.

Regarding the statement made by Mr. Curley that "Wallsend miners quite recently have come out of the mine because there was not sufficient air for them to work in," I know nothing about this matter, as no complaint has been made to me officially or otherwise concerning it.

2. *Newcastle Company's Colliery*.—This colliery has again been referred to, and I again repeat my statement that according to the showing of the Check Inspectors in December last, the ventilation was first-class. I also made an inspection of the same colliery on the 22nd January last, and found the ventilation according to the Act in every working heading in the pit. I am therefore at a loss to account for the statements given by the Check Inspectors to Mr. Curley, as I believe the said inspection was made only about one week after mine.

3. In conclusion, I beg to state that in my opinion this method of doing business is not the correct one. What I mean is simply this, if the miners at any of the collieries have complaints to make concerning anything with which I have to do, I think it would be only common justice to me if they would communicate with me at once, either through the Lodge Secretary, General Secretary, or Executive Committee, which is composed of the three district officers. Then, if I failed to attend to the matter, the Honorable the Minister for Mines could be appealed to. I feel strongly on this point, and fail to see why I should not have the same fair play as an English Inspector, who, in every instance, is first appealed to in any matter concerning the health and safety of the miners, and, from my knowledge of the miners in this district, I believe they would endorse my views on this subject by a large majority.

I have, &c.,

JOHN DIXON,
Inspector of Collieries.

As I only lately returned from Wollongong to attend to matters requiring immediate attention, including my annual report, I shall not be able to visit the Wallsend Mine at present. I therefore send the Inspector's further report in reply to Mr. Curley's letter of the 13th ultimo, and I cannot help observing that if these complaints were made in the first instance to the Inspector, as suggested by Mr. Dixon, a great deal of time and trouble would be saved to all parties.—J.M., 13/3/84. The Under Secretary for Mines, B.C., 13/3/84.

The attention of the Miners' General Secretary may be invited to the suggestion that all complaints on the part of the miners be made in the first instance to the Inspector, and if not attended to by him they should then be forwarded to the Minister.—H.W., 17/3/84. Submitted. Approved—J. P. ABBOTT, 18/3/84.

No. 6.

The Under Secretary for Mines to Mr. J. Curley, Miners' General Secretary.

Sir,

Department of Mines, Sydney, 20 March, 1884.

With reference to complaints as to alleged failure on the part of colliery owners in the Newcastle district to comply with any of the requirements of the Coal Mines Regulation Act, 1876, I have the honor to inform you that the Secretary for Mines is of opinion that in all such cases any complaints on the part of miners should, in the first instance, be made to the Inspector of Collieries, and that if such complaints be not attended to by that officer they should then be forwarded direct to this office.

I have, &c.,

HARRIE WOOD,
Under Secretary.

No. 7.

The Examiner of Coal-fields to The Under Secretary for Mines.

Sir,

Coal-fields Office, Newcastle, 18 April, 1884.

I beg to forward, for the information of the Honorable the Secretary for Mines, a recent report of Mr. Inspector Dixon's on the Newcastle Wallsend Colliery, and copy of a registered notice I have served on Mr. J. Y. Neilson, the Colliery Manager, for non-compliance with sub-sections 3 and 4, section 12, of the Coal Mines Regulation Act, 1876, and shall be obliged by your informing me what further action the Minister desires me to take in matter.

I have, &c.,

JOHN MACKENZIE,
Examiner of Coal-fields.

At the end of fourteen days from the date of his letter to the Manager, the Examiner should make another inspection, and if the defects have not been remedied he should take the necessary proceedings.—H.W., 22/4/84. Approved—J. P. ABBOTT, 24/4/84.

[Enclosures to No. 7.]

Mr. J. Dixon, Inspector of Collieries, to the Examiner of Coal-fields.

Sir,

Glebeland, 15 April, 1884.

I have the honor to report inspection of the Wallsend Colliery, as follows:—

1. *Willis's District, 3th instant.*

In the little tunnel I found the air good; there are about 32 men employed in this place. Front heading, from 19 to 24, there are 10 men, supplied with a current of air of about 3,500 cubic feet per minute from the small shaft.

Please note.

From 24 bord to 32 the current of air was about 3,600 cubic feet per minute for 26 men, 2 boys, and 2 horses—total, 30. In the Brookstown shaft split there are about 28 men, 2 boys, and 2 horses—total, 32. For this number I got a result of about 3,150 cubic feet of air per minute, but at the same time found the current to be fluctuating, as there were times when the instrument would not work. There is, as a rule, a good result from this shaft, but at the time of my inspection the current of air seemed to be baffled.

Cemetery Split.

Please note.

In this split there are about 62 men. At the far end of the split a new shaft has been sunk, which is known as the Foundry Shaft. At the time of my inspection the current of air from this shaft was almost nil. Hence the major portion of the split was being ventilated from Sneddon's tunnel, at the rate of about 7,800 cubic feet per minute. It will be seen by the above that the current entering this split is more than the minimum quantity for the 62 men, yet I am strongly of opinion that it has too much to do in this split after serving upwards of 20 men, &c., in Sneddon's workings, and certainly think it would be better to shut the air off from Sneddon's and get a current from the Foundry Shaft for the whole of the Cemetery Split.

Bonsfield's District, April 10th.—Lambton Front Heading, First Split.

In this split there are about 72 men, 4 boys, and 4 horses—total, 80, supplied with a current of air of about 10,000 cubic feet per minute.

Lambton Headings, Second Split.

In this split there are about 34 men, 2 boys, and 2 horses—total, 38; supplied with a current of about 4,000 cubic feet of air per minute. This air was not well conducted into the top heading, as a screen on one of the headings had been knocked down by a train of skips on the previous evening, and had only been put up temporarily, but the overman promised to have it put right at once.

Third Split, Lambton Headings.

Please note.

The current of air in this split was about 10,710 cubic feet per minute for about 80 men, 4 boys, and 4 horses—total, 88. It will be seen that the current of air in this split is above the minimum quantity required by the Act, yet I would especially draw your attention to the fact that, although the men on this split were reduced to about 66 after the second or middle split was formed, yet I find that the manager has put more men in and brought the number up to 80. I certainly fail to understand this sort of work, in the face of all the vexation we have lately had in connection with the overcrowding of the splits in the Wallsend Colliery.

Maggie Split.

Please note.

In this split there are about 42 men, but the current of air was only about 3,000 cubic feet per minute.

Donnolly's Split.

Please note.

In this split there are about 70 men, supplied with a current of air of about 6,300 cubic feet per minute.

No. 1 Split, Chinaman's District.

In this district there are about 32 men, supplied with a current of air of about 16,800 cubic feet per minute. The three splits, as given above, are all ventilated from what is known as the Chinaman's Shaft, and, as a rule, there is a plentiful supply for every man, &c., employed in that part of the mine.

Please note.

Yet it will be seen that there is not an equal distribution of the air got from said shaft, as I found both Maggie and Donnolly's short, while a current of about 16,800 cubic feet per minute was going into Chinaman's, for 32 men. The overman was with me when I got the above results, and I requested him (Mr. Maddison) to see Mr. Neilson that evening if possible, and draw his attention to the state of things as I found them.

In the second split, Chinaman's or Cockroach, there are 8 men, 1 boy, and 1 horse. The current of air in this split is about 1,760 cubic feet per minute, which, in my opinion, is not an adequate amount to keep the working places sweet, as the current has a great distance to travel before it reaches the working places, and for part of the distance travels over water.

The travelling roads are in good order, and a good supply of timber at the various stations ready for use.

In concluding this report, I desire to state that I did not see Mr. Neilson concerning the above matters, neither have I written to him, but leave the matter entirely with you to act on this report as you may think best. At the same time, I am of opinion that a letter from you to the Manager would cause matters to be rectified at once, for most of the things complained of by me in the above report can be remedied in a few days.

I have, &c.,

JOHN DIXON,
Inspector of Collieries.

The Examiner of Coal-fields to Mr. J. Y. Neilson.

Sir,

Coal-fields Office, Newcastle, 13 April, 1884.

In view of a recent report I have received from Mr. Inspector Dixon on the Newcastle-Wallsend Colliery, and in accordance with the provisions contained in the 31st section of the Coal-mines Regulation Act, 1876, I hereby give you notice that you have failed to comply with sub-sections 3 and 4, sections 12, of the said Act, in the third split, Lambton headings, and in Maggie and Donnolly's splits.

Mr. Dixon's report on them being as follows:—

“*Third Split, Lambton headings.*—The current of air in this split was about 10,710 cubic feet per minute for about 80 men, 4 boys, and 4 horses—total, 88. It will be seen that the current of air in this split is above the minimum quantity required by the Act; yet I would especially draw your attention to the fact that, although the men on this split were reduced to about 66 after the second or middle split was formed, yet I find that the Manager has put more men in, and brought the number up to 80. I certainly fail to understand this sort of work, in the face of all the vexation we have lately had in connection with the overcrowding of the splits in the Wallsend Colliery.

Maggie split.—In this split there are about 42 men, but the current of air was only about 3,000 cubic feet per minute.
Donnolly's split.—In this split there are about 70 men, and supplied with a current of air of about 6,300 cubic feet per minute.”

2. Mr. Dixon also informs me that he got unsatisfactory results in the ventilation in the Brookstown Shaft split, in which, as a rule, he had previously got good results.

3. That in the Cemetery split there are about 62 men. At the far end of the split a new shaft has been sunk, which is known as the Foundry Shaft, and that, at the time of his inspection, the current of air from the shaft was nil; hence the major portion of the split was being ventilated from Sneddon's tunnel, at the rate of about 7,880 cubic feet per minute. That it will be seen by the above that the current entering the split is more than the minimum quantity for the 62 men, but he was strongly of opinion that it has too much to do in this split, after serving upwards of 20 men, &c., in Sneddon's workings, and thinks it would be better to shut the air off from Sneddon's, and get a current from the Foundry shaft for the whole of the Cemetery split.

4. That on the second split (Chinaman's, or Cockroach) there are 8 men, 1 boy, and 1 horse. The current of air in the split being about 1,760 cubic feet per minute, which, in his opinion, is not an adequate amount to keep the workings sweet, as the current has a great distance to travel before it reaches the working places, and for part of the distance travels over water.

I have, &c.,

JOHN MACKENZIE,
Examiner of Coal-fields.

No.

No. 8.

The Examiner of Coal-fields to The Under Secretary for Mines.

Sir,

Coal-fields Office, Newcastle, 22 April, 1884.

I beg to forward, for the information of the Honorable the Secretary for Mines, a letter and ^{See 7.} telegram I have this day received from J. Y. Neilson, Esq., with respect to the notice I served upon him on the 18th instant, referred to in my letter to you of the 18th idem, with respect to his non-compliance with sub-sections 3 and 4, section 12, of the Coal-mines Regulation Act, 1876, at the Newcastle-Wallsend Colliery, and asking to be informed what further action the Minister desired me to take in the matter.

I have, &c.,

JOHN MACKENZIE,
Examiner of Coal-fields.

[Enclosures to No. 8.]

Mr. J. Y. Neilson to The Examiner of Coal-fields.

Sir,

Wallsend, 21 April, 1884.

Your favour of the 18th instant to hand, and contents duly noted.

In reference to your several queries, I shall reply at length in a few days, as your letter is so very strong, and your interpretation of the Act requires some consideration; and as I have a strong opinion of the justice of my position, and as the matter is likely to receive the serious consideration of other parties concerned, I will give you a detailed reply in a few days.

If you refer to the last Check Inspectors' Report on the mine you will find all things satisfactory, even to the miners.

I have, &c.,

J. Y. NEILSON.

Telegram from Mr. J. Y. Neilson to The Examiner of Coal-fields.

Wallsend, 22 April, 1884.

This morning I have made a thorough examination of Lambton headings, and find that my orders have been entirely disregarded in respect to No. 3 split. I promise you the matter will be all put right in seven days. I leave for Sydney to-night, and will be at the "Great Northern Hotel" at 10 p.m., and would like to see you.

J. Y. NEILSON.

Telegram from The Examiner of Coal-fields to Mr. J. Y. Neilson.

Newcastle, 22 April, 1884.

Your telegram received respecting No. 3 split, and promise to have it put right in seven days. Regret that I am unable to comply with your desire to see you at "Great Northern" 10 to-night.

J. MACKENZIE,

Examiner of Coal-fields.

No. 9.

The Under Secretary for Mines to The Examiner of Coal-fields.

Sir,

Department of Mines, Sydney, 26 April, 1884.

Referring to your letter of the 18th instant, forwarding Mr. Inspector Dixon's report on the Wallsend Colliery, and copy of your letter to Mr. Neilson, the Manager of that Colliery, pointing out the defects in the 3rd split, Lambton headings, and in Magpie and Donnolly's splits, and I am directed to request you to be good enough, at the expiration of fourteen (14) days from the date of your letter to Mr. Neilson, to cause another inspection of the Colliery to be made, and if the defects referred to have not been remedied, you should take the necessary proceedings.

I have, &c.,

HARRIE WOOD,
Under Secretary.

No. 10.

The Examiner of Coal-fields to The Under Secretary for Mines.

Sir,

Coal-fields Office, Newcastle, 8 May, 1884.

Referring to your letter of the 26th ultimo, informing me that you were directed to request ^{See No. 9.} me, at the expiration of fourteen days from the date of my letter of the 18th ultimo, to cause another inspection to be made of the Newcastle-Wallsend Collieries, I have now the honor to forward, for the Minister's information, a further report from Mr. Inspector Dixon, dated the 5th instant, from which it will be seen that Mr. Neilson has remedied the defects complained of, and that the provisions of the Coal-mines Regulation Act are now complied with.

I have, &c.,

JOHN MACKENZIE,
Examiner of Coal-fields.

[Enclosure to No. 10.]

Mr. J. Dixon, Inspector of Collieries, to The Examiner of Coal-fields.

Sir,

Glebeland, 5 May, 1884.

According to instructions from you, I proceeded to Wallsend Colliery on Saturday last, 3rd instant, and made another inspection of the places complained of by me in my report dated 15th April last, and am pleased to be able to report that, for the most part, the matters complained of have been remedied, as the following will show:—

Willis's District.

1. In the Brookstown shaft split a steady current of air, of above the minimum quantity, is now supplied for the 32 men, &c., from a new shaft lately sunk to ventilate this split.

Cemetery Split.

2. The top end of this split is now ventilated from the Brookstown Shaft instead of from Sneddon's Tunnel. There are now only about 24 men on this split, part of which is ventilated from Sneddon's and part from the Foundry Shaft. I may here state that preparations are being made to shut the whole of Sneddon's air off and ventilate the whole of this split from the Foundry Shaft, as suggested by me, and I expect the arrangements to be completed this week. However, as it is, the matter complained of by me has been remedied, inasmuch as the air from Sneddon's tunnel is only supplying about 24 men in Cemetery split, instead of about 62, as before.

Bongfield's

Bonsfield's District.

3. Lambton heading, 3rd split.—The number of men on this split have now been reduced to 68 instead of 80 men as reported by me on 15th April last.

4. Magpie back heading.—In this split the current of air was about 6,000 cubic feet per minute for about 42 men, being about 3,000 cubic feet more than I got on my previous inspection.

5. Magpie front heading and Donnolly's cross-cut.—As there has been some alteration made at the entrance to this split since my previous inspection, I could not get the whole of the intake air in one volume. But, judging from the result which I got on the front heading (about 5,000 cubic feet of air per minute), and from the amount of scaling through the frame-work of one of the bearing-up doors, I am of opinion that the total quantity of air going into this split was over 7,000 cubic feet per minute, for about 68 men. The air scaling through the door would go on to 12 men. I expect that the frame-work of this door will be plastered to-day, and the whole of the current sent down the front heading then away through the whole of the split.

Cockroach District.

6. I found the current of air in this split to be about 1,920 cubic feet per minute for a total of 10 men, &c., being about 160 cubic feet per minute more than the quantity given in my previous report. Regarding this place, Mr. Neilson has decided to take the air from Chinaman's split to ventilate it, and shut the air off from the Ballarat Shaft, which air has hitherto been supplying the Cockroach split.

This decision is heartily approved of by the men working in the above split, and Mr. Neilson gave me his promise that this should be done in a week, or less, if possible.

I have, &c.,

JOHN DIXON,

Inspector of Collieries.

The Under Secretary of Mines to The Examiner of Coal-fields.

Sir,

Department of Mines, Sydney, 26 April, 1884,

Referring to your letter of the 18th instant, forwarding Mr. Inspector Dixon's report on the Wallsend Colliery, and copy of your letter to Mr. Neilson, the Manager of that Colliery, pointing out the defects in the third split, Lambton headings, and in Magpie and Donnolly's splits, I am directed to request you to be good enough, at the expiration of fourteen days from the date of your letter to Mr. Neilson, to cause another inspection of the Colliery to be made, and if the defects referred to have not been remedied, you should take the necessary proceedings.

I have, &c.,

HARRIE WOOD,

Under Secretary.

Mr. Inspector Dixon to make another inspection on May 3rd, and report whether the defects complained of have been remedied.—J.M., 29/4/84. Secn.—J.D., 29/4/84.

Will make another inspection on May 3rd, and report whether the defects complained of have been remedied.—J.D., 29/4/84. The Examiner of Coal-fields, 29/4/84.

No. 11.

The Under Secretary for Mines to Mr. J. Curley, Miners' General Secretary.

Sir,

Department of Mines, Sydney, 15 May, 1884.

With reference to your letter of the 13th February last, respecting the defective ventilation in the Newcastle-Wallsend Colliery, I have the honor to inform you that the Examiner of Coal-fields has reported that the defects complained of have been remedied, and the provisions of the Coal Mines Regulation Act are now being complied with.

I have, &c.,

HARRIE WOOD,

Under Secretary.

See No. 4.

No. 12.

The Under Secretary for Mines to The Examiner of Coal-fields.

Sir,

Department of Mines, Sydney, 5 August, 1884.

Referring to your letter of the 8th May last, covering a report from Mr. Dixon, an Inspector of Collieries, to the effect that the defects complained of in the case of the Newcastle-Wallsend Colliery have been remedied, I have the honor to inform you that the Secretary for Mines has approved of that report.

I have, &c.,

HARRIE WOOD,

Under Secretary.

See No. 10.

[Two plans, Nos. 10 and 11.]

H.

The Newcastle Agreement.

MEMORANDUM of Agreement made the _____ day of _____, one thousand eight hundred and eighty-eight, between the Australian Agricultural Company, the Newcastle-Wallsend Coal Company, the Scottish-Australian Mining Company, Messieurs James and Alexander Brown (of Newcastle), William Laidley, Esq. (of Sydney), the Newcastle Coal-mining Company (Limited), the New Lambton Colliery, the Ferndale Colliery, the Burwood Coal-mining Company, the Stockton Coal Company, the Hutton Coal-mining Company, hereinafter called the Associated Masters of the one part, and the District Officers of the Miners' Association of the Hunter River District and the Delegates employed at the various collieries whose proprietors are parties to this agreement, of the other part.

WHEREAS it is considered expedient to enter into an agreement for the purpose of regulating the rate of wages to be paid at the collieries belonging to the abovenamed parties of the first part, for hewing coal and for other work usually done and performed by the miners, the hours of labour to be observed at the said collieries, and the mode of settling any dispute that may arise in reference thereto: Now, therefore, it is mutually agreed and declared by the Associated Masters of the one part, and the officers and delegates representing the miners working at the collieries comprised in the Associated Northern Collieries of the other part—

1. Subject to the provisions herein contained, the wages paid at the said collieries shall be regulated by the selling price of coal, and shall rise and fall with it; provided that the selling price shall be fixed from time to time by the Associated Masters.

2. The standard hewing price shall be 4s. 2d. per ton of clean round coal when the selling price of round coal is 11s. per ton; and the standard price for yard work shall be that paid at the various collieries abovenamed prior to 1st August, 1888, when the selling price of round coal was 11s. per ton—excepting in the case of 6-yard bords, the basis of payment for which is hereinafter specially provided for; and the standard price for filling small coal by the miners shall be that paid at the said various collieries prior to the said 1st August, 1888, when the selling price of small coal was 5s. 6d. per ton.

3. Wages shall rise and fall upon the scale hereinafter mentioned—provided that the said scale shall not operate below the point at which the several rates shall stand when the selling price of round coal is 9s. per ton, and of small coal 4s. 6d. per ton, which rates shall be the minimum wages paid for working what is hereinafter defined to be the standard seam.

(a) Hewing by the ton—1d. for every 3d. in the selling price of round coal.

(b) Yard work—1d. per yard for every 3d. in the selling price of round coal, in the case of the maximum rates paid for headings, and a proportionate rate in the case of other yard work for which lower rates are paid.

(c) Filling small coal, either in places wrought by the yard or in wide places 1½d. per ton for every 1s. in the selling price of small coal.

4. The standard seam to be worked for the standard hewing price hereinbefore provided in clause 2 of this agreement shall be defined as follows, viz.:—

Five feet of coal, including what are known as penny bands, shall be the minimum standard height; and in cases where the seam is less than the said minimum standard height, 1d. per ton for every inch by which the seam is less than the said minimum shall be paid in addition to the said standard hewing price—provided always that when refuse, commonly known as jerry, morgan, or myrtle, shall be met with, the same shall be separated from the coal, and thrown aside by the miners; and for the additional work so entailed, payment shall be made on the following scale, that is to say:—

Where the seam (including the ordinary penny bands) is less than 5 feet in height, any thickness of the said refuse up to 4 inches shall be worked and thrown aside free of charge; above 4 inches and up to 9 inches in thickness, ¾d. per ton for each inch in excess of 4 inches shall be paid in addition to the hewing price of coal; above 9 inches in thickness, ½d. per ton for each inch in excess of 9 inches shall be paid in addition to the said hewing price.

Where the seam (including the ordinary penny bands) is from 5 feet to 6 feet in height, any thickness of the said refuse up to 5 inches shall be worked and thrown aside free of charge; above 5 inches and up to 9 inches in thickness, ¾d. per ton for each inch in excess of 5 inches shall be paid in addition to the hewing price of coal; above 9 inches in thickness, ½d. per ton for each inch in excess of 9 inches shall be paid in addition to the said hewing price.

Where the seam (including the ordinary penny bands) is 6 feet and upwards in height, any thickness of the said refuse up to 6 inches shall be worked and thrown aside free of charge; above 6 inches and up to 9 inches in thickness, ¾d. per ton for each inch in excess of 6 inches shall be paid in addition to the hewing price of coal; above 9 inches and up to 18 inches in thickness, ½d. per ton for each inch in excess of 9 inches shall be paid in addition to the said hewing price; above 18 inches in thickness, ¼d. per ton for each inch in excess of 18 inches shall be paid in addition to the said hewing price.

5. The hewing wages, fixed and provided by any part of this agreement, shall include the cutting up on one rib of so much of the coal seam as lies above the morgan band, such cutting to be done after the most approved method of mining in the district; and in the case of any colliery at which such cutting has not heretofore been a practice, or has not been provided for by the special or local rules, no extra payment shall be due to the miners for cutting; but the same shall be done, notwithstanding, on its being required by the manager, overman, or deputy, unless brass occurs in the line of cutting to a total thickness (not including bands) of 1½ inch.

6. The hewing price for taking down tops shall be 3d. per ton less than the current standard hewing price.

For lifting bottoms the price shall be 2d. per ton less than the current standard hewing price, where the bottoms are 3 feet and upwards in thickness; and where the bottoms are less than 3 feet in thickness, the price shall be the current standard hewing price.

The hewing price for drawing pillars shall be 2d. per ton less than the price payable for hewing coal in the adjacent bords.

Yardage shall be paid for driving 6-yard bords at the rate of 2s. 6d. per lineal yard in a clean seam.

7. The daily hours to be observed at the said collieries for drawing coal, exclusive of the time required for men riding in the shaft, shall be eight.

8. All disputes which may arise between the parties hereto, whether concerning one individual colliery or more, shall be submitted for settlement to a referee, to be appointed as hereinafter provided, whose decision shall in all cases be final.

It is mutually agreed that no person having direct personal interest in the coal trade shall be eligible for such appointment.

9. For the purpose of carrying out the foregoing method of settlement of disputes, a referee shall be appointed by the favour of His Honor the Chief Judge in Equity. The referee shall hold office for a period of twelve months, but shall be eligible for re-appointment; and in the event of his death, or inability, or unwillingness to discharge the duties of his office, as well as upon expiry of his term of office, a successor shall be appointed in similar manner to that above provided for the first appointment. The referee shall appoint times and places for hearing and inquiring into disputes. He shall have power to call for any evidence, whether oral or documentary, as may appear to him to be necessary, or to reject evidence which may appear to him to be immaterial or superfluous. His rule shall decide the order of procedure, and generally he shall have all powers requisite for full inquiry and prompt settlement of all disputes arising between the parties hereto, and his award in regard to the subject matter of the dispute shall be observed by both of the disputing parties. Each party shall pay his own costs. The referee's salary shall not exceed forty guineas for each day of sitting in the Referee's Court. The amount of such salary shall be fixed by the said Chief Judge in Equity, and shall be contributed by both of the parties hereto in equal proportions, to be paid in advance or not, or partly in advance or not, and in such manner and with such directions as may be required by the referee. The failure to contribute to this salary

salary as required, or to observe the awards, orders, or directions of the referee, shall have the effect of enabling either party to thereupon put an end to this agreement. Each party to any matter of dispute brought before the referee for examination and decision shall have the right to nominate an assessor (no member of Parliament shall be eligible for nomination) to sit with the referee at any inquiry, for the purpose of affording him assistance upon any technicalities which may require the knowledge of experts; but it shall be clearly understood that the assessors' duty shall be simply that of advisers to the Court. It is expressly declared that they shall take no part in, or have power to interfere in any respect with, the conduct of the business before the Court, or with the control of its proceedings hereinbefore given to the referee.

It shall be optional with each party to a dispute to be represented before the referee by not exceeding four persons as managers of their case.

All inquiries under this clause shall be made, as far as practicable, in conformity with the provisions of the Act to make arbitrations more effectual (31 Vic. No. 15).

10. Consideration shall be paid only for the following services or deficiencies in the workings:—

- (a) Stone or roof coming down extraordinary.
- (b) Crossing faults.
- (c) Taking out water, as provided by the local rules at each colliery.
- (d) For an unusual quantity of water coming from the roof.
- (e) Cutting sumps, if ordered by the manager, overman, or deputy.
- (f) Soft or tender coal in close proximity to faults, and tender coal extraordinary in other places.
- (g) For sets of timber, where slabs are used as caps, the consideration shall be 1s. per set.
- (h) For filling dirt, 6d. per skip; and for removing dirt from pillar sides where necessary.

In the event of disputes arising as to the value of any of the services or deficiencies mentioned in the foregoing part of this clause, such dispute shall be settled by local arbitration; the arbitrators for such purpose being two persons, *employés* of the colliery, respectively appointed, one each, by the owner or manager and the miners at the colliery where such dispute may occur, and in the event of the arbitrators not agreeing they shall appoint an umpire, whose decision shall be final; but failing an appointment of an umpire by the arbitrators for seven days, he shall be appointed by the referee, whose fee for such appointment shall be £1 1s.

11. All established customs of the district, except such as are inconsistent with the provisions of this agreement, shall continue to be observed until altered by mutual consent of the parties hereto. This clause shall not be construed as prohibiting, at any of the said collieries, the establishment of the practice of cutting the coal above the morgan.

It shall not be permissible, on the grounds of custom, to lay a colliery idle on two days' notice on any but public holidays.

12. Local agreements shall be entered into at the various collieries between the manager and miners employed thereat, in accordance with this general agreement, for their mutual guidance.

13. In the event of any colliery commencing to work the coal by the long wall or any other system not generally adopted in the district, the rates to be paid for hewing coal, driving levels, packing, and all other work incidental to such system, in default of agreement between the manager and miners, may be fixed by local arbitration as provided in clause 10; or, failing settlement by that method, the said rates shall be fixed by the Referee's Court provided by clauses 8 and 9.

14. One ton of fire coal shall be supplied each month to each householder amongst the miners, but no ticket for fire coal shall have currency for longer than two months.

15. This agreement shall be terminable on infraction of its conditions by fourteen days' notice from either of the parties to the other, but otherwise shall continue in force until the 31st December, 1889; and thereafter it shall continue in force from year to year, unless on or before the 30th September, 1889, or any subsequent 30th September, notice shall have been given, in writing, of its discontinuance on the 31st December then next ensuing.

As witness the hands of the parties,—

Australian Agricultural Company (by their Agent and Attorney), Jesse Gregson, General Superintendent A.A.Co.

For the Newcastle-Wallsend Coal Company, F. W. Binney, Secretary.

For the Scottish-Australian Mining Company (Limited), A. Shannon, Manager.

James and Alexander Brown, for Duckenfield and Brown's Collieries.

For W. Laidley, James Fletcher, Co-operative Company.

Newcastle Coal-mining Company (Limited), Stewart Keightley, Manager.

New Lambton Colliery, Alexander Brown.

For Ferndale Colliery Company, George Hewison, Secretary.

For the Burwood Coal Company (Limited), Henry Stokes, Director.

For the Hetton Coal-mining Company (Limited), W. A. Steel, Managing Director.

Joseph Middleby, Co-operative Lodge.

Alfred George Hamilton, Wallsend Lodge.

Henry Hanlon, Lambton Lodge.

James Errington, Stockton Lodge.

John A. Davidson, Borehole Lodge.

Albert D. Jones, Glebe Lodge.

John Thwaites, Burwood Lodge.

William Ridings, Lambton C Pit Lodge.

John Jack, Hetton Lodge.

David Durie, Back Creek and Duckenfield Lodge.

Thomas Thomas, Ferndale Lodge.

Ralph Goundry, District Chairman.

William Hunter, District Treasurer.

James Curley, General Secretary.

I.

Reports of Examiner of Coal-fields and Inspectors of Collieries on the Stockton Colliery.

Stockton Colliery Inspection, Stockton.

Sir,

Coal-fields Office, Newcastle, 15 December, 1893.

We have the honor to report inspection of the above colliery on Wednesday and Thursday, the 13th and 14th instant.

1. On the first day the mine was at work, and we commenced our inspection by visiting the forty-two men, four boys, and four horses at work in the Gardiner's heading district.

The quantity of air was 6,480 cubic feet per minute, which gave an average of 129 cubic feet each.

We noticed that a few bords in the south-west corner of this district, some of which are now being driven westward towards the Hunter River, have crossed a north and south fault with an upthrow of from 6 to 9 feet, going west.

The inclination of the seam adjacent to this fault is very irregular, and the roof is very soft, and in two of the bords recently abandoned very wet. All these places are well timbered with strong and substantial props and slabs.

2. We next visited the three brick and cement dams, which we found in apparently good condition. The feeder of water coming through the pipe in each dam is about the same as when the dams were built in February last, totalling upwards of 150 gallons per minute.

Leaving there we travelled through the remainder of this district. The bords and headings driven herein since work was resumed in March last have from 18 inches to 2 feet of the upper part of the seam left as a roof, and in spite of this a fall of sand roof (containing water) took place where one of the bords exposed one of the two dykes passed through by the main headings. This fall is now barricaded with props and slabs.

Proceeding along the main headings we found that more workings had been opened out beyond, and on the in-by side of the dykes. All are now abandoned, and thickly studded with timber.

The immediate roof here is the 18 inches or 2 feet of coal previously referred to, and it is extremely soft and wet.

3. The whole of the seam here has a very dirty and inferior appearance, and looks like as if nearing the outcrop.

4. On the following day we continued our inspection from this point right along the face of the eastern workings, known as Kelly's heading district. About a dozen bords nearest to the main headings and Gardiner's heading district are now abandoned, and, like the other abandoned places, very thickly timbered.

The inclination is very irregular, the roof wet, soft, and traversed by faults and dykes.

5. With regard to the workings in the company's M.P. 130, under the ocean, the method of working is the same as in other parts of the mine, viz., 6-yard bords and 6-yard pillars, which, as regards pillars, is in contravention to the conditions of the permit, which are as follows:—"The minimum width of pillars to be 8 yards," and left unwrought.

The permit also provides that "In one road of every pair of winning off or leading headings a bore shall be kept going 10 feet in advance, &c."

Of the two pairs of winning places driven under the ocean one pair had a borehole, but the other pair, which were stopped at a dyke, and very wet, had none.

The permit also provides that "the strata overlying the coal-seam shall be bored through, and proved a minimum thickness of 30 feet at the face of the leading headings or levels so soon as they have been driven 100 yards in advance of the working bords," but no hole of the kind has been put in to prove the thickness of the overlying strata.

The whole length of main engine plane and cross-cuts were in good condition, and there was a plentiful supply of timber on hand ready for use.

6. In conclusion, we beg to state that after most careful inspection and due consideration of all the conditions in connection with the underground workings of this colliery, we find nothing that would justify us in altering the opinion expressed by us and recorded in the book at the company's office on the 18th February last, and before leaving the office on the 14th instant we recorded the following report in a book kept for that purpose:—

Our inspection of the above colliery yesterday and to-day has revealed nothing that would justify us in altering the opinion expressed by us, and recorded in this book, on the 18th February, 1893.

Stockton Colliery, 14 December, 1893.

JOHN DIXON,
WM. HUMBLE,
Inspectors of Collieries.

We have, &c.,
JOHN DIXON,
WILLIAM HUMBLE,
Inspectors of Collieries.

Stockton Colliery Inspection.

Sir,

Coal-fields Office, Newcastle, 9 January, 1893.

I have the honor to report inspection of the above colliery on the 5th and 6th instant.

The quantity of air in each split was as follows:—

No. 1 Split (Gardiner's heading district).—Fifty men, three boys, and three horses employed, and supplied with 6,200 cubic feet per minute, being an average of 110 cubic feet each.

No. 2 Split (Kelly's heading district).—Fifty-four men, four boys, and four horses employed, and supplied with 6,460 cubic feet per minute, being an average of 10½ cubic feet each. This current of air was not sustained for more than about half the distance of the split, the latter half of the men being without any perceptible current. In consequence of this, I have served the manager with notice to have a remedy effected without delay. [Copy of notice annexed.]

No. 3 Split.—Sixty-four men, three boys, and three horses employed, and supplied with 7,140 cubic feet per minute, being an average of 102 cubic feet each.

No.

No. 4 Split.—Twenty men, two boys, and two horses employed, and supplied with 3,600 cubic feet per minute, being an average of 150 cubic feet each.

3. On the first day of inspection I travelled the branch engine-plane leading up to the No. 45 top-drive district that collapsed some few months ago. I found it quite quiet, and in much the same condition as when I saw it last.

4. The district known as Gardiner's heading (No. 1 Split) is very wet, the roof of almost all the bords and headings "shedding" water freely. In several of the old bords a thickness of about 12 feet of roof-stone has fallen. Water is dropping heavily from the top of each cavity thus produced, but not more so than was the case when the falls took place almost a year ago.

5. On both days of inspection I noticed in the districts now at work several recently formed pillars that were only 4 yards in width instead of at least 6 yards, and that several bords were from 6½ to 7 yards wide. This mode of working where the overlying strata is upwards of 300 feet thick does not, in my opinion, leave sufficient coal in the pillars to permanently secure the roof, and if such mode is continued it may create another crush that might be speedily followed with disastrous consequences to all persons employed in the mine. I have, therefore, forwarded a letter to the manager, drawing his attention to the matter, and urging him to take steps without delay to prevent a recurrence of the same.

6. I also forwarded notifications to him concerning the insufficient number of refuge-holes, and the dirty condition of those now in existence by the sides of the new cross-cut engine-plane, and the absence of fencing to the fly-wheel of the Priestman's oil-engine, that is now pumping water from the No. 42 district, and copies of such are herewith annexed.

7. On the second day I travelled the abandoned workings of the No. 3 district near to the shaft. I found everything in fair order and condition.

8. Water to depth of about 12 inches is still on the engine-plane, about 450 yards from the shaft. A new pump is now being placed at the bottom of the upcast shaft, which is expected to be ready for work in a short time and to deal effectually with this and other waters that have been troublesome for a long time.

I have, &c.,

WILLIAM HUMBLE,

Inspector of Collieries.

John Mackenzie, Esq., Examiner of Coal-fields, Sydney.

Sir,

Wickham, Newcastle, 6 January, 1893.

On my inspection of the Stockton Colliery, to-day I found that a portion of the engine-plane (which is also a travelling road) situated between the junction formed by the straight up and the new cross-cut main roads, and the No. 42 flat was not provided "with sufficient places of refuge at the sides of such planes at intervals of not more than 20 yards, and such places of refuge shall be at all times kept clear," in accordance with the provisions contained in section 12, sub-section 2, of the Coal Mines Regulation Act, 1876.

2. In addition to the above, several places of refuge that are in existence were not "kept clear," but were partly blocked up with loose timber, stone, rubbish, &c.

3. This, you will observe, is a contravention of the above-quoted sections of the Act, to which I now draw your attention, and request you to effect a remedy without delay.

I have, &c.,

WILLIAM HUMBLE,

Inspector of Collieries.

D. McAuliffe, Esq., Manager, Stockton Colliery, Stockton.

Sir,

Wickham, Newcastle, 6 January, 1893.

On my inspection of the Stockton Colliery to-day, I found that the fly-wheel of the "Priestman's oil-engine," which is pumping water from the No. 42 district, was not fenced in accordance with the provisions of section 12, sub-section 17, of the Coal Mines Regulation Act, 1876.

2. This, you will observe, is a contravention of the above-quoted sections of the Act, to which I now draw your attention, and request you to effect a remedy without delay.

I have, &c.,

WILLIAM HUMBLE,

Inspector of Collieries.

D. McAuliffe, Esq., Manager, Stockton Colliery, Stockton.

Sir,

Wickham, Newcastle, 6 January, 1893.

On my inspection of the Stockton Colliery yesterday, I found that the district known as Kelly's heading was not adequately ventilated.

2. The intake current of air measured 6,460 cubic feet per minute, for fifty-four men, four boys, and four horses, but this current of air did not "sweep undiminished along the air-way past each working-place," as provided for by section 12, sub-section 3, of the Coal Mines Regulation Act of 1876.

3. The current of air was fairly well sustained until about the middle of the district was reached, but from this point to the last working-place, adjacent to the return, there was no observable velocity of air-current, certainly not one that could be measured by the anemometer.

4. This, you will observe, is not in accordance with the provisions of the above-quoted sections of the Act, to which I hereby draw your attention, and request you to effect a remedy without delay.

I have, &c.,

WILLIAM HUMBLE,

Inspector of Collieries.

D. McAuliffe, Esq., Manager, Stockton Colliery, Stockton.

Sir,

Wickham, Newcastle, 7 January, 1893.

On my inspection of the Stockton Colliery, on the 5th and 6th instant, I found that in each of the working districts there were several recently formed pillars only 4 yards instead of at least 6 yards in width, whilst many of the bords were from 6½ to 7 yards wide.

2. This irregular method of working (which leaves considerably less than 50 per cent. of coal as pillars) does not, in my opinion, provide sufficient and secure support for the roof, for you must bear in mind that during the last four years three distinct and separate parts of this same mine have collapsed from the same cause.

3. Taking into account the fact that in the districts now at work the overlying strata is upwards of 300 feet in thickness, some of which is known to be sand and other alluvial deposits saturated with the tidal waters of the ocean and the Hunter River, I consider that a continuance of this practice tends greatly to create another crush that might be followed by disastrous consequences to all persons employed in the mine.

4. Having thus drawn your attention to this very grave matter, I trust you will take immediate steps to prevent a recurrence of the same.

I have, &c.,

WILLIAM HUMBLE,

Inspector of Collieries.

D. McAuliffe, Esq., Manager, Stockton Colliery, Stockton.

Mr. Inspector Humble will please make another inspection of this colliery to see whether the matters complained of have been remedied.—J.D., 13/1/93. Mr. Inspector Humble, B.C.

On further inspecting this colliery to-day, I found that the matters complained of in paragraphs 2 and 6, viz.: Inadequate ventilation, an insufficient number of refuge holes on the engine-plane, and the absence of fencing to the fly-wheel of the "oil engine" had been remedied. With regard to the first, several additional stoppings and doors have been fixed, which carry the current of air along the innermost cut-through past each working place. The volume of air passing the last pair of men on this split to-day was equal to the volume entering, and on the middle of the split. 2nd. Places of refuge are now to be found at less 20 yards apart, several new ones having been made since the notice was served. All are now clear and in good order. 3rd. The fly-wheel of the "oil-engine" is now fenced with wood framing.—W.H., 16/1/93. Mr. Inspector Dixon.

The Examiner of Coal-fields.—J.D., 17/1/93. Mr. Inspector Dixon (for Mr. Humble, to state on his next inspection whether the matter complained of in paragraph 5 has been attended to by the Manager.—J.M., B.C., 18/1/93. Mr. Inspector Humble.—J.D., 19/1/93. I have not found any more pillars or bords similar to those complained of in paragraph 5 of this report.—W.H., 20/2/93. Mr. Inspector Dixon. The Examiner of Coal-fields—J.D., 21/2/93.

Stockton Colliery Inspection

Report on outburst of Water and Gas from the Roof of the Bottom Seam.

Sir,

Coal-fields Office, Newcastle, 21 February, 1893.

In consequence of receiving the following telegram—"Come over to Stockton Mine at once Mr. Dixon is here.—D. McAuliffe, Stockton"—on Friday evening, the 17th instant, I at once went to Stockton Colliery office, and there met Mr. Inspector Dixon, who had also been called there by a similar telegram a couple of hours previous to my arrival.

2. Mr. D. McAuliffe, the manager, then informed me that between 6 and 8 o'clock that morning a large feeder of water was observed coming on to the main flat of Gardiner's heading district from some part of the same district.

Search being made, it was soon found that this water and a considerable quantity of sand and clay were coming off at a fall of roof in one of the abandoned bords.

The flow continuing, without any perceptible diminution, the manager, about 2 o'clock in the afternoon, withdrew all workmen from the mine, except a few needed for "inquiry into the cause of danger and the removal thereof."

3. Shortly after this was done, James Leitch, the overman, approached the fall with his naked light, and was burnt on the face and arms by explosive gas. He is not, I understand, seriously burnt, and will, I hope, be alright again in a short time.

4. About 6 o'clock in the evening Mr. Inspector Dixon and myself, accompanied by Messrs. McAuliffe and McDonald, the manager and night-shift overman, descended the shaft with locked safety-lamps, and inspected the district. We found no gas of any kind, but a large volume of water (difficult to measure, or even estimate, but certainly not less than 150 gallons per minute) was still issuing from the top of the fall, bringing with it large quantities of sand and clay, that were rapidly silting up the adjacent bords and cut-throughs.

5. The explosive gas that burnt Leitch probably came off from the same orifice as the water, and immediately after the latter had made its first outburst.

It may have had its origin in the black-shale bed overlying the seam, where it was probably stored under great pressure, which would be instantly reduced when the water commenced to flow, thus allowing the gas by its expansion to exude and enter the workings; or, what is still more probable, the gas may have been held in solution by the water whilst under great pressure, and given off when such pressure was reduced.

6. On the following morning (Saturday) we again visited the colliery, and before descending the shaft entered the following report in a book kept in the office for that purpose:—

Stockton Colliery, 18 February, 1893.

We hereby certify that last night, the 17th of February, we carefully inspected with locked safety-lamps a portion of the Gardiner's heading district of the Stockton Colliery.

2. We found no explosive gas, but a large volume, together with sand and clay, was coming off at a fall of roof in one of the abandoned bords in that district.

3. The manager (Mr. D. McAuliffe) informed us that a few hours after the issue of water was first observed yesterday, he withdrew all workmen from the mine, except a few for the purpose of exploration, one of whom, James Leitch, the overman, was burnt by explosive gas when in the immediate vicinity of the fall.

4. We are, therefore, of opinion that, in accordance with the provisions of section 12 (sub-section 5) of the Coal Mines Regulation Act, 1876, no "workman shall, except in so far as is necessary for inquiry into the cause of danger, or for the removal thereof, or for exploration, be readmitted into the mine, or such part thereof, until the same is stated by the Examiner or Inspector to be safe.

7. Accompanied by Mr. McAuliffe we then descended the shaft and made another inspection of the district with locked safety-lamps. We found nine or ten men at work with safety-lamps, putting in dams, composed of slabs and sandbags, on each side of the fall, with a view of preventing the flow of detritus which, it was hoped by the manager, would ultimately choke the orifice, and probably stop the flow of water. Five or six more men were employed in the adjacent bords putting in extra timber to secure the roof.

We found no gas or sign of any, and very little change in the quantity of water flowing; if anything there was a decrease, but nothing to speak of.

The

The sand-bags had stopped to some extent, the flow of sediment, but a deal was still being brought away with the water.

It is the intention of the manager to continue putting in those dams, one in front of the other, until the flow of sediment is stopped, and then build brick dams in front of all.

8. The roof of almost all the workings in this district is very wet and soft. Several falls of black shale roof, from 8 to 12 feet in thickness, are to be found in the abandoned bords. From the top of these falls water, highly charged with oxide of iron, is dropping heavily. Several of my previous reports refer to them, and the workings of this and other districts then at work formed the subject of a letter dated 7th of January, 1893, that I addressed to the manager drawing his attention to the fact that several of the recently formed pillars were only 4 yards in width, instead of at least 6, and many of the bords from 6½ to 7 yards wide.

My report on my last ordinary inspection with copies of this and three more letters sent to the manager, I herewith forward to you with the present report.

9. The point of issue of the water now flowing is situated about 86 chains north of the present downcast and upcast shafts, and about 29 chains south-west of the sinking shaft now down about 130 feet.

The flow of water is undoubtedly coming from the thick alluvial deposits, consisting of water-bearing beds of sand and gravel, interstratified with beds of clay, which almost immediately overlie the coal-seam at this point.

10. The whole of this Gardiner's heading district is upwards of 100 feet above the level of the downcast shaft bottom, and the present feeders of water are therefore all flowing out-by to the lodgment some 400 or 500 yards from the shaft, where the large pump recently placed at the bottom of the upcast receives and forces it to the surface. The pumping-power appears to be capable of pumping the ordinary feeders and the extra water now coming off.

11. In conclusion, I beg to state that my opinion is that under the present condition of the mine it is not safe for work to be resumed.

John Mackenzie, Esq., Examiner of Coal-fields, Sydney.

I have, &c.,

WILLIAM HUMBLE,

Inspector of Collieries.

I accompanied Mr. Inspector Humble during those inspections, and fully agree with this report.—
J.D. The Examiner of Coal-fields.

Report on Stockton Colliery inrush of water on 17th February, 1893.

Sir,

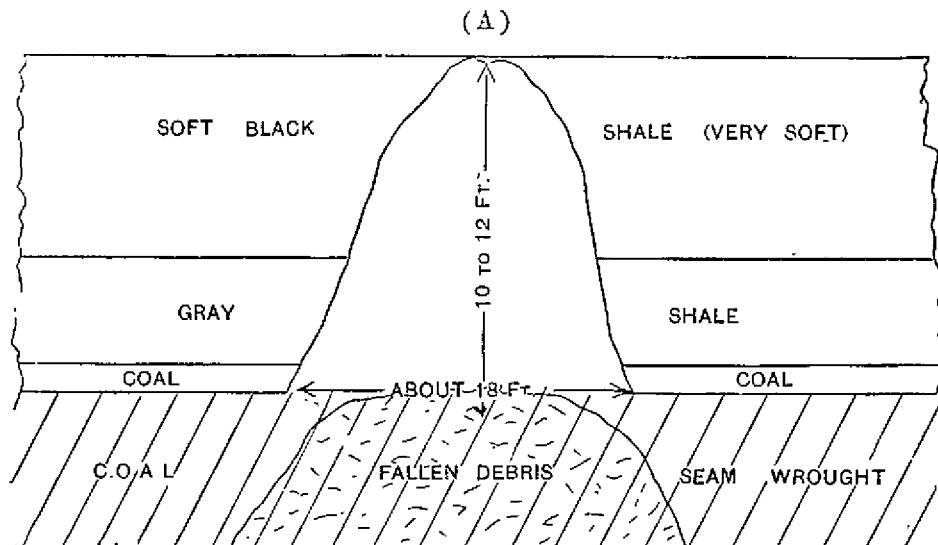
Coal-fields Office, Department of Mines, Newcastle. 21 February, 1893.

I have the honor to inform you that I went to the Stockton Mine yesterday, and accompanied by Messrs. Dixon and Humble, Inspectors of Collieries, and Mr. McAuliffe, the Company's colliery manager, proceeded to Gardiner's heading district, where the inrush of water took place near the face of a 6-yard bord, on Friday last, the 17th instant, and found about twenty workmen engaged in an attempt to stop the flow of sand, pebbles, &c., which was being carried down by the current of water from the fall.

2. The means being adopted to stop it were barriers of strong slabs supported by upright timber from roof to floor, filled in behind with large bags of sand, which sand came from the fall.

3. The barriers have been erected in three different places as near the fall as it was possible to get, and were then about 15 yards in length back from the fall. The work was still being carried on by the erection of slabs and filling in behind with bags of sand with a view to giving additional strength to the first barriers.

4. We next examined several old bords adjacent to the last fall and saw four other falls [*vide*



section of roof] 10 to 12 feet in height of soft shale, &c. The roof of these bords show signs of having been heavily watered, and some are now shedding water. The timber in some of them is giving way, and a large percentage of broken props is to be seen both on the road side and near the rib side, and consequently the roof is bending. Men are at work renewing the timber in the old bords in this district.

5. Messrs. Dixon and Humble are of opinion that the decrease in the flow of water is very slight, if any, since they saw it on the 18th instant (Saturday), viz., about 150 to 200 gallons per minute.

6. I and the Inspectors are of opinion from the shale conglomerate (10 inches in thickness) sand which we saw had been washed down into the bords and cut-through, that the water is probably coming from the large alluvial deposits on the Company's M.L. and the Hunter River adjacent thereto, which deposit (possibly thicker than what is usually supposed to overlie the Stockton coal seam) overlies the top of the 10-inch conglomerate resting on 10 to 12 feet of soft shale, &c., which is the roof of the coal seam worked.

7. In conclusion, I beg to state that I have seen Messrs. Dixon and Humble's report of 18th instant on the inrush of water, &c., which I fully agree with and forward you herewith. The men having been withdrawn by the manager, work cannot be lawfully resumed until I or an Inspector state that the mine is safe, which we cannot at present say.

I have, &c.,

JOHN MACKENZIE,

Examiner of Coal-fields.

The Under Secretary for Mines and Agriculture.

P.S.—Annexed plan No. 12 denotes the place where the fall occurred, viz., at the western boundary of mineral lease No. 38 (Crown lease), which is the Hunter River high-water mark.—J.M.

Stockton Colliery Inspection.

Report on the influx of water, &c., and other matters in connection therewith.

Sir,

Wickham, Newcastle, 22 February, 1893.

I have the honor to report inspection of the above colliery yesterday and to-day.

2. Yesterday I visited the mine in the afternoon, and inspected the workings adjacent to the fall in Gardiner's heading district, from which the water is now flowing.

I found about twenty men employed putting in dams to stop or regulate the flow of water, and in putting extra timber into the adjacent bords and headings to secure the roof.

The quantity of water coming off was about the same as when I saw it on the day of the outburst, viz., about 150 gallons per minute, but the flow of sand and clay has been stopped by the sand-bag dams. I did not see the least sign of gas, but all the men employed at the dams were still working with safety-lamps.

3. To-day, in company with Mr. Dixon, I made further inspection, and found the amount of water about the same as yesterday.

About twenty-six men were engaged in connection with the timbering and dam-building, three of whom were bricklayers, who started this morning to build one of the three brick dams considered necessary by the management.

I found no sign of gas, but the men working at the dams adjacent thereto were still working with safety-lamps.

4. In the same district I found a large number of broken props in several old bords, situated about 4 chains northward of the fall from which the water is now flowing, and am of the opinion that, unless the roof is speedily secured, further falls will occur, which might liberate other large volumes of water.

I drew the attention of the manager and Mr. Scott, the company's surveyor, who had charge of the work this morning, to this grave matter, and they both stated that extra timber would be put in as soon as possible.

5. I was greatly surprised to find that, notwithstanding the withdrawal of the workmen by the manager on Friday last (17th instant), and the report entered by Mr. Inspector Dixon and myself in a book at the mine on the following day, wherein we stated that "in our opinion no workman shall, except in so far as is necessary for inquiry into the cause of danger, or for the removal thereof, or for exploration, be readmitted into the mine or such part thereof as was so found to be dangerous until the same is stated by the Examiner or Inspector to be safe," the manager had either ordered or permitted the readmission of five small-coal fillers and two wheelers into the mine, all of whom I found filling and wheeling small coal in this Gardiner's heading district to-day.

6. The manager stated that this small coal was necessary as fuel for the boilers on the surface which supply steam to the pumps and winding engine, and, therefore, in his opinion, it was part of the work necessary "for inquiry into the cause of danger and the removal thereof."

7. I am of the opinion that this small-coal filling is certainly not at present necessary work in this sense, because the company has some hundreds of tons of small coal stored in their box on the surface in close proximity to the boilers that could have been used for steaming and furnace purposes.

8. Therefore, I think that the management has committed a breach of section 12 (sub-section v) of the Coal-mines Regulation Act, 1876, by readmitting these five small coal-fillers and two wheelers into the mine that was found dangerous, and before it had been "stated by the Examiner or Inspector to be safe," but I should like to have your advice on the matter as soon as possible.

I have, &c.,

WILLIAM HUMBLE,

Inspector of Collieries.

The Examiner of Coal-fields.

I accompanied Mr. Inspector Humble during the second day of inspection, and fully agree with this report.—J.D., 23/2/93. The Examiner of Coal-fields.

Stockton Colliery Inspection.

Report on the influx of water, &c., in Gardiner's heading district.

Sir,

Wickham, Newcastle, 25 February, 1893.

I have the honor to report inspection of the above colliery on Thursday, Friday, and to-day, the 23rd, 24th, and 25th instant.

2. On the first day I found about thirty men employed, five of whom were bricklayers building two brick dams, the remainder being shiftmen and deputies at work putting extra timber into some adjacent old bords and building sand-bag dams near to the point of issue of the water.

3. The quantity of water flowing appeared to be slightly less than formerly. The two dams now in course of construction are provided with pipes which are built into them for the purpose of allowing the water and any gases present to issue therefrom.

It is proposed to affix taps to the water-pipes, so that the flow of water can be regulated or even stopped altogether if circumstances require it.

The dams are built with brick and cement, one in a 6-yard bord and the other in a 2-yard cut-through, the former being about 8 feet high and 10 feet thick, and the latter about 10 feet high and 4½ feet thick, secured in front by a few feet of arching.

4.

4. Safety-lamps are still being used by the men at the dams, but I found no sign of gas. I found no small coal-fillers at work as I did on the previous day.
5. On the second day, in company with Mr. Inspector Dixon, I made further inspection. Found water slightly diminished, and the dam building making very fair progress. Found a gang of men stowing debris in and around several of the falls of roof in adjacent bords with the view of preventing such from further collapse. Safety-lamps still in use, but found no sign of gas, neither did I find any small-coal fillers at work.
6. To-day, in company with Mr. Inspector Dixon, I made another inspection and found things pretty much the same as yesterday.
7. The number of men timbering the old bords has been augmented, as it has now been seen by the management that every old bord needs more or less new timber to secure the roof. The two brick dams were not quite finished this morning, as some trouble had been experienced in making them tight next the roof, especially the dams in the cut-through where the closing point is about 10 feet high and very soft roof. Unless something unforeseen comes in the way both dams will be finished either to-night or to-morrow, and a start made with the third one.
8. Found no gas of any kind—safety-lamps still in use. No small-coal fillers at work to-day. The last I saw of this kind of work being on Wednesday, the 22nd instant.

I have, &c.

WILLIAM HUMBLE,

Inspector of Collieries.

John Mackenzie, Esq., Examiner of Coal-fields, Sydney.

I fully agree with this report.—J.D., 21/2/93. The Examiner of Coal-fields.

Stockton (No. 3) Sinking Shaft Inspection.

Sir,

Coal-fields Office, Newcastle, 23rd March, 1893.

I have the honor to report inspection of the above shaft on Tuesday, the 21st instant.

2. On my arrival at the shaft I found nine men employed in connection with the work, and the winding-engine busy taking out the water.

3. Mr. George Bell, the charginer, informed me that up to the time of my visit they had sunk about 127 feet 4½ inches of cylindrical tubing, 10 feet in diameter, the strata passed through being 120 feet of sand, 3½ feet of clay, and 1½ feet of sand, the bottom of the tubing then being some feet into a dark blue stiff clay.

The cylinders are forced down by a top weight of from 900 to 1,000 tons composed of sand-bags and other heavy materials.

Since the cutting tool in the bottom of the cylinders entered this stratum of stiff clay two divers have been employed to cut away the clay around the bottom of the shaft, and thereby help the descent of the tubing. These two men work two hours at a time and whenever their services are required.

As the top length of cylinders is about 4 feet 5½ inches below the level of the surface the total depth sunk in this shaft is 131 feet 10 inches.

Some of the water is now being taken out of the shaft, and when it is thought that a water-tight connection is effected between the bottom of the cylinders and the bed of the clay the shaft will be entirely unwatered and a borehole put down a short distance to prove the character of the deposits next to be sunk through.

4. The ropes, machinery, &c., appeared to be in good order and condition.

I have, &c.,

WM. HUMBLE,

Inspector of Collieries.

John Mackenzie, Esq., Examiner of Coal-fields, Sydney.

Further Report on the condition of Stockton Colliery.

Sir,

Coal-fields Office, Newcastle, 2 March, 1893.

We have the honor to report that we, yesterday, made an inspection of that portion of the Stockton Colliery workings, of Gardiner's heading district, where a fall of roof occurred on the 17th ultimo and liberated a large quantity of water, sand, pebbles, clay, and shingle, and find that although water is still to some extent flowing from the fallen ground, the inrush of sand, &c., has been stopped by the close packing of bags of sand behind barricades of slabs and upright props, and the erection of brick dams, one of which is 13 feet in thickness, and the others 10 feet and 4 ft. 6 in. in thickness, respectively, the latter being strengthened by a few feet of arching.

These dams are built from floor to roof, and set in cement, and each is provided with a 6-inch iron pipe to allow the water to flow. Thus, in our opinion, the danger arising from this source has been removed.

But there are other circumstances in connection with this colliery, which, in our opinion, preclude us from stating that the mine is safe, which we beg to give as follows:—

1. Throughout the whole of the Gardiner's heading district, and the districts adjoining, comprising the innermost northern workings, water is freely shedding from the roof in nearly all the bords and headings, or cut-throughs.

This, to us, is an evidence that the rock cover, between the top of the coal seam and alluvial deposits, is thin, and not only thin but very much broken by the cleavage at right angles to the horizontal bedding, and by igneous dykes, which, in the main headings, have given, and are now giving off regular quantities of water.

This rock appears to us to be of a texture unable to resist any great pressure from the overlying alluvial deposits of sand, clay, gravel, &c., but would rather of itself add to the dead load over every excavation, whether bord or heading.

2. During our inspection yesterday of the old bords, in the workings above named, we noticed much of the timber, which had been set to support the roof, broken, and men were engaged renewing some of the broken timber in bords adjacent to the late fall.

In

In very many places the roof shows signs of weakness, and several falls of roof have already taken place, some of which have been secured.

Under such conditions further falls of roof in other bords and headings may at any time take place, which, in every instance, might be expected to liberate considerable quantities of water, &c., similar to the late fall.

3. Should any further fall of roof take place, and cause a large opening or cavity, the inrush of water might be so great as to almost at once find its way on to the main road; and seeing that at one portion of the main road, about 22 chains from the bottom of the shaft, there is a swelly or depression of about 5 feet below the level of the shaft bottom, this portion of the road would in all probability be speedily blocked by the volume of water, and all egress to the shafts cut off.

4. In addition to the above, we may here point out that another source of danger arises from the fact that the bottoms of the main and upcast shafts are both about 100 feet below the level of the innermost working districts, and consequently the approaches to both shafts (as they are not far apart) could be flooded before the innermost workings would fill with water.

This, in our opinion, is a matter for serious consideration in the absence of an opening to the day or surface in the immediate vicinity of the present rise workings, whereby the persons employed in the mine could find a ready means of exit in case of a panic caused by a large flow of water into the mine.

5. We further beg to state that, according to provings by boring on the Stockton peninsula, there cannot be a doubt of the existence of thick alluvial deposits all over the present workings of the Stockton Colliery, and as in our opinion such deposits are to a great extent water-logged, we consider this to be a continual menace to the safe working of the colliery.

6. In conclusion, we have also to inform you that before leaving the colliery the manager (Mr. McAuliffe) asked us whether the water-bailers could, on the following day, commence drawing the water out of the men's places, so that the men could commence getting coal. We replied that we could not write a report in the book at the colliery stating that the mine was safe. Also, that our report of that day's inspection would be made and forwarded to you next day.

We have, &c.,

JOHN MACKENZIE,
Examiner of Coal-fields.

JOHN DIXON, and
WILLIAM HUMBLE,
Inspectors of Collieries.

The Under Secretary for Mines and Agriculture,
Department of Mines, Sydney.

Stockton Colliery Inspection—Special Inspection to see if the Mine was at work.

Sir,

Coal-fields Office, Newcastle, 18 March, 1893.

We have the honor to report inspection of the districts known as Gardiner's and Kelly's headings yesterday.

Arriving at the colliery about 11 a.m., we found the mine at work drawing coal. Accompanied by the manager, we descended the shaft about 11:30 a.m., and found that, notwithstanding the fact of no report having been entered in a book at the mine "by the Examiner or Inspector stating it to be safe," the bulk of the miners had been readmitted into the mine for the purpose of getting coal.

We counted forty-seven men and boys coming out from the workings to the shaft, and found thirty-eight miners and water-bailers at work in the Gardiner's and Kelly's heading districts, all such being engaged in their ordinary employment.

We noticed that since the miners commenced work a few days ago some of the working places situated in the north-east corner of Gardiner's heading district are now confined to the bottom coal between 5 and 6 feet thick, the top coal, of about 2 feet in thickness, being left unwrought to form a roof. This is, we understand, a precaution adopted by the management to avoid further falls of roof similar to the one that took place on the 17th ultimo, which released large volumes of water, sand, clay, pebbles, &c.

The volume of water now issuing through the pipes built into the brick dams is about the same as when last we saw it, and the dams are in good condition.

Since our last inspection, made on the 1st instant, a deal of additional timber has been put into the abandoned bords adjacent to the fall of roof from which the water is issuing, and several of the smaller falls of roof have apparently been secured by barricades of timber and sand-bags.

We have, &c.,

JOHN DIXON,
WILLIAM HUMBLE,
Inspectors of Collieries.

John Mackenzie, Esq., Examiner of Coal-fields, Newcastle.

Stockton Colliery Inspection, Stockton.

Sir,

Coal-fields Office, Newcastle, 8 February, 1894.

We have the honor to report inspection of the above colliery on Tuesday and Wednesday, the 6th and 7th instant. In the No. 22 going bord district we found eighteen men getting coal and eight deputies, shiftmen, stonemen, &c., employed on other work. These, together with two boys and two horses, making a total of thirty, were supplied with 3,360 cubic feet of air per minute. In Kelly's heading district we found thirty men getting coal, and two deputies in attendance. These, together with two boys and two horses, making a total of thirty-six, were supplied with 6,720 cubic feet of air per minute.

Each working-place was well supplied with timber, and the roadways were in fair condition.

In a cut-through off the No. 22 going bord, and about 10 chains beyond high-water mark of the ocean, there is a vertical borehole, which James Leitch, the overman, informed us was 33 feet in height, passing through, in ascending order, 17 feet of shale, 10 feet of coal, and 6 feet of coaly bands and shale. This 10 feet of coal is probably the upper of the two sections of coal usually wrought at this colliery.

About 25 yards further in the same bord another vertical hole was being bored. It was then (the first day of inspection) up 23 feet in shale, and boring still progressing.

The face of this same going bord was being driven in sinder and igneous rock. An advance borehole was in the face.

No place at present is being driven in the barrier adjacent to and on the west side of M.P. 130, and all the workings beyond, *i.e.*, advancing seaward, are laid out on 8-yard pillars and 6-yard bords.

In addition to the districts at work, we also inspected the old workings at Kelly's, Wilson's, and Gardiner's heading districts, and that portion of the latter district in which men were recently employed, but in which no work was being done on the day of inspection.

We found the old workings practically unchanged since our inspection in December last.

There appears to be about the same quantity of water flowing from the pipes through the three brick dams, and the quantity of water shedding from the roof in those districts is much the same as on prior inspections.

Since our previous inspection a portion of the old workings in the No. 3 District, amounting to an area of about 7 acres, has fallen and caused a subsidence of the surface at the junction of Maitland-street and Fullerton Cove Road.

We travelled the outskirts of a considerable portion of this fallen ground, and did not hear anything indicative of further disturbance, neither did we see any sign of water coming from the fallen ground.

To-day we walked over the surface where the subsidence has taken place. The greatest depression appears to be at the junction of the two streets, many of the kerbstones being split and disjointed, and in several places the asphalt guttering was fractured. The retaining-walls, stone steps, and fences of several houses in both streets bore evidence of disarrangement, the two former being fractured, and the latter thrown from their original upright position.

Before leaving the colliery to-day, we entered the following report in a book at the Colliery:—

Stockton Colliery, 8 February, 1894.
Our inspection of the above colliery on Tuesday and Wednesday, the 6th and 7th instant, has revealed nothing that would justify us in altering the opinion expressed by us, and entered in this book on the 18th February, 1893, and referred to by us on the 14th December, 1893.

JOHN DIXON,
WILLIAM HUMBLE,
Inspectors of Collieries.

We have, &c.,

JOHN DIXON,
WILLIAM HUMBLE,
Inspectors of Collieries.

John Mackenzie, Esq., Examiner of Coal-fields, Sydney.

Stockton Colliery Inspection, Stockton.

Sir,

Coal-fields Office, Newcastle, 6 April, 1894.

We have the honor to report inspection of the above colliery on Monday and Wednesday, the 2nd and 4th instant.

The quantity of air in each split was as follows:—

No. 1 split.—Thirty-two men, three boys, and three horses employed, and supplied with 4,800 cubic feet per minute, being an average of 126 cubic feet each.

No. 2 split.—Thirty-two men, two boys, and two horses employed, and supplied with 3,750 cubic feet per minute, being an average of 104 cubic feet each.

No. 3 split.—Forty men, three boys, and three horses employed, and supplied with 5,100 cubic feet per minute, being an average of 110 cubic feet each.

The wheeling-roads and working-places were in fair condition, and a good supply of timber was on hand ready for use.

On the first day of inspection we travelled the working-places of the No. 2 and No. 3 splits known as Kelly's heading, and No. 22 going bord districts. About one-third of the working-places in these two districts have now crossed the high-water mark, and are being driven under the ocean in an eastward direction. The bords are 6 yards wide, and the pillars 8 yards wide. On our last inspection the No. 22 going bord was being driven in troubled and cindered ground of the lower seam.

Since then this work has been abandoned, and about 60 yards back from the face a sloping drive has been driven through about 21 feet of strata to open out the upper seam. Just as this seam was reached an igneous dyke was met with, and at the time of our inspection two headings were starting about parallel with the dyke, to prove the coal on each side of the drive. From the lower seam in these two districts the manager and overman informed us that nine vertical boreholes have been put up into the roof to heights from 30 to 44 feet. In seven of these the upper was found, but in almost every case it was more or less cindered and interfered with by igneous dykes. In the No. 43 going bord driven in the lower seam we found three men employed boring a vertical hole in the roof close to the face, which was then idle and standing at an igneous dyke. The men informed us that they had bored this hole up 30 feet through shale-rock, without, however, finding any upper seam.

The innermost 15 yards or so of this bord is very very wet, the water "raining" from the roof heavily, resembling very much a tropical shower on the surface.

The yield of water from this small area of roof is not less than 15 gallons per minute.

On the second day of inspection, we visited the thirty-two men working in the south-east corner of Gardiner's heading district, and travelled the old workings of this, Kelly's, and Wilson's heading district. The amount of water coming from the pipes inserted in the three dams is unchanged, and with the exception of several broken props in the abandoned bords of each district things are much the same as when we saw them in February last. But this exception, in our opinion, is an important one, as the roof of every bord and heading appears to be resting almost entirely on the timber, which is constantly exposed to the deteriorating influence of moisture, vitiated air corrosion, and great weight.

The probable rapid decay of this timber, followed by large falls of roof, was an important element that influenced our opinion in February, 1893, because, judging from the dimensions of the fall that took place at that time and admitted large volumes of sand and water, we believe that all the abandoned portions of Gardiner's and Wilson's heading districts have not more than about 20 or 25 feet of soft porous shale between the roof of the seam and the overlying water-logged sand-beds.

Messrs. Leitch and Scott, the overman and surveyor, accompanied us and saw this broken timber, who will no doubt take steps to renew the same.

Before

Before leaving the colliery on the second day we entered the following report in the book kept at the colliery office:—

Stockton Colliery, 4 April, 1894.
Our inspection of the above colliery on Monday and Wednesday, the 2nd and 4th instant, has revealed nothing that would justify us in altering the opinion expressed by us and entered in this book on the 18th February, 1893, and referred to by us on the 14th December, 1893, and the 8th February, 1894.

JOHN DIXON,
WM. HUMBLE,
Inspectors of Collieries.

Since our last inspection the large pump that was then being fixed at the shaft bottom has been started.

It has been supplied by Evans and Co., of Wolverhampton, and has two 28-inch steam cylinders, two 10-inch water rams and 4-foot stroke.

The suction and rising main columns of pipes are each 12 inches in diameter, through which the water is brought from the lodgment in U heading district and forced to the surface. The manager expects that when it has got fairly to work it will deliver 45,000 gallons per hour, or 750 gallons per minute.

We have, &c.,
JOHN DIXON,
WILLIAM HUMBLE,
Inspectors of Collieries.

John Mackenzie, Esq., Examiner of Coal-fields, Sydney.

Copy of particulars entered in a book at the Stockton Colliery Office by the Inspectors.

Stockton Colliery, 18 February, 1893.

WE hereby certify that last night we carefully inspected, with locked safety-lamps, a portion of the Gardiner's heading district, of Stockton Colliery.

2. We found no explosive gas, but a large volume of water, together with sand and clay, was coming off at a fall of roof in one of the abandoned bords in that district.

3. The manager (Mr. D. McAuliffe) informed us that a few hours after the issue of water was first observed yesterday, he withdrew all workmen from the mine, except a few for the purpose of exploration, one of whom, James Leitch, the overman, was burnt by explosive gas when in the immediate vicinity of the fall.

4. We are, therefore, of opinion that in accordance with the provisions of section 12 (subsection 5) of the Coal Mines Regulation Act, 1876, no "workman shall, except in so far as is necessary for inquiry into the cause of danger or for the removal thereof or for exploration, be readmitted into the mine or such part thereof as was found to be dangerous until the same is stated by the Examiner or Inspector to be safe."

JOHN DIXON,
WILLIAM HUMBLE,
Inspectors of Collieries.

J.

EXTRACT from letter to the Registrar-General of Births, Deaths, and Marriages in England on the mortality in the registration districts of England and Wales during the ten years 1871-80; by WILLIAM OGLE, Esq., M.D.:—

General Register Office, Somerset House,
28 February, 1895.

MORTALITY OF MALES ENGAGED IN DIFFERENT OCCUPATIONS.

IN each of the two former decennial supplements an attempt was made to estimate the comparative mortality of males engaged in different professions and trades. The numbers of males engaged in each occupation and their ages were taken from the Census returns; while the numbers of deaths at each age-period were abstracted from the death-registers. The calculations in the supplement for 1851-60 were based upon the Census numbers for 1861, and the deaths in 1860 and 1861; in the supplement for 1861-70, upon the Census numbers for 1871, and the deaths in the same year. The attempt has been renewed on the present occasion, and on a larger scale, the deaths in combination with ages and occupations having been abstracted for three entire consecutive years, namely, 1880, 1881, and 1882. In order to ensure as great accuracy as was possible, the deaths in these three years were abstracted by the same clerks, and on occupation sheets of the same form, as had served for the abstraction of the living in the Census of 1881, and the same rules as to the details of the process were observed in each case.

The inquiry was limited, as on the previous occasions, to males, and for the same reason; namely, that the uncertainty attaching to the statement both of occupation and of age is very much greater in the case of women than of men. Males under 15 years of age were also excluded; inasmuch as the influence of occupation, which was the object of inquiry, is practically inappreciable at that early period of life.

The total number of males, 15 years of age or upwards, living in England and Wales at the date of the Census was 7,911,436, and the total number of deaths of males at those ages abstracted from the registers of the three years, of which the Census year was the centre, was 418,214. With so wide a basis of observation as this, and with the precautions that were taken to ensure, as far as possible, uniformity in the abstraction of the living and the dead, a very high degree of trustworthiness may fairly be claimed for the results. There are, however, numerous difficulties and causes of error that practically interfere with what might at first sight appear to be a simple though highly laborious process; and some of these difficulties and causes of error it is important to set forth, so that each person who interests himself in the results may be able to form an estimate as to the amount of confidence he should place in them.

In the first place then, although the aggregate numbers, both of the living and the dead, that were abstracted were, as we have seen, very great, yet the numbers of persons in many of the individual trades, and still more the numbers at each age-period in such trades, were but small.

The amount of confidence in the results is, of course, *ceteris paribus*, proportionate to the number of observations, which depends on the number of persons engaged in the occupation. The figures therefore which relate to small trades, or to age-periods where the numbers are few, should be received with due hesitation.

A second and still more serious difficulty and cause of error is due to the vagueness with which the occupation is oftentimes stated both in the returns made for the Census and in the death-registers, and especially in the latter. As the same rules for dealing with doubtful cases were adopted, as already mentioned, in abstracting the living from the Census returns and the dead from the death-registers, it might be supposed that this cause of error would be practically immaterial, as indeed it would be, were the vagueness of statement similar in amount and character in the two cases. But there is reason to believe that the vagueness of statement as to occupation was much more considerable in the death-registers than in the Census returns, inasmuch as special precautions had been taken in the case of the Census to ensure great precision in the statement of trade or profession, while no such special precautions had been taken in the case of the death-registers.

In order to obviate to some extent the evils arising from this vagueness, and also at the same time to increase the numerical basis of the calculation, occupations that are likely to be confounded with each other to any considerable extent have been grouped together, and in some cases it has been found necessary to do this, even when an occupation is of such a definite character that apparently it is not likely to be confounded with another. For instance, no occupation would seem at first to be more definite than that of a coal-miner; and as there were at the date of the Census no fewer than 355,363 male coal-miners over 15 years of age, it might naturally be supposed that here at any rate was an industry in which the death-rate could be calculated with much certainty. But it was soon discovered that a very considerable number of coal-miners who die are simply described in the death-registers as miners without further specification; and consequently it became necessary to group all miners together; or rather to divide them, as will be explained further on, geographically, and not directly by the character of the minerals. Again, in the death-registers there is often a confusion between general and agricultural labourer, and in consequence it was found necessary to group these together; while, in order to diminish the disturbing influence of the intermixture of general with agricultural labour, the calculation was based on the returns and registers for ten* selected counties, in which the great mass of labour was agricultural.

Similarly, hosiery-manufacture and hosiery-selling were found to be practically indistinguishable in the death-registers, and have been therefore grouped together, the effect of the intermixture being reduced, so far as possible, to a minimum, by basing the calculation on the returns and registers for the counties of Leicester and Nottingham, which are the main seats of the hosiery manufacture.

A similar process of grouping, with or without limitation to a special selected area, has been adopted in several other cases, as will be seen hereafter; while in those cases, where it was thought probable that the vagueness of statement as to occupation had seriously affected the results, these have been entirely discarded, and no statements as to the death-rates in such industries are given in the tables.

We come now to a difficulty of a different kind, and of a still more serious character, inasmuch as it appears to be one for which there is no remedy, and which must always occasion a great flaw in all calculations of the death-rates in different industries. There are many trades and occupations which require a considerable standard of muscular strength and vigour to be maintained by those who follow them; such occupations, for instance, as those of a blacksmith, of a miner, and the like; and, so soon as from any cause the health and strength of a man fall below this standard, he must of necessity give up the occupation and either take to some lighter kind of labour or, if his health be too much impaired for this, retire altogether from work. And even in those industries, where no excessive amount of muscular strength is required, there must nevertheless be always a certain line below which continuance in the business becomes an impossibility.

The weaker individuals, and those whose health is failing them, are thus being constantly drafted out of each industrial occupation, and especially out of those which require much vigour; and the consequence is that the death-rates in these latter occupations are unfairly lowered, as compared with the death-rates in occupations of an easier character, and still more as compared with the death-rates among those persons who are returned as having no occupation at all. A very considerable proportion of those who are forced to give up harder labour take to odd jobs of a more or less indefinite character, and are returned both on the Census schedule, and eventually in the death-registers, as general labourers, as messengers, or as costermongers, street-sellers, &c.; and thus it comes about that the death-rates of general labourers, of messengers, and of street-sellers, as shown in the table, appear to be of appalling magnitude, as also do those of persons returned as having no occupation. Under these headings, however, are comprised the broken down and the crippled who have fallen out of the ranks from all the various industries, as well as those who have been throughout life debarred by natural infirmities or other causes from following any definite occupation.

Another very serious flaw in these death-rates, when taken as measures of the relative healthiness of different industries, is due to the fact that these several industries do not start on equal terms as regards the vitality of those who follow them. A weakling will hardly adopt the trade of a blacksmith, a miner, or a railway navvy, but will preferentially take to some lighter occupation, such as that of a tailor, a weaver, or a shopman. This defect in the death-rates, as measures of comparative healthiness of occupations, tells in the same direction as the defect previously noticed; it gives an unfair advantage to such industries as demand much strength or activity in those that follow them. Such industries are in fact carried on by a body of comparatively picked men; stronger in the beginning, and maintained at a high level by the continual drafting out of those whose strength falls below the mark.

It is plain, then, that much caution must be used in drawing inferences from the death-rates in different industries. The data are sometimes scarcely sufficient in amount or precise enough in character for full confidence to be placed in the rigid accuracy of the rates based upon them; and, secondly, the differences presented by the rates, even when the accuracy of these is indisputable, are not invariably due to differences in the comparative healthiness of the occupations, but, often at any rate, to differences in the constitution of the groups of workmen severally engaged in them.

Still, after the fullest weight has been allowed to all the defects which have now been mentioned, there can be no reasonable doubt but that the death-rates do in reality furnish valuable indications of the comparative salubrity of different industrial occupations. Small differences between them must, it is true, be ignored, as falling within the limits of possible disturbing influences; but large differences, such as are presented in numerous cases, must be accepted as betokening real and substantial differences of healthiness.

In

* These counties are Hertfordshire, Oxfordshire, Bedfordshire, Cambridgeshire, Suffolk, Wiltshire, Dorsetshire, Devonshire, Herefordshire, and Lincolnshire.

In the following table (Table J.) the third and fourth columns of figures give the mean annual death-rates for two age-periods for 1880-1-2. The first and second columns give for comparison the corresponding death-rates, as calculated from the data in the two previous decennial supplements.

The fifth column of figures, which is headed Comparative Mortality Figure, requires some little explanation. There was in 1880-1-2 an annual mortality in England and Wales of 1,000 deaths per 64,641 males between 25 and 65 years of age; and of such 64,641 males, 41,920 were under, and 22,721 were over, 45 years of age. The figures in column five are the numbers of deaths that would have occurred in the several occupations out of 64,641 males, of whom 41,920 were under, and 22,721 were over, 45 years of age. For instance, 41,920 barristers and solicitors in the earlier age-period, and 22,721 in the latter period would, with death-rates respectively of 7.54 and 23.13 per 1,000, give 842 deaths. This figure is therefore set in the fifth column against the heading "Barrister, Solicitor," and represents the mean mortality of males in that profession between 25 and 65 years of age, as compared with the mortality of all males of similar ages in England and Wales, this latter being taken as 1,000.

TABLE J.—Death-rates of males, 25-65 years of age, in different occupations, in 1860-1-1871 and in 1880-2; and their comparative mortality figures in 1880-2.

Reference Number.	Occupation.	Mean annual death-rates per 1,000 living.				Comparative mortality figure, 1880-1-2.
		1860-1-1871.		1880-1-2.		
		Years of age.		Years of age.		Years of age
		25-45	45-65	25-45	45-65	
	All males	11.27	23.98	10.16	25.27	1,000
	Occupied males .....	.....	.....	9.71	24.63	967
	Unoccupied males .....	.....	.....	32.43	36.20	2,182
	Males in selected healthy districts* .....	.....	.....	8.47	19.74	804
1	Clergyman, priest, minister.....	5.96	17.31	4.64	15.93	556
2	Barrister, solicitor.....	9.87	22.97	7.54	23.13	842
3	Physician, surgeon, general practitioner	13.81	24.55	11.57	28.03	1,122
4	Schoolmaster, teacher	9.82	23.56	6.41	19.84	719
5	Artist, engraver, sculptor, architect	11.73	22.91	8.39	25.07	921
6	Musician, music-master	18.94	34.76	13.78	32.39	1,314
7	Farmer, grazier	7.66	17.32	6.09	16.53	631
8	Labourer in agricultural counties†.....	.....	.....	7.13	17.68	701
9	Gardener, nurseryman	6.74	17.54	5.52	16.19	599
10	Fisherman	11.26	15.84	8.32	19.74	797
11	Cab, omnibus, service	15.94	35.28	15.39	36.83	1,482
12	Bargeman, lighterman, waterman	14.99	30.78	14.25	31.13	1,305
13	Carter, carrier, haulier .....	.....	.....	12.52	33.00	1,275
14	Groom, domestic coachman .....	.....	.....	8.53	23.28	887
15	Commercial traveller.....	12.28	29.00	9.04	25.03	948
16	Brewer	10.26	36.86	13.90	34.25	1,361
17	Innkeeper, publican, spirit, wine, beer-dealer.....	18.01	34.14	18.02	33.68	1,521
18	Inn, hotel, servant.....	21.91	42.19	22.63	55.30	2,205
19	Maltster	7.04	22.26	7.28	23.11	830
20	Law clerk.....	18.75	37.05	10.77	30.79	1,151
21	Commercial clerk and insurance service	14.28	28.88	10.48	24.49	996
22	Bookseller, stationer	10.84	21.36	8.53	20.57	825
23	Chemist, druggist	13.92	23.66	10.58	25.16	1,015
24	Tobacconist	13.19	21.76	11.14	23.46	1,000
25	Grocer	9.49	17.15	8.00	19.16	771
26	Draper and Manchester warehouseman.....	14.34	26.33	9.70	20.96	883
27	Ironmonger	10.38	22.95	8.42	23.87	895
28	Coal merchant.....	8.83	22.59	6.90	20.62	758
29	General shopkeeper .....	.....	.....	9.12	21.23	865
30	Cheesemonger, milk, butter-man .....	.....	.....	9.48	26.90	1,009
31	Greengrocer, fruiterer	11.41	24.51	10.04	26.57	1,025
32	Fishmonger, poulterer	15.62	29.21	10.53	23.45	974
33	Shopkeepers, as represented by the above eleven (22-32) .....	.....	.....	9.04	21.90	877
34	Butcher	13.19	28.37	12.16	29.08	1,170
35	Baker, confectioner	10.72	26.39	8.70	26.12	958
36	Corn miller	9.32	26.65	8.40	26.62	957
37	Hatter	12.81	31.76	10.78	26.95	1,064
38	Hairdresser	15.11	30.10	13.64	33.25	1,327
39	Tailor	12.92	24.79	10.73	26.47	1,051
40	Shoemaker	10.39	22.30	9.31	23.36	921
41	Tannor, fellmonger	10.43	26.57	7.97	25.37	911
42	Currier	11.32	25.09	8.56	24.07	906
43	Saddler, harness-maker	12.29	25.21	9.10	26.49	987
44	Tallow chandler, soap-boiler	11.75	27.24	7.74	26.19	920
45	Tallow, soap, glue, manure manufacture .....	.....	.....	7.31	27.57	933
46	Printer	13.02	29.38	11.12	26.60	1,071
47	Bookbinder	12.76	31.56	11.73	29.72	1,167
48	Watch and clock maker	10.78	24.90	9.26	22.64	903
49	Watch, clock, phil. instrument maker, and jeweller..	.....	.....	9.22	23.99	932
50	Paper manufacture	10.33	20.19	6.48	19.62	717
51	Glass manufacture	13.10	29.32	11.21	31.71	1,190
52	Earthenware manufacture	12.59	41.75	13.70	51.39	1,742
53	Cotton, linen, manufacture (Lancashire)	10.65†	27.90‡	9.99	29.44	1,088
54	Silk manufacture	9.89	20.08	7.81	22.79	845
55	Wool, worsted, manufacture (West Riding)	9.35†	23.26‡	9.71	27.50	1,032

* The selected healthy districts are all those Registration Districts in which the mean annual death-rates for persons (males and females together) was under 17.00 per 1,000 in 1871-80.

† Labourer in ten agricultural counties, viz., Hertfordshire, Oxfordshire, Bedfordshire, Cambridgeshire, Suffolk, Wiltshire, Dorsetshire, Devonshire, Herefordshire, and Lincolnshire.

‡ This rate is based on less than 5,000 years of life.

§ These figures relate to England and Wales, and not only to Lancashire and the West Riding respectively as do the figures for 1880-1-2.

Reference Number.	Occupation.	Mean annual death-rates per 1,000 living.				Comparative mortality figure, 1880-1-2.
		1860-1-1871.		1880-1-2.		
		Years of age.		Years of age.		Years of age.
		25-45.	45-65	25-45	45-65	
56	Carpet, rug manufacture	9.92	25.57	9.48	24.10	945
57	Lace manufacture .....	.....	.....	6.78	20.71	755
58	Hosiery manufacture (Leicestershire, Notts) ..	.....	.....	6.69	19.22	717
59	Dyer, bleacher, printer, &c., of textile fabrics ..	11.10	25.99	9.46	27.08	1,012
60	Rope, twine, cord maker	9.19	29.35	7.95	22.25	839
61	Builder, mason, bricklayer	11.43	27.16	9.25	25.59	969
62	Slater, tiler	10.66	30.76	8.97	24.93*	942
63	Plasterer, whitewasher	9.50	27.90	7.79	25.07	896
64	Plumber, painter, glazier	12.48	34.06	11.07	32.49	1,202
65	Upholsterer, cabinet maker, french polisher ..	11.09	24.09	9.55	24.77	963
66	Carpenter, joiner	9.44	21.36	7.77	21.74	820
67	Sawyer	8.07	21.27	7.46	23.74	852
68	Wood turner, box maker, cooper	11.80	26.13	10.56	28.55	1,091
69	Coach builder	10.43	29.57	9.13	24.72	944
70	Wheelwright	8.40	21.17	6.83	19.21	723
71	Shipbuilder, shipwright	10.68	26.26	6.95	21.29	775
72	Locksmith, bellhanger, gasfitter	11.04	27.90	9.15	25.66	967
73	Gunsmith	10.62	25.32	10.62	25.78	1,031
74	Cutler, scissors maker .....	.....	.....	12.30	34.94	1,309
75	File maker	16.27	42.30	15.29	45.14*	1,667
76	Cutler, scissors, file, needle, saw, tool-maker ..	11.88†	32.74†	11.71	34.42	1,273
77	Engine, machine-maker, fitter, millwright ..	.....	.....	7.97	23.27	863
78	Boiler maker .....	.....	.....	9.27	26.65	994
79	Last two together (Nos. 77, 78)	10.61	23.81	8.23	23.89	888
80	Blacksmith	10.07	23.88	9.29	25.67	973
81	Other iron and steel workers .....	.....	.....	8.36	22.84	869
82	Tin workers	10.36	23.67	8.00	24.17	885
83	Copper, lead, zinc, brass, &c., workers	10.74	26.17	9.15	26.79	992
84	Metal workers (Nos. 72-83) .....	.....	.....	8.80	25.03	938
	Miner—					
85	Durham, Northumberland	11.30‡	22.01‡	7.79	24.04	873
86	Lancashire .....	.....	.....	7.91	26.30	929
87	West Riding .....	.....	.....	6.59	21.80	772
88	Derbyshire, Nottinghamshire .....	.....	.....	6.54	20.23	734
89	Staffordshire	11.33‡	30.45‡	7.81	26.50	929
90	South Wales, Monmouthshire	14.72‡	29.66‡	9.03	30.87	1,081
91	Coal miners, as represented by the above six (Nos. 85-90) ..	.....	.....	7.64	25.11	891
92	Miner (North Riding and other ironstone districts) ..	.....	.....	8.05	21.85	834
93	Miner, Cornwall	11.94‡	41.73‡	14.77	53.69	1,839
94	Stone, slate quarrier	10.88	28.67	9.95	31.04	1,122
95	Railway, road, clay, sand, &c., labourer .....	.....	.....	11.01	24.80	1,025
96	Coalheaver .....	.....	.....	10.22	23.77	968
97	Chimney sweep	17.53	42.87	13.73	41.54*	1,519
98	Messenger, porter, watchman (not Government) ..	.....	.....	17.07	37.37	1,565
99	Costermonger, hawk, street seller	20.09	37.82	20.26	45.33	1,879
100	General labourer (London)	18.35	40.64	20.62	50.85	2,020

* This rate is based on less than 5,000 years of life.

† In 1871 only.

‡ These rates are based on a return made to the Commissioners appointed to inquire into the condition of all miners in Great Britain, of the miners living at the census of 1861, and of the deaths registered in the three years, 1860-2, in certain mining districts in the respective counties. See appendix B, to report of Commissioners, p. 164.

The death-rates in the several industries will come under special consideration later on; but there are certain general remarks to be made as to the preceding Table which it will be convenient to introduce here.

It will be seen that there are vast differences as regards mortality between the several industries, the comparative mortality figure being three or four times as high in some industries as in others; and it will also be noticed that those industries in which the death-rates were exceptionally high or exceptionally low in the three years 1880-1-2 showed, as a rule, similarly exceptional rates in the earlier experience.

Again, it will be noted that the death-rate at the first of the two age-periods, 25-45 years, has in almost every case declined. There are in the Table altogether 73 industries, for which rates are given both for 1880-2 and also for earlier experience. In 65 of these 73 industries the death-rate in the 25-45 age-period has fallen, in one it has remained stationary, and in only 7 has it gone up. In the second age-period, 45-65 years of age, the case is very different. Only in 35 industries has there been a fall, while in the remaining 38 the rate has risen. That some such difference as this should be found to exist between the two age-periods might have been anticipated, for it is in strict accordance with the fact already discussed, and shown, moreover, in the first line of figures in Table J, namely, that there has been a fall in the death-rate of all males independently of occupation in the earlier age-period, and a not inconsiderable rise in the later.

Another feature in the Table that requires notice is the fact that in more than three-fifths of the industries to which it relates the death-rates are below those of "All Males"—that is to say, the comparative mortality figure is below 1,000. The comparative mortality figure of "All Males" is, however, a very unsatisfactory standard by which to estimate healthiness, for among "All Males" is of course included an enormous number of persons who are permanently enfeebled in health and unfit for work of any kind. Even, however, if we exclude all such persons as are unemployed, and take the death-rates of those persons only who were returned at the Census as following some occupation, we still have a comparative mortality figure (967), which is higher than the figure in more than half the industries. It appears, therefore, that the comparative mortality figure of "Occupied Males" is very considerably raised by the inclusion of a minority of occupations with excessively high rates. Thus neither "All Males," nor "Occupied

"Occupied Males" furnish a good basis for comparison. The standard for comparison should be one of excellence; it should be taken either from the healthiest occupation, or, if a geographical basis be preferred, from the healthiest districts. If the former be preferred, as I think it should, we may take as our standard the mean of the mortality figures for farmers, agricultural labourers, and gardeners, which would be 644; if the latter be selected, we may take the figure for males in all those districts in which the mean annual death-rate for persons (males and females) of all ages in 1871-80 was under 17.00, which we call the "Selected Healthy Districts." These give a comparative mortality figure of 804; but it must be remembered that in this are included the deaths of those sick and unoccupied males who live in the selected districts. The excess of the comparative mortality figure of an industry above these standards measures its departure from the healthiness attainable, under present conditions, in this country.

Having ascertained and set forth in Table J what is the comparative mortality from all causes in the various industries, the next step is to distribute this mortality to the registered diseases or causes by which it was occasioned—that is to say, to ascertain what is the comparative mortality in the several industries from each separate disease or group of diseases.

To do this thoroughly it would be necessary to go through the death-registers for the three years 1880-2, and abstract all the deaths of males by ages, occupations, and causes of death in combination, a task of such complexity and magnitude as to be practically impossible, and which, therefore, has not been attempted. It appeared possible, however, to obtain adequate data by a shorter plan, laborious enough, but still practicable, namely, by abstracting from the registers a considerable sample of the causes of deaths in each industry, and dividing out the total mortality in the industry to the several causes by the proportions existing in the sample. For, supposing the sample to be of sufficient size and to be fairly taken, there seemed no reason why it should not be considered truly representative of the bulk. This plan, therefore, was adopted.

The first question in regard to the sample is how large it should be. To this question no more definite answer can be given than that the larger the sample the better. It was, however, determined that 500 deaths with causes should be considered a minimum, and that when the number of deaths abstracted in any one industry fell short of this they should not be used as a basis for calculation. It will be seen in Table K [see page 173], which gives the result of the abstraction, that in most cases this minimum was not only reached but considerably exceeded. In some industries, however, it was found impossible to get 500 recorded deaths of males between 25 and 65 years of age, without running through the registers for more than three years; in these cases, therefore, either the minimum was not reached and rates were not calculated, or the search was extended to the registers of additional years.*

More important than the mere size of the sample is its freedom from local peculiarities, which might detract from its representative value. It is very possible, for instance, that if 1,000 deaths, say of tailors, were abstracted with the registered causes in the North of England, and a second 1,000 similarly abstracted in the South, the distribution of the two samples by causes might be very different—there might, for instance, be a much larger proportion of diseases of the respiratory system in the Northern than in the Southern sample; and such differences would most certainly be found to exist, if one sample were taken from large towns and a second from rural districts. It was necessary, therefore, in order to ensure the sample being a fair one, that it should be taken from a considerable number of districts in different parts of the country, and especially necessary that town and country should in each case be represented in the sample in proper proportions, which proportions had first to be ascertained separately for each industry.

There are some industries, of course, from which the element of locality is inseparable, as they are only carried on in more or less circumscribed areas. Such for instance is the cotton industry of Lancashire, the hosiery manufacture of Leicestershire and Nottinghamshire, the manufacture of cutlery and files, practically confined to the West Riding, and other similar local industries. It is conceivable that if the cotton manufacture were carried on in some other totally different part of England, the mortality from all and several causes in that industry might be different from what it is at present; but, as things stand, whatever influence on mortality may belong to the geographical position of Lancashire attaches inseparably to the cotton industry. To meet this, as far as possible, the mortality figures for Lancashire are given in the same Table as contains the mortality figures for the cotton industry, and similarly with the other chief local industries, so that instead of comparing the mortality of such an industry with that of All England, it may be compared, if such be desired, with that of the county in which it is carried on.

Another disturbing element which might interfere with the value of the sample for comparative purposes, and which it was therefore necessary to exclude, was seasonal influence. The causes of 500 deaths in any industry in winter would doubtless be different from those of 500 deaths taken in summer. This possible source of error, however, was easily guarded against. Whatever districts were chosen as suitable areas for examination, their death-registers were invariably gone through for the three complete years 1880-1-2, so that the seasons of the year were all equally represented, and the samples in all the industries were so far strictly on an equality. In the few cases where the registers for more than three years had to be searched, as before mentioned, the additional registers used were also registers for complete years, the years taken being 1879 and 1883.

The number of minute precautions that it was found necessary to observe in order to secure the fair character of the samples added very considerably to the difficulty of the task. It is believed, however, that their adoption has made the samples truly representative of the bulk. The samples themselves are given in Table K while in Table L the comparative rates of mortality based on these samples are given. [See tables, pages 173 and 174.]

Miners (No. 85-93).—Mining constitutes so important an industry in this country, one in every 19 males between 25 and 65 years of age being a miner, that the mortality under this heading requires special attention. At the Census of 1881, great pains were taken to secure accurate returns of miners, distinguished from each other by the character of the minerals or metals with which they were engaged, and it was hoped that it would thus be possible to estimate the death-rate of each group of miners more closely than could be done with the vaguer data of former Censuses—that is to say, to estimate the death-rates of coal-miners, tin-miners, ironstone-miners, copper-miners, &c., separately; but, after all, it was unfortunately found that this was impossible, owing to the very imperfect manner in which the speciality of occupation of deceased miners is stated in the death registers. This was found to be especially the case

* This was done in the case of fishermen, file makers, hosiery manufacture, ironstone miners, and miners in Cornwall.

case with those deaths which are caused by accident, and on which inquests are held. The coroners in their certificates very commonly neglect to distinguish one kind of miner from another and simply describe the deceased as "miner" without further specification. As at least a fifth of the deaths of miners are due to accident of one kind or another, it is plain that this negligence on the part of coroners renders the separate estimation of the mortality of the several kinds of miners an impossibility.*

The best practicable substitute that offered itself was to divide out the miners geographically, and estimate their death-rates by counties or other convenient areas; and this may be accepted as a rough approximation to a division of the miners by the nature of the material in which they work; for in the West Riding, in Durham with Northumberland, in Derbyshire with Nottinghamshire, in Monmouthshire with South Wales, in Lancashire, and in Staffordshire respectively, more than 90 per cent. of the miners are coal-miners; in the North Riding and in the districts† that have been grouped with it, 90 per cent. are ironstone-miners; while in Cornwall, 79 per cent. are tin-miners, the remainder being almost all lead and copper-miners. The first group of counties, therefore, may be taken to represent coal-miners; the North Riding, with the associated districts, to represent ironstone-miners; while Cornwall will represent tin-miners. The lead-miners and the copper-miners must be left without estimated death-rates.

Coal-miners (No. 85-90).—The death-rates of coal-miners are surprisingly low. In spite of their terrible liability to accident, and their constant exposure to an atmosphere vitiated by coal-dust, by foul air, and by an excessively high temperature, the comparative mortality figure of these labourers is considerably below that of all males; nor is this only true of coal-miners in the aggregate, but it is true, with one single exception, for the miners in each great coal area taken separately. It holds good for Durham with Northumberland, for Lancashire, for Derbyshire with Nottinghamshire, for the West Riding, and for Staffordshire. In each of these areas, as is shown in Table L [see table, page 174], the comparative mortality figure of all males within the area is higher than that of the miners. The one exception to the rule is furnished by South Wales with Monmouthshire; here the mortality figure for the miners is slightly higher than that of all males within the same area; but even here, if deaths from accident be left out of account, the rule holds good; the mortality of the miners from all other causes together is below that of the general male population.

Again, if in each case we exclude accidents, it will be found that the mortality of the coal-miners only slightly exceeds that of the most healthy class of men in our table, viz., the agriculturists—that is to say, farmers, the agricultural labourers, and the gardeners.

This low mortality of coal-miners is not now noted for the first time. "Whilst lead and copper and tin-mining," wrote Dr. Greenhow‡ in 1858, "are certainly dangerous to health, coal-mining appears to be at least not unhealthy."

It has of course to be borne in mind that miners are a body of picked men. No very weakly man is likely to take to the occupation, and moreover, as much strength is necessary, many men who become weakly must abandon this form of labour for lighter work. On the other hand, the general male population, with which miners have just been put in comparison, comprises the sick and weakly of all sorts, and the men who have fallen out of the ranks of all industries. This objection, however, ceases to be of much weight if we compare coal-miners with such other labourers as quarrymen or blacksmiths, who also require to maintain a high standard of vigour; and a glance at the table shows that, again excluding accidents, the mortality of the coal-miners is considerably below that of these two groups of workers. Making, then, all due allowance for the picked character of coal-miners, their extremely low mortality figure cannot but remain a matter of surprise.

Turning to Table L [see table, page 174], which gives the comparative mortality figures for the several causes, it will be seen that under the heading "Accident" the mortality of the coal-miners is of appalling magnitude, there being no other industries in the table at all comparable to coal-mining in this respect, excepting other forms of mining, stone and slate quarrying, and fishing.

Under all the other headings, however, the mortality figure for coal-miners, taking the mean of the figures for the six great coal areas (No. 85 to 90), is far below the average with one important exception; viz., "Diseases of the Respiratory Organs." The mean mortality of coal-miners under this heading is 202, while the figure for all males in England and Wales is 182. Moreover, there can be no doubt that the mortality of coal-miners under this heading is considerably understated, owing to a number of deaths which are not of veritably tubercular character being designated by the popular term "miners' phthisis," and so being transferred from the heading "Diseases of the Respiratory Organs" to the heading "Phthisis." It must, therefore, be admitted that coal-miners, in spite of their being picked men, and in contrast with their low mortality from other diseases, suffer from diseases of the respiratory organs to a greater extent than those engaged in most other industries. What is the precise excess above the average cannot be stated, because of the confusion already noticed between phthisis and diseases of the respiratory organs; but it is plain that the excess is but small as compared with that which occurs in occupations where the workmen are exposed to the inhalation of other kinds of dust than that of coal; for instance, in the quarrying of slate and stone, in the manufacture of pottery, or in the making of cutlery and files.

This comparative innocuity of coal-dust, as compared with stone-dust or with metallic-dust, is probably to be explained by the microscopical character of its particles, which are comparatively free from sharp points and corners,|| and therefore do not cause such acute irritation to the lungs when inhaled.

The understatement of the mortality of miners from diseases of the respiratory organs implies, of course, a corresponding overstatement of their mortality from phthisis; but the mortality figure under this heading is already extremely low, the mean figure for the miners in the six coal areas being only 126, and being only raised even so high as this by the inclusion of South Wales and Monmouthshire, where the miners, for some local reason, have a higher mortality generally than the miners in the remaining coal districts. To what extent this figure of 126 should be still further reduced, on account of the inclusion of non-tubercular cases of miners' phthisis, it is impossible to say, but in all probability the reduction would bring the figure down at least to the level of the figures for farmers and for fishermen, which are the lowest in the table.

It

* Complaint as to the unsatisfactory certificates given by coroners in mining districts was also made by the Commissioners on Condition of Miners (1864) in their Report (p. xxi). The complaint then made was that the nature of the accident which caused death was not stated in the verdict, but merely "accidental death."

† Namely, the districts of Uiverston and Ilarrow, with the sub-districts of Ilarrington and Egrenont in Whitehaven.

‡ "Papers relating to the Sanitary State of the People of England." Board of Health, 1858, p. 65.

|| Hirt, i, 144.

It is much to be regretted that there should be this confusion in the case of miners between phthisis and other affections of the respiratory organs, because it prevents a definite answer being given to the question whether coal-miners enjoy any special immunity from tubercular disease. If the figures as they stand in the table were correct—if, that is to say, no transference had to be made from the heading "Phthisis" to the heading "Diseases of the Respiratory System"—then, low as the mortality from the former would be, it would not be much lower in proportion to the average for all males than the mortality under other headings. For instance, the mortality figure of coal-miners from phthisis in the table is some 43 per cent. below the average for all males, but so also, or nearly so, is their mortality from diseases of the nervous system. The conclusion, therefore, as to phthisis would simply be that the low mortality of coal-miners from this malady is part and parcel of their general healthiness and exemption from disease of all kinds. But if, as is most probable, a large transference should be made from the heading phthisis to the heading diseases of the respiratory system, then the inference from the figures would be quite different. We should have to conclude that coal-miners add to their low mortality from all diseases a special immunity from phthysical affections; and that there is some condition or other in their life, possibly the inhalation of coal-dust, that renders them comparatively proof against tuberculosis.

At any rate, be the explanation what it may, there can be no possible doubt that the mortality of coal-miners from phthisis is remarkably low, especially when their liability to irritation of the lungs from dust, and the alternations of temperature and other conditions to which their work subjects them, are taken into account.

And this statement is in strict harmony with the observations of those medical practitioners who in this and in other countries have had opportunity of studying the ailments to which coal-miners are subject. "The miners of Durham and Northumberland," says Dr. R. Wilson, "are not prone to phthisis."* "Il est incontestable," says Dr. Boens Boisseau, † "que la phthisie pulmonaire est moins fréquente dans la classe des charbonniers que dans la plupart des autres classes laborieuses"; and Dr. Schoenfeld, who, like Dr. Boisseau, practised in the Belgian colliery districts, speaks of this immunity of coal-miners in even stronger terms. Similar conclusions have been arrived at in Germany‡ from the data furnished by the coalfields of Upper Silesia.

This general concurrence of evidence, English, Belgian, and German, leaves no room for doubt, but that for some reason or other the mortality of coal-miners from phthysical disease is excessively low as compared with that of other workers. But the question can scarcely be said to be as yet answered beyond all civil or doubt, whether the reason for this apparent comparative immunity consists merely in the picked character of the men engaged in coal-mining or in some special preservative condition attaching to their industry. The latter is the view adopted by foreign writers, such as Hirt; and, inasmuch as the most notable of the special conditions under which coal-miners work is the inhalation of coal-dust, their apparent immunity has been usually attributed to this cause, though some writers have exceptionally sought an explanation in other conditions of the miner's life, such as the warmth and moisture of the atmosphere in which he works. "It is in the highest degree probable," says Dr. Hirt, "that coal dust possesses the property of hindering the development of tuberculosis, and of arresting its progress."

Not impossibly it may eventually turn out that this is really the case; but it must be admitted that the data at present forthcoming are hardly sufficient to establish the conclusion beyond all possibility of fair doubt, and there are certainly some facts which must make us at any rate for the present hold our judgment in suspense. In the first place there is the uncertainty, already expressed, whether the immunity of coal-miners from phthisis is really greater than their immunity from other disease, and not merely a part of their general healthiness. Secondly, the figures in Table L (*see* p. 174), which relate to the North Riding miners are hardly consistent with the view that the supposed immunity of coal-miners is due to coal-dust. For the miners in the North Riding, and in the other districts that have been grouped with it, work almost exclusively in ironstone, and are in no wise exposed to the inhalation of coal-dust or coal-gas or other product of coal mines. Yet their mortality from tubercular disease is also extremely low, and though somewhat higher than that of most coal-miners, is actually lower than that of the coal-miners in South Wales and Monmouthshire. The low mortality of these ironstone miners, which is not limited to phthisis but extends to the other headings in the Table, can hardly be referable to any other cause than the picked character of these miners; and the natural inference certainly would be that the similarly low mortality of the coal-miners was due to a similar cause. Again, if coal-dust really possess the supposed preservative influence, we should expect that coal-heavers, who, though in a less degree than coal-miners, are also exposed to the inhalation of such dust, would also present an exceptionally low mortality from phthisis, but the figures in Table K. (No. 96) (*see* page 173), scarcely answer to this expectation. The comparative mortality figure for coal-heavers (*see* Table J.) is 968, and, judging from the 230 deaths of which the causes were abstracted, the mortality of this group of coal workers from phthisis was very little below the average of all males. Departing for once from the general rule laid down previously, that morates for individual diseases should be calculated on less than 500 deaths with known causes, the phthisis rate for coal-heavers would be 210, while the rate for all males is 220, and the mean of the six figures for coal-miners is 126.

Another element in the question must not be altogether neglected. Whenever the mortality from any one cause in any industry is in abnormally great excess, the mortality from other causes must be to a certain extent thereby reduced. A man who is killed by an accident cannot also die of phthisis or other disease. Now, among miners the mortality from accident is appallingly high; and the mortality from all other causes must be by that fact more or less reduced.

On the whole, then, we must be content to leave the question of the supposed protective action of coal-dust undecided. The most that we can say with certainty is that the inhalation of coal-dust does not seem to increase the liability to phthisis, and that both in this respect and in respect to its effect in producing disease of the respiratory organs it contrasts favourably with many other kinds of dust.

The mortality of coal-miners from alcoholism, or from the diseases which are specially connected with habitual alcoholic excess, is low. This is in accordance with the description of their habits given by

various

* Report of the British Association for the Advancement of Science, 1863, p. 126.

† *Maladies des Houillères*. Bruxelles, 1802, p. 110.

‡ Hirt, *Die Staubinhalations Krankheiten*. Breslau, 1871, p. 150.

§ To the authorities already cited may be added the following: Levy (*Traité d'Hygiène*, ii, 913), who says that "la phthisie pulmonaire est rare chez les mineurs," and who cites to that effect Hervier, *Gaz. Méd. de Lyon*, 1869, iii, 516; François, *Bulletin de l'Acad. de Belgique*, 1857, c. xvi; and Ribmault, *Hygiène des Ouvriers Mineurs dans les exploitations houillères*. Paris, 1861 p. 200.

various observers; for though "many of them indulge periodically in great excesses," says Dr. Wilson,* "the régime of a colliery is so strict that, however much they may exceed on receipt of their wages, they must resume work at the proper time, and thus habitual drunkenness is prevented, and consequently the specific diseases induced by alcohol are extremely rare."

The mortality of the coal-miners differs considerably in different areas, and arranging these in the order of mortality, beginning with the lowest, the sequence is as follows: Derbyshire with Nottinghamshire, 734; the West Riding, 772; Durham with Northumberland, 873; Lancashire, 929; Staffordshire, 929; South Wales with Monmouthshire, 1,081. Possibly some of these differences might vanish if a larger basis were taken than the mortality of only three years; but, as regards the three areas concerning which alone we have previous experience, the order remains unchanged from the previous record, for in 1860-2 the mortality of miners was higher in South Wales and Monmouthshire than in Staffordshire, and in Staffordshire than in Durham and Northumberland. In each of these three areas the mortality of the miners decreased very considerably in the interval between 1860-2 and 1880-2 in the earlier age-period, 25-45 years, but in the second age-period, 45-65 years, it rose both in Durham with Northumberland and in South Wales with Monmouthshire, while it fell only in Staffordshire.

So large a share of the mortality of coal-miners is attributable to accident that it may be well to give a summary view of the deaths thus occasioned. In the ten years 1871-80 the total number of deaths ascribed to accidents in coal-mines was 9,678, and these deaths were distributed by ages and causes in the manner shown in the following table.

TABLE M.—Deaths from Accidents in Coal-mines 1871-80.

	Under 15	15—	20—	25—	35—	45—	55—	65 and over.	All ages.	Per 1,000 accidental deaths.
Crushing, fall of coal, stone, &c.	291	605	688	1,120	871	667	344	102	4,688	485
Fall in shaft, pit	53	83	91	211	152	100	67	27	784	81
Machinery, explosion of boiler	23	31	13	23	21	16	9	4	140	14
Waggon, tram, tub	413	307	120	151	117	114	85	43	1,350	139
Drowning	8	13	11	28	13	14	3	2	92	10
Blasting	4	15	27	66	41	15	10	2	180	19
Fire-damp	128	331	336	606	358	221	82	22	2,084	215
Choke-damp, suffocation	19	50	45	88	49	29	11	3	294	30
Otherwise, or not stated.....	13	13	6	7	16	2	6	3	66	7
	952	1,448	1,337	2,300	1,638	1,178	617	208	9,678	1,000

Nearly half the deaths, it will be seen, are caused by falling in of the sides or roofs, and a quarter by fire-damp or by choke-damp. After these forms of accident, which are shared equally by miners of all ages, that is to say, shared pretty nearly in proportion to the numbers employed at the several ages, come accidents from the waggons and tubs in which the coals are carried from the underground workings to the shaft; this form of accident falls especially on the young lads who are engaged in "tramping and hurrying" the coals. The remaining and less common forms of accident, viz., falls in the shaft, accidents with machinery and boilers, explosions of blasting powder, and drowning from the irruption of water into the mine, affect miners of all ages alike. Putting, however, all causes together, it is plain that the lads and younger miners suffer considerably more from accident than do the elder workmen, and consequently that the figures in Table L. (*see* page 174), which are based on the mortality of males between 25 and 65 years of age, understate the liability to fatal accident of coal-miners in the aggregate and independently of age.

Ironstone Miners (No. 92).—The miners in the North Riding and in certain selected districts have been grouped together to represent ironstone-miners, being almost exclusively engaged in that form of mining. Their mortality is very much the same in its general features as that of coal-miners. For in both groups of miners the mortality is somewhat in excess under the heading Diseases of the Respiratory Organs, while it is considerably below the average under all the other main headings, with, of course, the exception of Accident. Here the mortality figure for ironstone-miners is even higher than that for coal-miners. This seems strange, inasmuch as there is neither fire-damp nor choke-damp in the iron-mines. Possibly the apparent anomaly would disappear if a larger basis were taken, for accident is, of course, a very fluctuating element in the death-rate; but it must not be forgotten that the main cause of mining accidents, namely, the falling-in of roofs and walls, is shared alike by iron-miners and coal-miners. The low mortality of ironstone-miners from disease can scarcely be attributed to other causes than the picked character of the men who alone are able to undertake such hard labour.

Cornish Miners (No. 93).—The mortality of the Cornish miners, who may practically be considered to be tin-miners, for the proportion of lead and copper miners to the whole is but small, contrasts in a most extraordinary degree with that of coal-miners or of ironstone-miners. So strange indeed seemed the contrast, that it was thought expedient to go a second time through both the Census returns and the death registers to see whether some great error had not been made in the abstraction. It was found, however, that the figures had been correctly given. While the mortality of the other miners is, as has been shown, lower than that of males generally in the corresponding areas, the mortality of the Cornish miners is more than

* On the Coal-miners of Durham and Northumberland. Report of British Association, 1893, p. 126.

than double that of Cornish males in the aggregate. For while the comparative mortality figure for all Cornish males is 887, that for Cornish miners is no less than 1,839, and is almost the highest in the Table. Moreover the death-rates have risen very considerably since the previous record, and at each of the two age-periods. This exceptional rise may very probably be explained in the following manner. In the decennium, 1871-80, the mining industry in Cornwall was in a state of decadence; and the miners in that county at the Census of 1881 were 44 per cent. fewer than they had been in 1871. A similar falling off, moreover, but on a smaller scale, had also occurred in the previous decennium, the miners in 1871 being 27 per cent. fewer than in 1861. These successive decreases in the number of the miners in Cornwall were due to their emigration into countries where mining was more prosperous, and offered better chances of employment; and it is only reasonable to suppose that the miners who had the energy to emigrate would be the more vigorous and healthy, while those who remained behind would be the comparative weaklings.

Thus the very opposite process has been going on among the Cornish miners to that which has been going on among coal-miners. The latter, as before explained, have been kept at a high standard of healthiness by the constant elimination of the least vigorous; the former have been undergoing deterioration by the constant emigration of the strongest.

The notable increase of the death-rates of Cornish miners in the interval between 1860-2 and 1880-2 may be explained with much probability by the foregoing hypothesis; but, after allowing all due weight to these considerations, it is still unquestionable that mining in Cornwall is for some reason or other very considerably more unhealthy than mining in other parts; for the death-rates of the Cornish miners in 1860-2 (which rates it may be noted were almost identically the same as those of 1849-53, though much lower than those of 1880-2) were vastly in excess of the death-rates of the coal-miners; and yet these rates apply to a period when the decadence had not yet set in. Allowing all the increase in the mortality since 1860-2 to be explained by emigration of the strongest, and taking the death-rates at that date to be the normal rates for Cornish miners, their comparative mortality figure would still be 1,449, while that of the miners in the six colliery areas is only 886.

The great bulk of the excess of mortality among the Cornish miners comes under the headings phthisis and diseases of the respiratory organs. The mortality figures from these two causes amount together to no less than 1,148, while the figure for all males in Cornwall is only 368, and the figure for the least healthy group of miners outside Cornwall, namely, the miners of South Wales and Monmouthshire, is only 459. The Cornish miners suffer therefore from these diseases more than three times as much as Cornish males in the aggregate, and more than twice as much as the miners in any other great mining area. In the whole list of industries in Table L. (*see* page 174) there is only one that at all approximates to these Cornish miners in this respect, namely, the earthenware and china manufacture. Here the mortality figure from the two causes is 1,118, while that of the Cornish miners, as already stated, is 1,148. It is under the heading Phthisis that the mortality of these Cornish miners is most appallingly in excess; the mortality attributed to this one cause alone is actually greater than the mortality of either farmers or gardeners from all causes together. In the case of miners, however, as also in the case of earthenware makers, the word phthisis has to be looked on with suspicion, owing to the unfortunate use of the terms "miner's phthisis" and "potter's phthisis" for non-tubercular affections, so that it is safer in these industries not to separate phthisis from diseases of the respiratory organs. Still, it is curious to note that, if we compare the figure for the potters with those for the Cornish miners, the relative proportions of the phthisis and the respiratory mortalities are almost exactly inverted, while the sum of the two is practically the same in each case. The Cornish miners, therefore, are more liable than the pottery makers to tubercular disease, or to diseases likely to be confounded with tubercular disease of the lungs, while they are less liable to other affections of the respiratory organs.

Of the total mortality of the Cornish miners nearly two-thirds is attributed to phthisis and respiratory diseases; and practically the same proportion marked their mortality* both in 1849-53, and in 1860-62. Under the headings Diseases of the Nervous System and Diseases of the Organs of Circulation their mortality, though higher than that of other miners, and also higher than that of all males in Cornwall, shows no such enormous excess as that under the two headings already considered, and is less than the mean mortality for England and Wales. Neither do these Cornish miners show any excess of mortality from alcoholism or its consequences; a fact which tallies with the account of their habits given long since by the Royal Commissioners, who stated that "as a class they are well conducted and temperate; large numbers have taken the pledge and kept it, and whatever may be the causes of the diseases to which they are liable, the habit of intoxication cannot be assigned as one of them."† Under the heading Diseases of the Digestive Organs the mortality figure is unusually high; possibly this may be connected with the nature of their diet, which according to the Report of the Royal Commissioners was considered by the doctors to be unwholesome for men, whose digestions are already weakened by working in foul air and in high temperature.

The mortality from accident falls far short of that of other miners, and even than that of quarrymen or of fishermen. As compared with all other occupations, however, it is very high, the figure being 117, while that for cab-drivers, which comes next highest, is only 84.

Influence of Fresh or Foul Air.—The difference between an out-of-door life in fresh country air and an indoor life in a town is readily shown by comparing the mortality of agriculturists or fishermen with that of shopkeepers, or, going a step further in the scale of vitiated atmosphere, with the mortality of tailors, hatters, printers, and bookbinders. The agriculturists on the average have a comparative mortality figure of 644, the shopkeepers of 877, and the tailors, hatters, printers, and bookbinders of 1,088. The damage done by living in the vitiated atmosphere, though it is not confined to any one set of organs, nevertheless specially affects the organs of respiration. The mortality from diseases of these organs and from phthisis, taken together, is 198 for the fishermen and averages 237 for the agriculturists, while for drapers and grocers it averages 357, and for tailors and printers 549. Moreover, drapers live habitually in a more vitiated air than do grocers, and printers in a more vitiated air than do tailors, and the mortality in these several trades corresponds in each case to these differences. If we arrange the several industries in the order of purity of air, the order will also be that of mortality from phthisis together with diseases of respiratory organs, beginning with the lowest.

TABLE

* See Report of Royal Commission on Condition of Miners, 1864, p. xiv.

† See Report of Royal Commission on Condition of Miners, 1864, p. xxv.

TABLE N.—Comparative Mortality of Males working in Air of Different Degrees of Purity, from Phthisis and Diseases of the Respiratory Organs.

	Phthisis.	Diseases of Respiratory System.	The two together.
Fishermen	108	90	198
Agriculturists	115	122	237
Grocers	167	116	283
Drapers	301	129	430
Tailors	285	186	471
Printers	461	166	627

Influence of Dust.—The effect of exposure to inhalation of dust, speaking generally, is of course to increase the mortality from diseases of the respiratory organs and phthisis, but the effect differs very greatly, not only according to the amount but according also to the character of the dust, that which consists of hard and of sharp-pointed particles naturally doing more mischief to the air-passages than that of which the particles are soft or rounded. It is, however, unfortunately impossible to estimate accurately the comparative effects of different kinds of dust, independently of all other conditions, because the several industries concerned differ from each other materially in many other important respects besides the nature of the dust to which those who are engaged in them are exposed; some, for instance, being carried on in the country, others in towns, some in the open-air, others in the close and heated atmosphere of factories or in underground passages and the like. Nevertheless, if we arrange those dust-inhaling occupations, for which Table L. (*see* page 174) gives the necessary data, in the order of their mortalities from phthisis and diseases of the lungs, we have some valuable indications of the differences between different dusts in the production of such diseases. Of all occupations the one which is most completely free from exposure to dust is that of fishermen, and consequently the mortality figures for this industry have been added to the Table as a standard for comparison.

TABLE O.—Comparative Mortality of Males in certain Dust-Inhaling Occupations from Phthisis and Diseases of the Respiratory Organs.

	Phthisis.	Diseases of Respiratory Organs.	Phthisis and Diseases of the Respiratory Organs.
Coal-miner.....	126	202	328
Carpenter, Joiner.....	204	133	337
Baker, Confectioner.....	212	186	398
Mason; Builder, Bricklayer	252	201	453
Wool Manufacture	257	205	462
Cotton Manufacture	272	271	543
Quarryman	308	274	582
Cutler.....	371	339	760
File-maker.....	433	350	783
Earthenware Manufacture.....	473	645	1,118
Cornish Miner	690	458	1,148
Fisherman.....	108	90	198

It will be noted that in every one of these dust-inhaling occupations, the mortality from phthisis and from diseases of the respiratory organs is higher than among fishermen. Of the various dusts the least injurious, to judge from the Table, is coal-dust; for, though the mortality of coal-miners from diseases of the respiratory organs is higher than that of several other industries in the list, their registered mortality from phthisis is by far the lowest, and indeed not so very much higher than that of fishermen; and, therefore, as has been explained at length in a previous page, it is believed by many that coal-dust acts as a preservative from this form of disease.

The dust of ordinary wood does not appear to be very baneful, for carpenters and joiners stand nearly on a level with coal-miners as regards the mortality from the two causes taken together; the mortality figures, however, for the two causes when taken separately are almost exactly inverted, the carpenters having a higher rate than the coal miners from phthisis and a considerably lower rate from diseases of the respiratory organs. Carpenters and joiners, however, work to a great extent in the open air, and very possibly the mortality figures for cabinet-makers, or for wood turners, who work indoors in a much thicker atmosphere of wood-dust, might tell a different tale; nor is this improbable, seeing that their comparative mortality figure from all causes together is considerably higher than that of carpenters (*see* Table J). Moreover, many of the harder woods which are used by cabinet-makers are said to give off a much more injurious dust than the ordinary timber used by carpenters and joiners.

Bakers

Bakers and confectioners, who inhale the dust of flour, have a considerably higher mortality from diseases of the respiratory organs than carpenters, but it may be doubted whether this is due to the flour-dust so much as to the heated atmosphere of the bakehouse. For, though much flour-dust may be inspired into the mouth of the baker, it is extremely doubtful whether much or any of it would get as far as the air passages and not be arrested on the way by inter-mixture with the saliva and adherence to the wet surface of the tongue and pharynx. The mortality of bakers from phthisis is scarcely higher than that of carpenters, which accords with the observation of Hirt* that the inhalation of flour-dust rarely conduces to that disease.

More injurious than either coal-dust, wood-dust, or the dust of flour, appear to be the filaments and fluff and other dusts that are given off in textile factories; the mortality both from phthisis and from diseases of the respiratory organs being higher among workers in cotton and workers in wool than among persons exposed to either of the previously mentioned kinds of dust. The workers in cotton factories are worse than the workers in wool; the comparative mortality from the diseases in question being 543 for the former, and 462 for the latter. It must be remembered, however, that the air in the weaving sheds of cotton factories contains not only flocculent matter, but also a large amount of dust from mineral substances of various kinds used in sizing, and that the inhalation of mineral substances, judging from industries presently to be considered, is much more injurious than the inhalation of textile filaments.

The deleterious effects of dust upon the air-passages is increased both in the cotton and in the wool factories, and especially in the former, by the high temperature in which the work is carried on, and it is impossible to say how much of the lung mortality is due to the latter cause and how much to the dust.

But all the dusts as yet mentioned seem to be insignificant in their injurious action when compared with the dust of stone and the dust of metal. There are two industries in the Table, those of cutlers and file-makers, in which the workman is exposed to metallic dust. In the former the comparative mortality from the diseases in question is 760, and in the latter it is 783; and, doubtlessly, had not the subsidiary operations, such as hafting, been included in the cutlery manufacture, the mortality figure for cutlers would have been still higher. Even as it is, it is almost four times as high as that of fishermen.

Still more appalling seems the effect on the air-passages of stone-dust. There are four industries in the Table that are exposed more or less to this source of disease. Two of the four, namely, masons with builders and bricklayers, and quarrymen, work mainly in the open air, and though their mortality from lung diseases is very high, being between two and three times as high as that of fishermen, yet it is nothing as compared with that of Cornish miners and pottery-makers, who work in more confined space, and consequently inhale the stone-dust in much larger amount. For these workers the lung mortality is from five to six times as high as that of fishermen.

* Op cit., pp. 142 and 214.

TABLE K.—Causes of Deaths of males, aged 25-65 years, in different industries; being samples abstracted from the Death Registers of 1880-1-2.

Reference Number.	Occupations.	Diseases of Nervous System.	Suicide.	Diseases of the Circulatory System.	Phthisis.	Diseases of the Respiratory System.	Diseases of the Urinary System.	Liver Diseases.	Other Diseases of the Digestive System.	Alcoholism.	Gout.	Plumbism.	Accident.	All other Causes.	Total.
7	Farmer, Grazier.....	254	54	264	326	313	99	131	95	18	5	..	94	340	1,992
8	Labourer, in ten Agricultural Counties	274	32	332	418	533	74	68	147	3	2	..	111	400	2,304
9	Gardener, Nurseryman	67	12	87	128	118	41	19	23	2	1	..	25	112	635
10	Fisherman	56	0	166	75	62	10	22	24	3	..	..	105	80	552
11	Cab, Omnibus, Service.....	86	10	103	231	219	42	35	25	21	7	..	54	125	653
15	Commercial Traveller.....	97	22	70	108	103	31	43	18	16	4	..	25	66	663
16	Brewer	63	6	72	140	103	24	42	20	11	4	..	29	77	595
17	Junkeper, Publican, Spirit, Wine, Beer-Dealer.	164	21	115	242	178	68	197	30	45	11	..	37	138	1,246
22	Bookseller, Stationer	23	1	19	51	28	12	4	2	3	..	..	3	23	169
23	Chemist, Druggist	35	4	27	48	37	10	18	10	6	2	..	7	38	242
24	Tobacconist	13	2	12	38	19	3	10	9	4	1	..	5	25	141
25	Grocer	109	17	109	170	118	49	63	32	10	2	..	14	102	785
26	Draper, Manchester Warehouseman.	66	3	45	180	77	22	21	23	5	1	..	14	72	528
34	Butcher.....	134	22	127	251	200	53	92	32	22	5	..	34	153	1,125
35	Baker, Confectioner	89	17	89	139	122	26	30	17	10	1	..	14	78	629
37	Hatter	24	6	18	40	24	1	9	1	3	..	..	3	20	119
38	Haldresser	57	15	45	98	53	14	17	20	18	2	..	11	26	371
39	Tailor	157	18	139	311	203	40	63	46	12	4	..	20	137	1,149
40	Shoemaker	217	31	203	451	378	76	57	54	7	1	..	30	237	1,035
46	Printer	67	5	59	292	106	19	18	20	2	..	3	15	83	678
47	Bookbinder	11	2	6	30	12	1	3	3	..	..	3	2	6	77
52	Earthenware Manufacture	72	*	81	239	324	25	26	17	4	..	5	12	76	881
53	Cotton, Linen, Manufacture (Lancashire).	167	*	131	320	319	38	51	37	2	..	..	35	177	1,278
56	Wool Manufacture (West Riding).	157	19	176	318	254	44	45	40	5	..	..	38	178	1,278
58	Hosiery Manufacturer (Leicestershire and Nottinghamshire).	84	16	77	124	85	31	12	17	1	..	..	12	70	520
61	Builder, Mason, Bricklayer ..	142	22	183	405	323	79	48	55	8	5	..	72	217	1,559
64	Plumber, Painter, Glazier	162	20	180	239	180	97	47	37	12	10	20	71	138	1,169
66	Carpenter, Joiner	138	27	161	317	206	61	66	46	6	3	..	59	184	1,274
74	Cutler, Scissors Maker	135	*	79	263	276	25	21	22	2	..	..	12	98	928
75	Pile Maker	83	*	57	137	111	39	18	10	1	..	13	2	62	522
80	Blacksmith	85	10	108	194	183	30	28	31	7	..	..	44	143	872
85	Miner (Durham and Northumberland).	140	8	167	216	195	42	53	54	6	..	..	313	200	1,391
86	Miner (Lancashire).....	89	*	103	134	246	26	19	34	8	..	..	213	131	998
87	Miner (West Riding).....	69	5	88	111	172	23	21	31	1	..	..	101	101	774
88	Miner (Derbyshire and Notts).	49	4	45	90	105	14	13	26	3	..	..	324	85	658
89	Miner (Staffordshire).....	87	3	112	110	281	41	22	30	1	..	..	182	130	1,093
90	Miner (South Wales and Monmouthshire).	46	3	92	127	224	26	18	27	4	..	..	176	84	826
92	Miner (North Riding, and other Ironstone Districts).	37	8	47	103	150	17	10	10	6	..	..	150	70	698
93	Miner (Cornwall).....	59	2	56	348	231	19	20	29	1	..	..	59	104	927
94	Stone, Slate Quarryer	83	11	91	309	275	21	25	28	5	..	..	148	115	1,124
96	Coalheaver	23	4	29	50	46	7	7	14	2	..	..	23	28	230
97	Chimney Sweep	24	4	25	51	43	5	4	6	5	..	..	7	65	242
98	Costermonger, Hawker, Street Seller.	75	16	82	172	152	25	17	24	7	1	..	10	90	680

* The deaths from suicide were in this case not separated from the deaths from nervous diseases.

TABLE L.—Comparative mortality of males, 25-65 years of age, in different industries; from all and several causes*.

Reference Number.	Occupations.	Diseases of Nervous System.	Suicide.	Diseases of the Circulatory System.	Phthisis	Diseases of the Respiratory System.	Diseases of the Urinary System.	Liver Diseases.	Other Diseases of the Digestive System.	Alcoholism.	Gout.	Plumbism.	Accident.	All other Causes.	All Causes (Comparative Mortality Figure)
	All Males (England and Wales).	119	14	120	220	182	41	39	38	10	3	1	67	146	1 000
7	Farmer, Grazier	81	17	84	103	90	31	41	30	6	2	..	30	107	631
8	Labourer in ten Agricultural Counties.	30	9	97	122	156	22	20	43	1	1	..	38	117	701
9	Gardener, Nurseryman	03	11	82	121	111	39	18	22	2	1	..	24	105	599
10	Fisherman	81	13	153	108	90	14	32	35	4	..	..	162	115	797
11	Cab, Omnibus, Service	134	10	160	359	341	65	54	31	33	11	..	84	194	1,432
15	Commercial Traveller	130	31	200	240	147	44	61	26	23	6	..	30	95	948
16	Brewer	144	11	165	384	236	55	96	46	25	9	..	61	176	1,361
17	Innkeeper, Publican, Spirit, Wine, Beer-Dealer.	200	26	140	295	217	83	240	37	55	13	..	45	170	1,521
25	Grocer	107	17	107	167	116	48	52	31	10	2	..	14	100	771
26	Dryer, Manchester Warehouseman.	109	5	75	301	129	37	86	38	3	2	..	23	121	883
31	Butcher	189	23	132	291	208	55	96	33	23	5	..	35	160	1,170
35	Baker, Confectioner	136	26	131	212	186	40	40	26	15	2	..	21	117	938
39	Tailor	144	16	127	285	186	45	48	42	11	4	..	18	125	1,051
40	Shoemaker	122	17	114	254	157	44	52	30	4	1	..	17	129	921
46	Printer	90	8	93	461	166	30	23	32	3	..	5	24	131	1,071
52	Earthenware Manufacture	140	†	169	473	645	49	49	34	8	..	10	24	160	1,712
53	Cotton, Linen, Manufacture (Lancashire).	142	†	112	272	271	82	43	32	3	..	..	30	161	1,088
55	Wool Manufacture (Yorkshire)	127	15	142	257	265	36	36	40	4	..	..	27	143	1,032
58	Hosiery Manufacture (Leicestershire & Nottinghamshire)	114	22	104	108	115	42	16	23	1	..	..	16	96	717
	<i>All Males do.</i>	100	17	107	164	141	37	35	28	7	1	..	51	141	829
61	Builder, Mason, Bricklayer	88	14	114	252	201	49	30	34	6	3	..	45	134	969
64	Plumber, Painter, Glazier	167	21	140	246	185	100	48	38	12	10	21	73	141	1,202
66	Carpenter, Joiner	89	17	104	204	133	39	30	30	4	2	..	38	124	820
74	Cutler, Scissors Maker	190	†	111	371	389	36	30	31	3	..	..	17	132	1,309
75	File Maker	262	†	180	493	350	123	41	32	3	..	41	6	196	1,667
80	Blacksmith	95	11	121	216	204	44	31	35	8	..	..	49	159	973
85	Miner (Durham and Northumberland).	88	5	105	135	122	26	33	34	4	..	..	106	125	873
	<i>All Males do.</i>	114	13	135	178	155	30	36	41	13	..	..	98	165	958
86	Miner (Lancashire)	88	4	96	125	229	24	18	32	3	..	..	103	121	929
	<i>All Males do.</i>	143	15	133	250	307	43	42	45	17	1	..	82	172	1,249
87	Miner (West Riding)	60	5	88	111	172	23	21	31	1	..	..	101	99	772
	<i>All Males do.</i>	118	16	126	235	413	36	37	39	7	1	..	63	160	1,017
88	Miner (Derbyshire and Nottinghamshire).	64	5	59	118	133	18	17	34	4	..	..	163	114	734
	<i>All Males do.</i>	99	15	103	166	118	30	41	33	9	1	..	66	135	846
89	Miner (Staffordshire)	81	3	104	102	260	38	20	28	1	..	..	172	120	929
	<i>All Males do.</i>	117	13	119	174	226	37	43	39	9	2	..	75	153	1,007
90	Miner (South Wales and Monmouthshire).	90	4	120	166	293	34	24	35	5	..	..	220	111	1,081
	<i>All Males do.</i>	97	8	114	202	200	39	37	39	7	1	..	123	130	1,096
92	Miner (North Riding and other Ironstone Districts).	51	11	64	141	206	23	14	14	3	..	..	206	96	834
93	Miner (Cornwall)	117	4	111	990	458	38	40	56	2	..	..	117	206	1,830
	<i>All Males do.</i>	99	13	89	203	165	29	27	36	4	1	..	59	162	887
94	Stone, Slate Quarrier	83	11	91	308	274	24	25	38	5	..	..	148	115	1,122
99	Coxtermonger, Hawker, Street Seller.	207	44	227	475	420	69	47	66	19	3	..	53	249	1,879

* The figures in this Table are the numbers of deaths that would occur annually in each industry out of 64,611 males from 25 to 65 years of age; of whom 41,920 were under and 22,721 were over 45 years of age.
† The deaths from suicide were not separated in this case from the deaths from nervous diseases.

K.

STATEMENT of accidents, New South Wales, (fatal and non-fatal) for decennial periods years 1875-1884 and 1885-1894.

Fatal Accidents.

Periods.	Number of accidents.	Number of men employed.	Number of tons raised.	Number of men employed per accident.	Number of tons raised per accident.
1875 to 1884.....	83	46,845	17,868,421	564	215,282
1885 to 1894.....	252	93,266	33,320,785	370	132,225

Non-fatal Accidents.

Periods.	Number of men injured.	Number of men employed.	Number of tons raised.	Number of men per accident.	Number of tons raised per accident.
1875 to 1884.....	226	46,845	17,868,421	207	79,063
1885 to 1894.....	480	93,266	33,320,785	194	69,418

RETURN showing the number of fatal and non-fatal accidents; those caused by "falls of coal," stone "roof"; and Lithgow, Ferndale, Bulli, A. A. Co.'s Hamilton Pit, and South Burwood Sinking Pit disasters, 1873 to 1894 inclusive.

Year.	Fatal accidents.	Remarks on fatal accidents.	Non-fatal accidents.	Remarks on non-fatal accidents.	Men above and below ground.	Tons of coal raised.	Tons of coal raised per life lost.
1873...	13	9 by falls of coal	10	4 by falls of coal, 1 by stone roof	*	1,192,862	91,758
1874...	5	3 by falls of coal, 2 by stone roof	13	6 by falls of coal, 4 by stone roof	*	1,304,612	260,922
1875...	8	4 by falls of coal, 3 by stone roof	10	6 by falls of coal	3,308	1,329,720	166,216
1876...	4	2 by falls of coal, 1 by stone roof	8	4 by falls of coal	4,084	1,319,918	329,979
1877...	7	4 by falls of coal, 1 by stone roof	21	16 by falls of coal	4,657	1,444,271	206,324
1878...	8	2 by falls of coal, 1 by stone roof	15	12 by falls of coal, 1 by stone roof	4,792	1,575,497	196,937
1879...	5	2 by falls of coal, 2 by stone roof	19	10 by falls of coal	5,035	1,583,381	316,676
1880...	8	4 by falls of coal, 1 by stone roof	19	8 by falls of coal	4,676	1,466,180	183,272
1881...	2	2 by falls of coal	33	25 by falls of coal	4,098	1,769,597	884,798
1882...	12	10 by falls of coal	33	23 by falls of coal	4,487	2,109,282	175,773
1883...	15	8 by falls of coal, 1 by stone roof	34	15 by falls of coal, 4 by stone roof	5,481	2,521,457	168,096
1884...	14	6 by falls of coal, 2 by stone roof	34	14 by falls of coal, 6 by stone roof	6,227	2,749,109	196,964
1885...	11	7 by falls of coal, 2 by stone roof	40	13 by falls of coal	7,097	2,878,863	261,714
1886...	29	10 by falls of coal, 1 by stone roof, 8 by Lithgow disaster, 1 by Ferndale flooding.	43	15 by falls of coal, 2 by fall of roof	7,847	2,830,175	97,592
1887...	94	81 killed by Bulli catastrophe, 5 by falls of coal, 2 by falls of stone roof.	45	22 by falls of coal, 5 by fall of stone roof.	7,998	2,922,497	31,080
1888...	15	5 by falls of roof	43	12 by falls of coal, 4 by stone roof	9,301	3,203,443	213,562
1889...	41	11 by crush at Hamilton Pit, 11 by falls of coal, 4 by over-winding at South Burwood.	57	24 by falls of coal	10,277	3,655,632	89,161
1890...	13	4 by falls of coal, 1 by fall of roof	36	17 by falls of coal, 3 by stone roof	10,315	3,060,876	236,145
1891...	21	7 by falls of coal, 3 by fall of roof	54	27 by falls of coal, 6 by stone roof	10,820	4,037,929	192,282
1892...	8	4 by falls of coal, 3 by fall of roof	77	38 by falls of coal, 10 by stone roof	10,514	3,780,967	472,020
1893...	13	10 by falls of coal, 1 by fall of stone	45	22 by falls of coal, 5 by fall stone	9,971	3,278,327	252,179
1894...	7	2 by falls of coal, 2 by fall of stone	40	28 by falls of coal, 1 by fall stone	9,126	3,672,076	524,582

* Figures not available.

L.

INSPECTOR ROWAN'S Reports in reference to the Bulli Colliery.

Sir,

Wollongong, 2 September, 1886.

For your information, I have the honor to inform you that I have inspected the Bulli Colliery on August 5th and 9th instant:—

Bulli old Tunnel.—About 130 men and horses are employed, and served with 12,500 cubic feet of air per minute in three different splits.

Hill End district.—Thirty-six men and horses employed, and supplied with 3,600 cubic feet of air per minute. The miners in this division are working with safety-lamps, as the coal gives off a small portion of fire-damp. Strict discipline is exercised by the management to ensure safety, viz., the bords are examined every morning by a competent person, and the same reported to be safe before the miners commence work. Four danger signals are placed at a respectable distance from the working faces, cautioning persons not to pass said boundaries with a naked light. I carefully examined every bord with a safety-lamp, but in no case did the fire explode in the lamp. I also asked the miners if they considered every care was taken; they said they believed so, and that the deputy made several inspections during the day.

Hill End, West.—About forty-six men and horses employed, and served with 5,500 cubic feet of air per minute.

Slacky heading.—About thirty men and horses employed, and served with about 3,400 cubic feet of air per minute. I went through a large portion of the waste workings, which from the return air-course, for the Hill End district, heavy falls of roof have taken place. I pointed out the defective condition of this return air-way. The manager showed me a new return air-way he was making through a portion of the waste workings and solid coal, which is expected to be finished in a few weeks, as he was driving it from each side, with two shifts of men. This air-course will come along all the working-faces, and will be the future permanent air-course for the colliery.

I have, &c.,

JAMES ROWAN,

Inspector of Collieries.

The Examiner of Coal-fields.

Sir,

Wollongong, 25 October, 1886.

For your information, I herewith forward report of my inspection made at Bulli Colliery on the 20th instant.

On making my inspection of the workings I found that heavy falls of roof had taken place in the return air-ways, also in Harris's heading. In this heading, where about forty men were employed, the manager has lifted all the plant, as there was no possible way of keeping the roads in order.

This, Harris's heading, has a very bad class of roof, and requires a constant staff of way-men to keep it in order. The manager informed me at the commencement all the day-men and deputies struck work with the miners, leaving him without a man; even the underground furnace-man left, and it was with difficulty he could find another to fill his place. I mentioned in my last report that a new air-course was in course of construction, which by this time would have been finished, but that also was at a standstill for want of workmen.

The new furnace which is being built about 43 chains from the entrance of the tunnel is almost finished, which will be a great boon for the ventilation of the colliery.

I have, &c.,

JAMES ROWAN,

Inspector of Collieries.

The Examiner of Coal-fields.

Sir,

Sir,

Wollongong, 22 December, 1886.

I beg to state that I have inspected Bulli Colliery on the 20th instant.

The miners are still on strike. Five men employed underground doing general repairs. I examined the Hill End division of workings. This is the division of workings that used to generate fire-damp, and where the men when working had locked safety-lamps. I examined this portion with a safety-lamp, and found the same clear from fire-damp or any other foul gases. I could not pass through the other two divisions of workings on account of heavy falls of roof, especially in the return air-ways. I drew Mr. Ross, the manager's attention to the condition of the return air-ways. He stated he could not get men to work to keep the air-ways in order, and they were constantly falling. (See October report on the Bulli Colliery.) But it would be his first business to put the air-ways in order, when the strike was settled. The new ventilating furnace is now finished, and in working order.

I have, &c.,

JAMES ROWAN,

Inspector of Collieries.

The Examiner of Coal-fields.

Sir,

Wollongong, 2 March, 1887.

For your information, I have the honor to inform you that I inspected Bulli Colliery, on the 17th instant.

Hill End District:—Fifty men employed, four of them working in narrow headings with safety-lamps, owing to the coal giving off a small per cent. of fire-damp. I carefully examined this division of workings and found the ventilation good in every bord, 12,000 cubic feet of air being brought up to within 20 yards of the furthest in working-face. On examining the return air-way I found that heavy falls of roof had taken place. The falls were so heavy I could not make a passage through. I drew the manager's attention to this matter. He stated that he had three shifts of men working, making a new air-course, and the same would be kept working until a proper recognized air-way was made from the working-faces to the ventilating furnace. As I have formerly reported, a number of these falls took place during the recent strike.

Harris's heading, where forty men were employed previous to the strike, is so completely crushed, caused by the bottoms heaving in this district. The bords will require to be cut out anew with a pair of headings.

I have, &c.,

JAMES ROWAN,

Inspector of Collieries.

The Examiner of Coal-fields.

TABLED LIST of Non-fatal Accidents in the Southern and Western Districts of New South Wales Collieries investigated by the Inspector of Collieries during the half-year ending 30th June, 1894:—

No.	Date.	Colliery.	Sufferer.	Occupation.	Remarks, &c., on the Nature and Extent of Injuries.	Hurt by Coal.	Hurt by Slips.	Ignition of Powder.	Fatal.	Non-fatal.
1	Feb. 19	Corrimal	Richard Smith ...	Miner	Hurt about the back and arms by a fall of coal.	1	...	...	...	...
2	" 27	Osborne Wallsend	Jas. O'Brien	"	Hurt about the back by a fall of coal.	1	...	...	...	...
3	Mar. 1	South Bulli	George Clark ...	"	Leg fractured by a fall of coal.	1	...	...	...	...
4	April 6	Osborne Wallsend	George Pratt ...	"	Internal injuries by a fall of coal.	1	...	...	...	...
5	" 16	Metropolitan	George Featonly..	"	Leg fractured by a fall of coal.	1	...	...	...	...
6	" 26	Bellambi	Miles Richardson.	"	Bruised about the chest by skips.	...	1	...	...	...
7	June 22	Corrimal	Wm. Johnstone...	"	Burns on arms and chest by loose powder.	...	...	1	...	...
8	" 22	"	A. Demonchie ...	"	Burnt on the arm by ignition of powder.	...	...	1	...	...
						5	1	2	...	8

M.

SELECT COMMITTEE ON WORKING OF COLLIERIES.

REPORT.

THE SELECT COMMITTEE of the Legislative Assembly, appointed on the 13th March, 1894.—“with power to send for persons and papers to inquire into and report on the Working of Collieries,”—have agreed to the following Report:—

Your Committee having examined the witnesses named in the List,* and carefully considered the evidence given before the Committee, find the following:—

1. That it is absolutely necessary that an amended Act regulating the working of collieries should be passed without delay, and, amongst others, containing the following provisions:—
2. That a fixed minimum quantity of air—not less than 150 cubic feet of air per man, boy, and horse per minute—should be provided, for the following reason: That in the majority of collieries working at the present time, where there is little or no inflammable gas met with, the absence of a fixed minimum quantity of air would leave the matter at the discretion of the manager, which would lead to disputes, and, perhaps, subsequently to strikes.
3. That provision should be made for conducting the air to the working-face, so that the men working there may be kept safe from the different gases with which they have to contend, and which prove so detrimental to health.

4.

* List of witnesses: R. Baxter, J. Campbell, H. O. MacCabe, J. Owens, W. Thomas, J. Thornton, J. Welford, H. Wood.

4. That a difference of opinion exists among the witnesses as to the better methods for conducting the air, viz., by lessening the distance between the cut-throughs or by brattice. But your Committee consider that the better way to conduct the air to the working-faces is by means of brattice, which is the cheapest and most approved scientific method.
5. That your Committee consider that the number of men in a split should not exceed sixty, as such provision is highly essential for the health of the workmen.
6. That the majority of witnesses were in favour of legalising eight hours per day for men working underground; and so far as hewers are concerned, the evidence goes to show that eight hours is the time worked at present in the great majority of mines. Your Committee therefore believe that it would be no great hardship to embody an "eight-hours" clause in any Bill for the better regulation of coal-mines and collieries.
7. That your Committee are of opinion that the system known as the "Standard Weight System" is unjust, and ought to be abolished, and that the miners should be paid for the total weight of coal obtained by them.
8. That your Committee consider it necessary that managers, under-managers, and engine-winders should be required to pass an examination to qualify them for "certificates of competency" before they are appointed to any of the before-mentioned positions; but provision should be made to allow those who have served as managers, under-managers, and engine-winders, respectively, "certificates of service" as provided for in the English Coal-mines Acts of 1872 and 1887.
9. That a uniform code of signals should be used at all collieries.

In conclusion, your Committee beg to recommend the adoption of the English Coal-mines Regulation Act of 1887 (50 and 51 Vic., chap. 58), with the amendments suggested in this Report, believing it to be for the better protection of the miner's health and life, the owner's property, and the welfare of the community in general.

No. 3 Committee Room,
Sydney, 5th May, 1894.

JOHN L. FEGAN,
Chairman.

N.

TABLE showing quantities of Mineral wrought under the English Coal Mines Regulation Acts of 1872 and 1887, number of Fatal Accidents and Deaths, Tons of Mineral wrought per Fatal Accident and per Death, Number of Mines at Work, and Number of Persons Employed above and below ground.

Year.	Tons of Mineral Wrought.					Separate fatal accidents.	Lives lost by the accidents.	Tons of Mineral Wrought.		No of mines.	Persons employed.			Total above and below.
	Coal.	Fireclay.	Ironstone.	Shale, &c.	Total.			Per fatal accident.	Per lives lost.		Under-ground. Males.	Above ground.		
												Males.	Female.	
1873	128,680,131	1,742,193	12,094,827	524,065	143,041,245	973	1,609	146,867	133,677	3,939				
1874	120,590,108	2,067,791	11,638,186	392,747	140,713,832	895	1,056	157,222	133,251	4,332	428,611	103,319	6,899	538,820
1875	133,306,486	1,932,294	12,018,594	442,940	147,700,313	927	1,244	159,331	118,740	4,501	427,017	102,324	6,504	635,845
1876	134,125,106	2,071,931	12,159,580	682,056	148,939,355	839	933	177,580	159,688	4,935	409,229	99,243	6,055	514,532
1877	134,179,908	1,813,541	12,014,356	838,395	148,846,200	864	1,208	172,276	123,217	4,231	305,025	93,988	5,373	494,391
1878	132,012,063	1,625,586	10,747,227	813,262	145,798,133	811	1,413	170,777	103,183	3,068	382,979	87,894	4,060	476,329
1879	133,720,393	1,455,093	9,387,766	803,207	145,366,369	782	973	185,890	149,400	3,056	335,179	86,789	4,842	470,810
1880	146,969,409	1,938,630	11,664,726	894,119	161,466,793	815	1,318	195,119	122,609	3,094	361,351	83,912	4,640	484,913
1881	154,184,300	1,896,907	11,358,766	1,019,958	168,959,931	844	964	200,189	177,106	3,847	399,357	91,375	4,715	495,477
1882	156,490,977	2,209,030	11,505,447	1,110,572	171,334,032	876	1,126	195,586	152,161	3,814	406,192	93,143	4,652	603,957
1883	163,787,327	2,189,452	11,495,401	1,341,210	178,763,390	921	1,054	194,097	109,605	3,707	416,096	93,758	4,479	514,933
1884	160,757,779	2,058,927	10,412,443	1,648,610	174,872,769	863	942	202,633	185,639	3,554	422,233	93,655	4,458	603,378
1885	150,351,418	1,878,514	10,108,612	1,885,416	173,223,960	807	1,150	214,651	156,620	3,483	424,191	92,138	4,308	520,632
1886	167,518,482	1,782,064	8,962,643	1,843,776	179,006,969	807	953	216,665	173,391	3,391	423,802	91,977	4,131	519,970
1887	162,119,812	1,810,490	7,509,018	1,549,675	173,048,795	830	995	208,494	173,010	3,352	423,540	91,554	4,133	526,277
1888	169,935,210	1,879,273	8,085,652	2,210,630	182,600,163	811	888	222,485	206,093	3,324	433,902	92,108	3,935	534,945
1889	178,918,724	2,192,346	8,270,542	2,254,044	189,633,656	848	1,064	223,624	178,227	3,359	463,600	96,108	4,027	563,735
1890	181,614,233	2,465,727	8,117,476	2,468,599	194,605,937	861	1,160	226,023	107,763	3,409	606,312	102,215	4,206	613,233
1891	185,479,126	2,594,065	7,229,150	2,501,251	197,698,592	811	976	217,007	201,934	3,439	530,091	107,903	4,450	648,450

N 1.

WEALTH AND PROGRESS OF NEW SOUTH WALES, 1893 (COGLAN).

(Extract, page 77.)

ACCIDENTS IN COAL-MINES.

There were 7 persons killed and 76 persons injured in New South Wales coal-mines during 1892, making a total of 83 accidents—the number of fatal accidents being smaller and that of non-fatal accidents larger than in any of the previous ten years. For the ten years ending with 1892, the average annual loss of life in the British coal-mines was 1.8 per thousand, or at the rate of 179,696 tons of coal raised for every fatal accident. In the New South Wales collieries, for the same period, the rate was 3.0 fatal accidents per thousand miners employed, and only 121,657 tons of coal were raised for every life lost. This very high average of fatal accidents in this Colony results from the Bulli disaster in 1887, when 81 miners lost their lives. The circumstances surrounding the mining industry in New South Wales would warrant the expectation of a much lighter average.

O.

NEW ZEALAND LABOUR LAWS—Pages 274–5.

Owner to make Quarterly Contribution to Coal-miners' Relief Fund.

69. The owner of every coal-mine, whether situate on private lands or on Crown lands, in addition to the conditions for the payment of any royalty, shall contribute to a fund for the necessary relief of coal-miners who may be injured whilst working in coal-mines, and for the relief of the families of coal-miners who may be killed or injured whilst so working, and for the purpose of such fund shall, in the months of January, April, July, and October in every year, pay a sum equivalent to one half-penny per ton on the output of the bituminous coal and one farthing per ton on lignite in any coal-mine sold during the preceding three months respectively ending on the last day of the previous months of December, March, June, and September, into the Post Office Savings Bank which is nearest to the said mine, to the credit of an account called "The Sick and Accident Fund" in connection with the Miners' Association of the district where such mine is situated. In case there is no Miners' Association, the same shall be paid into the Post Office Savings Bank which is nearest to the said mine to the credit of the Minister of Mines and the Public Trustee, in an account to be called "The Coal-miners' Relief Fund."

All moneys so paid into the said Sick and Accident Fund shall be operated upon only by the persons appointed in that behalf by the Miners' Association of the district, in accordance with regulations to be from time to time made by the Governor, and all moneys so paid into the Post Office Savings Bank shall be operated on only by the aforesaid Minister and Public Trustee jointly for the purposes of the said relief.

Any inspector of mines is hereby authorised and empowered, at any reasonable time, to examine from time to time the books of any owner of a coal-mine for the purpose of ascertaining the quantity of coal raised from such mine during any period or periods, and also to ascertain from the proper officer having control of the Sick and Accident Fund of the Miners' Association of the district, and from the proper officer at any Post Office Savings Bank as aforesaid, the amount paid to the credit of the aforesaid fund by any owner of a coal-mine from time to time, and to compare the amount so paid by any such owner in respect of any quarter of a year with the quantity of coal sold during such quarter as appearing in the books of such mine.

If on such comparison it shall appear that any such owner has not paid into the aforesaid Sick and Accident Fund or Relief Fund any amount as hereby prescribed, or only a part thereof, such owner shall be deemed guilty of an offence against this Act, and shall be liable to a penalty of two pounds sterling in respect of each and every pound sterling or fraction of a pound sterling which he should have paid into the said Sick and Accident or Relief Fund respectively, and all penalties recovered under this section, less the expenses incident to the recovery of the same, shall be paid by the inspector of mines into the aforesaid Sick and Accident or Relief Fund respectively, and shall form part thereof.

Every owner of a coal-mine who refuses, obstructs, or prevents, or causes the refusal, obstruction, or prevention of the production of the books of the mine, and the free examination of such books for the aforesaid purpose by any inspector of mines, on his request for such production, shall be deemed guilty of an offence against this Act, and shall be liable to a penalty not exceeding fifty pounds for every day during which such refusal, obstruction, or prevention continues.

In any action brought by a workman against the owner for injuries, the amount to which such workman may be entitled from the said fund shall be taken into consideration in assessing the damages.

"Owner" in this section includes any one or more owners and any company whether incorporated or not.

O 1.

BRATTICING.

ESTIMATED cost of Bratticing to a point 15 yards from the face. The bord is assumed to be as now—that is, 8 yards wide and 35 yards long between headings.

1 square yard of brattice costs $7\frac{1}{2}$ d.

- (1) Cubic yards of coal in a bord, 4 feet high = 373.

Allowing one-quarter for small coal, dirt, &c., leaves 280 cubic yards of large coal.

Taking 18 cwt. as the weight of 1 cubic yard of coal, we get $\frac{280 \times 18}{20} = 252$ tons of large coal.

The brattice (inclusive of door at bord end), to be 15 yards from the face, will require (say) 24 lineal yards of canvas, 4 feet deep—

$$\frac{24 \times 3 \times 4}{9} = 32 \text{ square yards.}$$

$$32 \times 7\frac{1}{2}\text{d.} = 240\text{d.}$$

Therefore the cost of brattice, per ton = $\frac{240}{252} = .95\text{d.}$

The cost of fixing will be very small, because the timber now used by the miner to support the roof will be utilised for brattice supports. Therefore, this cost will scarcely ever exceed .4d. or .5d. per ton. (In one mine where brattice is now used the cost of fixing is .3d. per ton.)

Assuming it, however, to be .5d.

Then, total cost for bord, 4 feet high = $\frac{95}{145}$ pence per ton.

- (2) Cubic yards of coal in a bord 5 feet high = 467.

Allowing one-quarter for small coal, dirt, &c., leaves 350 cubic yards of large coal.

1 cubic yard of coal = 18 cwt. and gives $\frac{350 \times 18}{20} = 315$ tons of large coal.

24 lineal yards of brattice, 5 feet deep, = 40 square yards, @ $7\frac{1}{2}$ d., amounts to 300d.

Then cost of brattice = $\frac{300}{315} = .95\text{d.}$ per ton.

Cost of fixing = .50d. ,,

Total cost = 1.45 pence per ton.

(3)

- (3) Cubic yards of coal in a bord 6 feet high = 560.
 Allowing one-quarter for small coal, dirt, &c., leaves 420 cubic yards of large coal.
 18 cwt. = 1 cubic yard, which gives $\frac{420 \times 18}{20} = 378$ tons of large coal.
 24 lineal yards of brattice, 6 feet deep, = 48 square yards, @ $7\frac{1}{2}$ d. = 360d.
 Then cost of brattice = $\frac{360}{20} = 18$ d. per ton.
 and cost of fixing ... = 50d. „
- Total cost = 1'45 pence per ton.
- (4) Cubic yards of coal in bord, 7 feet high = 658.
 Allowing one-quarter for small, &c., leaves 490 cubic yards of large coal.
 1 cubic yard = 18 cwt. which gives $\frac{490 \times 18}{20} = 441$ tons of large coal.
 If canvas is not, at present, made deeper than 6 feet, it soon would be if there was a demand for it, but assuming, for the present, the maximum depth to be 6 feet, then to brattice a bord 7 feet high, use 4 feet canvas, one depth above another. This would give 48 lineal yards of canvas, 4 feet deep = 64 square yards, @ $7\frac{1}{2}$ d. = 480d.
 Then cost of brattice = $\frac{480}{20} = 24$ d. per ton.
 and cost of fixing ... = 50d. „
- Total = 1'59 pence per ton.
- (5) Cubic yards of coal in a bord 8 feet high = 747.
 Allowing one-quarter for small, &c., leaves 560 cubic yards of large coal.
 1 cubic yard = 18 cwt. and gives $\frac{560 \times 18}{20} = 504$ tons of large coal.
 Two depths of 4 feet canvas, 24 yards long, gives 64 square yards, @ $7\frac{1}{2}$ d. = 480d.
 Then cost of brattice = $\frac{480}{20} = 24$ d. per ton.
 and cost of fixing ... = 50d. „
- Total = 1'45 pence per ton.
- (6) Cubic yards of coal in a bord 9 feet high = 840.
 Allowing one-quarter for small, &c., leaves 630 cubic yards of large coal.
 1 cubic yard = 18 cwt. and gives $\frac{630 \times 18}{20} = 567$ tons of large coal.
 24 lineal yards of 4 feet canvas = 32 square yards, @ $7\frac{1}{2}$ d. = 240d.
 24 " 5 " = 40 " " = 300d.
540d.
- Then cost of brattice = $\frac{540}{20} = 27$ d. per ton.
 and cost of fixing ... = 50d. „
- Total = 1'45 pence per ton.

Average cost of the six cases cited = 1'47 pence per ton.

It must be remembered that about one-half of the allowance made (one-quarter) for small coal, dirt, &c., is—marketable small coal, which, when sold, will slightly reduce the above calculations based on large coal only.

The cost will also depend on the regularity of working. The brattice will be fixed, a few yards at a time, as the working face advances and even under the most adverse conditions, such as wet, moist, and vitiated atmospheres which tend to destroy the canvas, the last few yards of it used in one bord will always be available for use in another bord, and under favourable conditions, all the brattice used in one bord will serve a second bord without extra cost, except that of fixing.

The above calculations are based on bords being 8 yards wide. In the few cases where 6-yard bords are driven in the thick coal under tidal waters the cost per ton for brattice will be much less, inasmuch as the coal is wrought in two or three sections, the first or lowest one (generally) only needing brattice; the remaining sections being taken out after the bords are connected at each end with headings, thereby affording facilities for coursing the air up one bord and down the next by the aid of doors and stoppings only.

Headings also are not included in the calculations. These, being only two or three yards wide, yield less coal, per lineal yard driven, than the bords, and therefore the cost per ton for brattice which they require is higher, but this is more than compensated for by all the coal in the ordinary cut-throughs between bords being got without the use of brattice. The cost, as will be observed, has been confined to the "whole" or solid working; that is to say, driving bords and headings. The extraction of pillars need no brattice, because the air current can be coursed and kept up to within a reasonable distance of the working place by stoppings in a similar way to the method alluded to where top coal is wrought.

It may perhaps, with some reason, be urged that the cost per ton for brattice should be borne by the total output. If so a still further reduction must be made, because, at some collieries, at some period of their existence, half the output may come regularly from pillar extraction.

In collieries where the output is entirely derived from the pillars, or where longwall method of working has been adopted, the cost for brattice will be almost nil, only a small quantity being required for doors and stoppings.

The first cost of putting a mine under the bratticing clause of the Bill introduced into the Assembly on 5th September, 1894, is not taken into account. It may be looked upon as money expended on new plant in the same way as the money for a new ventilating fan, the cost of which is borne by the output of a long period. Both are necessary to provide adequate ventilation where gases are met with or the workings rising.

9th September, 1895.

WM. HUMBLED,
Inspector of Collieries.

P.

CHECK-INSPECTORS' REPORT.

(Newcastle Paper.)

Mr. F. Miles read the check-inspectors' report. In the Jubilee part of the colliery, No. 3 split, the report stated that the amount of air travelling only gave an average of 35 cubic feet per minute.

The reading of this statement caused considerable surprise, and at first it was thought a mistake had been made. It was explained that the air current had since been improved. The report also dealt with several other places where no register could be obtained. With reference to the air current in the little tunnel, the overman says that he could not do anything. They (the inspectors) could do no more, and it was self-evident that the Government inspectors would do nothing. The report was adopted.

Q.

EXTRACT from Report of Royal Commission on Collieries adjacent to Ferndale.

THE width of the bords and the area and arrangement of pillars, while they ought in all cases to be graduated to suit circumstances, such as depth, character of roof, floor, or particular conditions overhead—in the case of collieries working under the ocean at the limited depths referred to (and without reference to the ordinary circumstances that should regulate the width and thickness or area of bords and pillars), may fairly be considered in a special light. The impossibility of calculating the conditions of the superincumbent strata and the forces that repose in the ocean, makes it necessary, in the opinion of the Commission, to increase the ordinary margin considered sufficient for the safety of a mine. As no attempt, under these circumstances, could be made to work out or recover pillars, it becomes necessary to consider the coal pillars as so much mineral won, or impossible to recover for this reason. The size of pillars must be such as to afford ample support *after* exposure to the crumbling effect of the air over many years.

The Commission are therefore of opinion that the thickness of pillars should be materially increased beyond that generally considered necessary in the district. The strength of these pillars may be increased by a judicious arrangement of cut-throughs and roads, so as to have as few roads intersecting or branching from a main road at one place as possible. Zig-zagging pillars, with respect to cut-throughs, may be advisable. The width of bords in the district is 8 yards. In the case of collieries working under the above conditions, this width would, in the opinion of the Commission, court disaster. The width of bords should be materially reduced, and the greatest care taken to secure the roof with timber. In these general opinions the Commission are supported by almost every witness who submitted himself for examination. While many of these gentlemen condescended upon specific widths of bords and thickness of pillars, the Commission prefer, in the absence of particular and detailed information, to enunciate general opinion only, and to repeat that while these should be graduated or fixed by a knowledge of all the circumstances, yet it might be advisable to state that in the case of ocean leaseholds a minimum thickness of (say) 8 yards for pillars, or maximum width of 6 yards for bords, might be insisted upon, leaving the management free to exercise their discretion in altering these (by increasing the maximum thickness or decreasing the minimum width) so as to increase the general safety.

Knowing the tendency that "faults" possess of weakening the roof, and of permitting the passage of water through the broken material that is frequently found along their line, or through open joints in their substance, it would be well in discovering a fault or fissure in a bore to take precautions against possible danger from this source before opening it up by the drive.

In the case of some of these ocean leaseholds it may be impossible; but when possible, the coal underlying the ocean should be attacked only after a large "goaf" has been made by extensive coal-workings under the main land. This, in addition to special and unusual facilities being provided for the escape of men by the shafts, would afford a measure of security difficult to over-estimate.

The Commission, aware of the impossibility of preventing accidents by Act of Parliament, and the danger of absolute rules, are confident, in pointing out some of the general lines in which protection to life and property can best be secured, and allowing ample scope for skilful management, that greater benefits will probably result than by recommending regulations of a hard and fast and unbending nature, that would be found in practice to be unworkable, to bear with especial severity on individuals, and to induce results detrimental to an important industry.

It is obvious that if coal-mining is to be conducted under the precarious conditions narrated, it must of necessity be guided by managers thoughtful, experienced, and skilful, and under regulations and discipline that will eventually, by appealing to the reflective faculties of the workmen, impress and identify them with a sense of their individual and collective responsibility. It is possible that the chief security may be found to rest in the skill and thoughtful care of those engaged in these avocations.

Q 1.

LETTERS from Examiner of Coal-fields to the Under Secretary for Mines upon tidal and ocean leaseholds.

Leases to mine under the ocean or tidal waters.

The Examiner of Coal-fields may be asked to say whether the conditions as to 6-yard bords and 6-yard pillars should be inserted in all leases under the ocean or tidal waters, and whether any general rule should be laid down in regard to the thickness of coal to be taken out or to be left in overhead.—H.W., 3/1/87. Examiner of Coal-fields, B.C., 5/1/87.

My recommendations for special conditions to be inserted in ocean and tidal water leaseholds in the county of Northumberland are forwarded herewith.—J.M., 7/1/88. Under Secretary for Mines, B.C., 7/1/88.

Tidal

Tidal Leaseholds.

Sir,

Coal-fields Office, Newcastle, 7 January, 1888.

Referring to your blank-cover communication of the 5th instant (234), I beg to recommend that in tidal leaseholds a minimum thickness of 6-yard pillars and maximum width of 6-yard bords, or any other excavations or mine works, should be insisted on, leaving the management free to exercise their discretion in altering these (by increasing the maximum thickness or decreasing the minimum width), so as to increase the general safety; and also,—

2. That the 6-yard pillars be left unwrought.
3. The thickness of coal to be wrought out not to exceed 7 feet, without the Minister's permission be obtained for working or excavating any greater thickness of the coal-seam, after it has been opened out and the character of the overlying strata proved by the lessee.
4. All headings and bords to be driven by plumb-lines.
5. All coal-workings to be accurately surveyed every three months, and the coal taken out during the previous three months to have the dates of such surveys affixed on the plan in ink, and every year's workings to be represented on the plan by some conspicuous colour.
6. The colliery plans to contain a faithful and honest record of all faults, dykes, fissures, and occurrences that are met with in the mine, and the workings delineated thereon as they are, and not as they are intended to be.
7. In one road of every pair of winning-off or leading headings, or levels, a bore to be kept going 10 feet in advance, for the purpose of foretelling the presence of any fissure, washout, open joint, fault, dyke, or otherwise; and all winning-off headings shall be driven at least 50 yards in advance of the working bords.
8. Owing to the tendency that faults, dykes, washouts, &c., possess of weakening the roof, and of permitting the passage of water through the broken material that is frequently found along their lines, or through open fissures or joints, the lessee must, on discovering a fault, washout, dyke, or fissure in a bore at the face or side of leading headings or levels, take all necessary precautions against possible danger before opening it up by the drive.
9. That the most accurate and trustworthy information be obtained by the lessees as to the thickness and character of the strata and estuary deposits overlying the coal-seam before commencing to work it.

In conclusion, I have the honor to state that the above conditions embody the Royal Commission on Collieries' recommendations for tidal water leaseholds.

I have, &c.,

JOHN MACKENZIE,
Examiner of Coal-fields.

The Under Secretary for Mines.

Ocean Leaseholds.

Sir,

Coal-fields Office, Newcastle, 7 January, 1888.

Referring to your blank-cover communication of the 5th instant (No. 234), I beg to recommend that in ocean leaseholds a minimum thickness of 8-yard pillars and maximum width of 6-yard bords, or any other excavations or mine works, should be insisted on, leaving the management free to exercise their discretion in altering these (by increasing the maximum thickness or decreasing the minimum width) so as to increase the general safety; and also,—

2. The 8-yard pillars to be left unwrought.
3. The thickness of coal to be wrought out not to exceed 6 feet.
4. All headings and bords to be set out and driven by plumb-lines.
5. All coal-workings to be accurately surveyed every three months, and the coal taken out during the previous three months to have the dates of such surveys affixed on the plan in ink, and every year's workings to be represented on the plan by some conspicuous colour.
6. The colliery plans must contain a faithful and honest record of all faults, dykes, fissures, and occurrences that are met with in the mine, and the workings delineated thereon as they are, and not as they are intended to be.
7. In one road of every pair of winning-off or leading headings or levels a bore to be kept going 10 feet in advance, for the purpose of foretelling the presence of any fissure, washout, open joint, fault, dyke, or otherwise, and all winning-off headings shall be driven at least 100 yards in advance of the working bords.
8. Owing to the tendency that faults, dykes, washouts, &c., possess of weakening the roof, and of permitting the passage of water through the broken material that is frequently found along their lines, or through open fissures or joints, the lessee must, on discovering a fault, dyke, or fissure in a bore at the face or side of leading headings or levels, take all necessary precautions against possible danger before opening it up by the drive.
9. When possible, the coal under the ocean should be attacked only after a large "gap" has been made by extensive coal-workings under the mainland. This is to be in addition to special and unusual facilities being provided for the escape of men by the shafts, will afford a measure of security difficult to over-estimate.
10. That the most accurate and trustworthy information be obtained by the lessees, not only of the depth and character of the sea bottom, but also of the strata overlying the coal-seam, which strata shall be bored through, and proved a minimum thickness of 30 feet, at the face of the leading headings or levels so soon as they have been driven 100 yards in advance of the working bords, and after the first borehole has been completed, other boreholes to be so put up in advance of it at the face of the headings or levels, at distances not to exceed 20 yards.

In conclusion, I have the honor to state that the above conditions embody the Royal Commission on Collieries' recommendations for ocean leaseholds.

I have, &c.,

JOHN MACKENZIE,
Examiner of Coal-fields.

The Under Secretary for Mines.

P.S.—The Royal Commission on Collieries have expressed, as their opinion, that they do not see any practicable method where mining operations can, with safety, be conducted under some of the ocean leaseholds, which it may perhaps be as well to remind you of.—J.M.

The conditions recommended by the Examiner may be embodied in leases of land under the ocean or under tidal waters, as the case may be. The Examiner may be asked which leaseholds are referred to by the Commission as unsafe to work.—H.W., 10/1/88. Submitted. Approved.—F.A., 12/1/88. Examiner of Coal-fields, B.C., 17/1/88.

Stockton Ocean Lease of 680 acres (*vide* pages 53, 59, and 67 of Royal Commissioners on Collieries' Third Report) is the one referred to as impracticable to work. Referring to Frank and Garrett's leasehold of 2,516 acres (*vide* page 63) they say nothing short of boring to the actual coal-seams will afford the necessary information with accuracy required. "Hetton Lease.—That the most accurate information of the deposits overlying the coal should be ascertained at several points over this leasehold before any scheme of winning a thick coal-seam is elaborated or begun." This has not been done, although the coal-seam is being opened out and won. "Morewether's Ocean Leasehold."—That (*vide* page 67) "referring to the contemplated winning of a thick coal-seam under all tidal waters or the ocean, they desire in concluding their report on the condition of collieries adjacent to Ferndale, to summarise briefly the points, that they as practical men, connected in their various capacities with mining pursuits, believe should be observed, viz. :— That the most accurate and trustworthy information should be obtained, not only of the depth of water and character of the sea bottom, but (in collieries mining under the Delta) of the thickness and character of the deposits that overlie the rock; some of which, such as clay, it has been seen add so materially to the security and safety of the mines. From a sincere desire to ensure safety and security to mining works, the Commission, looking to the thickness of the strata overlying the coal-seam in the case of these leaseholds (ocean), where, it is probable, no surface deposits exist, and the rock itself may form the bed of the ocean, consider that, as the workings would be extended, so to speak, towards the unknown (although it may appear arbitrary, and to some extent may restrict operations), a minimum thickness of strata should, indeed must, intervene between the top of the coal and the bed of the ocean. In the case of the undoubted proof of plastic clay overlying the rock had due consideration should be given to that circumstance. To the north of Stockton the surface deposits are, so far as proven, of so ominous a nature that, unless carefully conducted operations reveal improved conditions, the Commission do not at present see any practicable method whereby mining operations can with safety be conducted under the ocean at that part of the district." "The Commission are fully aware that, so far as they know, no restrictions such as these indicated have been as yet considered necessary in Great Britain or her Colonies, but they are likewise unaware of coal-mining being prosecuted under similar circumstances. The peculiar conditions of the coal-fields under consideration is, in their opinion, a justification for calling attention thus early to the sources from whence danger may be apprehended. The Coal Mines Regulation Act enforces certain precautions being observed approaching suspected danger. The Commission cannot distinguish any reason why these precautionary measures should not be extended with a view to avert danger from a source novel to Colonial coal-mining, and not contemplated when the Act of 1876 was passed."—J.M., 19/1/88. Under Secretary for Mines, B.C., 19/1/88.

The attention of the owners of the collieries or lands referred to may be invited to the portions of the report referred to, and they may be invited to show that the coal-seam proposed to be worked can be worked without danger.—H.W., 20/1/88.

Submitted. Approved. Nothing further should be done towards granting the leases until all the precautions recommended by the Commission and approved by the Examiner of Coal-fields have been attended to.—F.A., 23/1/88.

Q 2.

Report of Members of the Royal Commission on Collieries Adjacent to Ferndale *re* Wickham and Bullock Island Colliery Shaft.

To the Chairman and Members of Royal Commission,—
Gentlemen,

Newcastle, 12 August, 1886.

We, the undersigned, chosen by you to examine the Bullock Island Colliery shaft, beg to state that we did so on the 11th instant.

We measured the seam at the bottom of this shaft, and found it to be (including coal and bands) 18 feet 9 inches in thickness, and the rock immediately above this seam, which Mr. Menekin said was 25 feet thick, we found to be 27 feet 6 inches.

The manager informed us that the cast-iron cylinders were set into this rock, but he could not say how far.

We examined each of the cylinders in this shaft, and found that the thirty-first cylinder from the surface was split longitudinally, crossing all the joints, and extending all round the shaft in this particular cylinder. This break was wedged up some of the way, and made water-tight with wedges $\frac{5}{8}$ of an inch in thickness at the head.

We also found that the thirty-fifth cylinder was split in a longitudinal direction, and extended about two-thirds of the way round the shaft and crossing the joints of the segments. This break was also wedged up with wedges $\frac{5}{8}$ of an inch in thickness at the head, and made almost water-tight.

These broken cylinders are situated in the clay stratum, there being about 29 feet of clay above first broken cylinder, and about 41 feet above the second broken cylinder.

We have, &c.,

WILLIAM TURNBULL,
JAMES CURLEY,
Members of Royal Commission.

Q 3.

H.—MINERAL LEASE.

Appn. No. at

THIS INDENTURE, made the day of , in the year of our Lord one thousand eight hundred and , between Her Most Gracious Majesty Queen Victoria, of the one part, and (hereinafter called the lessee), of the other part, witnesseth:—That in consideration of the sum of paid by the said lessee on the day of 18 and of the rents and royalties hereinafter reserved, and of the covenants and provisoes hereinafter contained, Her Majesty doth by these presents grant

grant and demise unto the lessee, his executors, administrators, and transferees, all that piece or parcel of land, containing by admeasurement and more particularly described and delineated in the Schedule hereto or in the plan hereunto annexed, and numbered , and all those mines, veins, seams, or deposits of , in and under the said land (hereinafter called the said mine), together with all and singular the shafts, levels, drifts, works, ways, fixtures, erections, liberties, easements, advantages, and appurtenances which are now or at any time during the term hereby granted may be held, occupied, or enjoyed therewith, for the purpose of mining under the said land for , and also with full power for the said lessee, his executors, administrators, and transferees, and his and their agents and workmen (including contractors, tributors, and so forth), to dig, sink, drive, make, and use excavations, pits, shafts, levels, tunnels, watercourses, and other works necessary for winning and raising the in or under the said land, and to take and appropriate the same during the term hereby granted, for effectually carrying on the works of the said mine: To hold the said land, mine, and premises, with the appurtenances (subject nevertheless to such rights and interests as may be lawfully subsisting therein at the date of these presents), unto the said lessee, his executors, administrators, and transferees, from the date hereof, for the term of years, for the purpose of mining therein, for working or winning the said , and for no other purpose,—yielding and paying therefor unto Her Majesty, Her Heirs and successors, yearly and every year during the said term, the yearly rent of in advance, or in lieu thereof a royalty equal to sixpence per ton on all raised during the year, the first year's rent having been paid as aforesaid on the day of the next payment, being the rent of the said land at the rate of per acre per annum to the day of 18 , shall be made to the Colonial Treasurer in Sydney, on or before the day of 18 , and thereafter on or before the day of in each and every year, the yearly rent aforesaid shall be paid to the Colonial Treasurer aforesaid, clear of all rates, taxes, and assessments to which the said land, mine, and premises are now, or at any time during the said term may be, subject or liable: Provided that if the royalty upon the raised during any year of the said term, computed at the rate aforesaid, shall exceed the rent paid for such year, such royalty, after deducting therefrom the rent paid for such year, shall be paid to the Colonial Treasurer at the expiration of the year or within one month thereafter; but if such royalty in any year amount to less than the rent paid for such year no royalty shall be demanded in respect of the raised during that year: Provided always, and it is hereby agreed, that if the said yearly rent or royalty shall be in arrear for thirty days after the same shall have become payable, whether such rent or royalty shall have been legally demanded or not, any officer appointed or authorised thereto by the Secretary for Mines may, by himself or his agent, enter upon the said land, and seize and distrain all minerals, metals, and ores actually got and raised from the said mine; and all machinery, apparatus, tools, waggons, carts, carriages, engines, plant, and all other goods, chattels, and effects whatsoever, in and about the said land and premises, and in every distress thus made may take away, sell, and dispose of as in cases of distress for rent reserved in common leases; and out of the moneys arising thereby retain so much as shall be sufficient to satisfy the said arrears, and which shall at the time of such sale be unpaid, and all expenses incurred by him or them in or in respect of such seizure, distraint, removal, and sale; and if there be any surplus such officer shall pay the same to the said lessee, his executors, administrators, or transferees; and the acceptance or receipt of rent or royalty by or on behalf of Her Majesty, after breach of any covenant hereinafter contained, shall not be or be deemed a waiver of the right of Her Majesty, or of the Secretary for Mines, or other officer on behalf of Her Majesty, to enforce observance of such covenant. And if the said lessee, his executors, administrators, or transferees, shall mine for or win from the said land, mine, and premises any gold, or any earth, rock, stone, quartz, clay, sand, gravel, or soil containing gold, or any mineral or metal with which gold is associated or combined, without the express sanction first had and obtained of the Secretary for Mines for the time being, the Governor, with the advice of the Executive Council, may declare these presents void, and thereupon all the right, title, and interest of the lessee, his executors, administrators, and transferees under these presents shall cease and determine both at law and in equity. And the said lessee do hereby, for himself, his heirs, executors, administrators, and transferees, covenant with Her Majesty, her heirs and successors, in manner following, that is to say:—

1. That the said lessee, his executors, administrators, and transferees, shall and will during the said term pay unto Her Majesty, her heirs and successors, the rent or royalty hereby reserved, at the times and places hereinbefore appointed for payment thereof, clear of all deductions.

2. And shall and will, after the expiration of from the date of delivery hereof, upon and during all lawful working days, except when prevented by inevitable accident, or during the execution of repairs, work the said land, mine, and premises, or the land, mine, and premises adjoining thereto and proposed to be worked in connection therewith, in the best and most effectual manner, and to the best advantage, without interruption; and shall and will with reasonable expedition make and construct all necessary works with a view to diligently explore and search for in and under the said land, mine, or premises, in accordance with the special conditions following, that is to say:—

- a. The minimum width of pillars to be left shall be six yards, and the maximum width of bords or other excavations shall be six yards; but the lessee or the manager of the colliery is free to exercise his discretion in altering the above by increasing the minimum width of the pillars or decreasing the maximum width of the bords or other excavations so as to increase the general safety.
- b. That the six-yard pillars shall be left unwrought.
- c. All headings and bords to be driven by plumb lines.
- d. All coal workings to be accurately surveyed every three months, the plan thereof to show the area worked out during the previous three months, and every year's workings must be indicated thereon by some distinctive colour. The dates of each survey must be noted on the plan.
- e. The colliery plans to contain a faithful and honest record of all dykes, fissures, and occurrences that are met with in the mine, and the workings delineated thereon as they are, and not as they are intended to be.
- f. In one road of every pair of winning-off or leading headings a bore shall be kept going ten feet in advance, for the purpose of foretelling the presence of any fissure, wash-out, open joint, fault dyke, or otherwise, and all winning-off headings shall be driven at least fifty yards in advance of the working bords.

land, and to remove therefrom such machinery, plant, and apparatus as shall have been erected and fixed upon such land, and such earth, rock, ore, mineral, or metal as shall have been won from and raised to the surface of such mine.

11. And shall not nor will use or occupy, or permit to be used or occupied, the said land, or any part thereof, for other than mining purposes.

12. And shall not nor will mine in the said mine, land, and premises, for any mineral, metal, or ore other than without the express sanction of the Secretary for Mines.

13. And shall not nor will transfer, underlet, or part with possession of the said land, mine, and premises, or any part thereof, or mortgage, charge, or encumber the same, without the license first had and obtained of the Secretary for Mines for the time being: Provided always that no such license shall be necessary in cases where, by operation of law or otherwise, a sale of the said land, mine, and premises, or any part or parts thereof, is made by any person or persons entitled to sell the same for the benefit of the creditors or a creditor of the lessee or his transferees, or in cases where the lessee or his transferees desire to let the said mine and premises, or any part thereof, to be worked on tribute.

14. And shall not nor will close up or obstruct any adit or adits to or from any contiguous mine or mines, whereby fresh air is admitted or ventilation promoted.

15. And shall not nor will plead acceptance of rent or royalty by or on behalf of Her Majesty as a waiver of the right of Her Majesty, or of the Secretary for Mines, or other officer on behalf of Her Majesty, to enforce observance of the covenants herein contained, or of the right of the Governor, with the advice of the Executive Council, to declare these presents void for breach of any such covenant: Provided always and it is hereby agreed and declared in manner following:—

16. That it shall be lawful for Her Majesty, Her Heirs, Successors, and Assigns, to make and use in, on, or under the said land, any levels, drifts, leads, shafts, watercourses, adits, roads, ways, and passages for freeing and keeping free any other lands or mines from water, or for conveying water to any other lands or mines for mining purposes, or for supplying any other mines with fresh air, or for effectually working any other mines, or for any public purpose whatsoever, causing as little damage, obstruction, or interference as possible to or with the said mine and the works thereof. And if, at any time during the term hereby created, any part or parts of the land hereby demised, shall be required for any public purpose, it shall be lawful for the Governor for the time being, with the advice of the Executive Council, on giving three months' notice of his intention so to do, to cause to be set out the part or parts of the said land which shall be so required; and as soon as the same shall be so set out, such part or parts of the said land shall cease to be included in the land hereby demised, and the lessee, his executors, administrators, or transferees shall not be entitled to any abatement of rent or royalty, or any compensation whatever in respect thereof.

17. And if the said lessee, his executors, administrators, or transferees shall prove to the satisfaction of the Secretary for Mines for the time being that the said mine is unworkable or cannot be profitably worked, from any cause whatsoever, or that the lessee, his executors, administrators, or transferees is or are unable, by reason of sickness or other sufficient cause, to work in such land or mine, or that the supply of water is insufficient to allow the working of the said land, mine, and premises to be profitably carried on, the said Secretary for Mines may grant permission to suspend work therein, for any period not exceeding six months without the lessee, his executors, administrators, or transferees incurring in respect thereto any forfeiture or penalty for breach of any covenant herein contained.

18. And, lastly, that if the lessee, his executors, administrators, or transferees shall at any time during the said term fail to use such land *bonâ fide* for the purpose for which it has been demised, or if and whenever the said rent or royalty shall be in arrear for thirty days after the time appointed for payment thereof, whether the same shall have been legally demanded or not, or if and whenever there shall be a breach of or non-compliance with the covenants and provisoes herein contained by the lessee, his executors, administrators, or transferees, and the lessee, his executors, administrators, or transferees shall not have obtained from the Secretary for Mines for the time being permission to suspend work as aforesaid, in case the breach shall have been for non-compliance with the covenants for the employment of workmen or miners, or for the working of the mine, the Governor, with the advice of the Executive Council, who alone and finally shall judge and determine the matter upon the evidence or reports submitted by the Secretary for Mines for the time being, may declare these presents void; and upon publication in the *Government Gazette* of notice of such declaration, all the right, title, and interest of the lessee, his executors, administrators, and transferees under these presents shall cease and determine both at law and in equity; and the production of a copy of the *Government Gazette* containing a notice, purporting to be signed by the Secretary for Mines, declaring the lease void, shall be conclusive evidence in all Courts whatsoever in the Colony of New South Wales or a breach of or non-compliance with the covenants and provisoes herein contained sufficient to authorise and sustain such declaration having been lawfully made, and that the interest created hereunder has been lawfully determined; and thereupon it shall be lawful for Her Majesty, Her Heirs and Successors, or Her or their agents or officers, or for any bailiff or other person duly authorised thereto, or for any holder of a mineral license who has the permission of the Secretary for Mines for the time being, without any previous demand whatsoever, to enter forthwith into and upon the said land and premises hereby granted, and the same to repossess and enjoy as fully and effectually to all intents and purposes as if these premises had not been made, and the said lessee, his executors, administrators, and transferees to expel and remove, without any legal process, and as effectually as the Sheriff might do in case judgment in ejectment had been obtained and a writ of *habere facias possessionem* had been issued on such judgment; and in case of such entry and any legal proceeding taken in respect thereof, the defendant or defendants in any such proceeding may plead leave and license in bar thereof; and these presents shall be conclusive evidence of such leave and license by the lessee, his executors, administrators, and transferees, or other the person or persons, plaintiff or plaintiffs in such proceedings, for such entry or other matters complained of in such proceedings.

In Witness Whereof, His Excellency the Honourable SIR FREDERICK MATTHEW DARLEY, Knight, Lieutenant-Governor of the Colony of New South Wales and its Dependencies, hath, on behalf of Her Majesty the Queen, caused the Seal of the said Colony to be affixed to this Grant, and also set his Hand, at Government House, Sydney, in the said Colony, the day and year first above written, and the lessee ha also set h hand and seal
the day of 189

Signed, sealed, and delivered by the within named in the presence of

R.

Extract from the evidence of John Lionel Fegan, Esq., M.L.A., given before the Select Committee of the Legislative Council, 16th May, 1893; Hon. W. H. PIGOTT, Esq., M.L.C. Chairman.

173. *Chairman.*] Is there anything further that you wish to say about the Bill? Yes; I wish to refer to sub-clause 1 of clause 6, in reference to the standard weight. There has been a great deal of friction in some places in reference to this matter. All that we ask in this clause is that the miner shall get paid for the coal that he hews, and as far as weighing is concerned, that would be a matter between the employers and the employees. That is what this clause means.

174. *Mr. Combes.*] In your opinion weighing the coal should be a matter between employer and employees? I believe that as under the British Act all coal should be weighed, but nevertheless as we have an agreement in the northern district between the employers and the employees it should be left in their hands. This clause gives that power.

175. *Mr. Vickery.*] What do you mean by standard weight? In certain collieries if a skip goes over a certain weight the miner does not get paid for that skip. In other collieries the men are fined for filling skips to more than the standard weight fixed by the employers.

176. *Mr. Combes.*] You say that the whole skip is taken from them? Yes; the whole skip is taken. They put up a bar near the weigh-bridge, and if the skip gets caught under that bar the coal tumbles off the top, and the miner loses that skip. That is done in some collieries.

177. *Chairman.*] Can you name the collieries in which that practice prevails? I do not think it fair to name them.

178. It is a very serious allegation? Nevertheless it is so.

179. *Mr. Vickery.*] Seeing that the Committee know of no colliery at which there is a rule of that sort, do not you think we ought to have the same? I have been informed that at the Newcastle Wallsend Colliery this practice has been in vogue, and I remember that some time since we had almost a strike at the Glebe Colliery on the same question. The men, rather than give in, commenced to fill their skips level with the top board of the skip, but that did not satisfy the managers who at once demanded that the skips should be filled. The men have no voice in fixing the height of the bar—it is entirely in the employers' hands, and consequently the men lose many cwt. of coal.

180. *Mr. Combes.*] Do you say from your own knowledge that the men have no voice in it? Yes.

181. It may be usual in the district that a bar should be fixed 2, 3, or 4 inches above the skip? The employers fix it—the men have no say in the matter.

182. *Mr. Vickery.*] Are not the skips built to carry a certain average weight of coal? Certainly.

183. Do you think it is right for the miners, for some purpose of their own, to pile up the skip beyond the average weight? No; I do not think it right.

184. Do you think that some fine ought not to be imposed for it? Certainly not.

185. Their object is to gain an unfair average of weight by piling, perhaps, a ton into a skip that was built to carry 15 cwt. Then all the rest are paid according to that average, and there is danger in some mines, where the ceiling is not high, from the skips piled up having coal knocked off and blocking the road, causing other skips to run off the road;—is it not right, therefore, that some punishment should be imposed upon a man who piles up the skip? If your statement of the case were correct it ought to be; but it is not correct. A pair of men send from ten to twelve skips a day, or (say) from six to ten skips a day, and perhaps they get weighed for three or four days running. Therefore, it gives the employer an advantage, seeing that it is entirely in the employer's hands to call for a skip to be weighed. The employee has not the same opportunity that the employer has, because the check-weigher has no right to call for the weighing of a skip before it is on the weigh-bridge. [*At this stage Mr. Hoskins vacated the chair, which was taken by Mr. Pigott.*]

186. *Mr. Vickery.*] Do you say that the miners' check-weigher never calls for a skip to be weighed? He does not. I do not think he has power.

187. As far as I know, he does? As far as I have been informed, and I have worked in the mines, they do not. It is the owner's weigher who calls for a skip to be weighed.

188. *Mr. Jacob.*] Do you say that this clause will prevent that grievance? This clause will prevent that grievance. I may say that I have worked in the Bullock Island Colliery where they have nothing of the sort, and everything has gone on satisfactorily as the employers and employees would like.

189. *Mr. Vickery.*] Of course, the miner has to be paid according to the weight of the coal got? Yes.

190. And if he fills in a lot of small coal he has no right to be paid? He will not get paid, it goes through the screen.

191. *Mr. Hoskins.*] Is this clause to enable the miners to have the coal weighed at the demand of the check-weigher? It is impossible otherwise to kill the system in existence in a small minority of collieries.

192. In what way will it kill that system? Clause 6 says: "All the mineral gotten by them shall be truly weighed at a place as near to the pit's mouth as is reasonably practicable: Provided that nothing in this section shall preclude the owner, agent, or manager of the mine from agreeing with the persons employed in the mine that deduction shall be made in respect of stones or substances other than the mineral contracted to be gotten." That makes provision for stone and any refuse of any description.

193. *Mr. Jacob.*] Might I ask you to refer to the third sub-clause. It is proposed that that should be struck out—

That nothing in this Act shall be held to authorise or give any power to any owner or manager of a mine to pay miners by the method known as the standard weight system, and from and after the passing of this Act that system shall be and is hereby abolished.

It is stated that that is a provision which has been inserted for the first time;—do you think it desirable to have it in the Bill? I believe it is, though it is not in the English Act.

194. But you think it ought to be in our Act? The standard weight is a thing which never cropped up anywhere else. Under the English Act every skip of coal has to be weighed. I have known a colliery drawing 2,000 tons of coal a day, of which every skip passed over the machine; but we are not asking for that here.

195. *Mr. Combes.*] If every skip passes over the screen, they get less for the coal, and it all comes to the same thing? What we know by the standard weight is this bar. We want to have that knocked off, and a man to get paid for what he sends up, on the average. What is called the bar is the standard weight.

196. *Mr. Vickery.*] The bar is the standard? Yes.

197.

197. *Mr. Jacob.*] And this sub-clause is to prevent that? Yes.
198. *Chairman.*] Do I understand you correctly to say that every skip should be weighed? Yes, if no agreement exists.
199. What is the meaning of these words, "unless otherwise mutually agreed upon, all the minerals got by them shall be truly weighed"? It says unless otherwise mutually agreed upon.
200. Assuming that there has been no mutual agreement, is it desirable that every skip should be weighed? Certainly.
201. Do you not think that in the working of a mine where a very large number of skips are sent out every few minutes, the weighing of each skip would be impossible? No, certainly not; because the working of the mines in England goes to prove that such is not the case—that is, in mines where they send up more coal than is sent up by any mines here, and the skip is weighed.
202. Do you know what has been the practice in the Wallsend Mine for the last thirty years? Yes; I know what has been the practice, though I cannot go back thirty years. From what I have heard, the practice has been to weigh one skip out of a certain number. Each pair of men have a number from No. 1 up to as many as there are in the mine. After No. 1 is weighed, perhaps a skip belonging to that number does not get weighed again for a week or a fortnight, and the weight of that skip is the weight paid for.
203. Is not this the practice at most, if not all, the mines, assuming that forty skips have been run out, that one out of every eight skips is weighed as it comes to the screen, and that that is taken as the weight of each skip? It is taken as the weight of that number; that is the custom of all the collieries in the northern district.
204. You desire that to be altered by law? Personally, I desire to see every skip weighed, but we have an agreement, and I am willing to bow to that agreement.
205. Yes; but you are providing by this section that, where there is no agreement, the mine-owner shall be compelled, if the men desire it, to weigh every skip of coal? Certainly; according to law, the same as you get your groceries weighed pound by pound, so that every skip should be weighed.
206. Assuming that forty skips are taken out of the mine every seven minutes during the day, do you think it possible to weigh every skip and still continue to work the mine? I know very well that it can be done, and in England every skip is weighed.
207. *Mr. Combes.*] I know, and you know, that it cannot be done except at very considerable expense? I admit that it is expensive at first, but I believe that afterwards it pays. At the same time we have an agreement in the northern district, and we are willing to abide by that agreement; but if there is no agreement between the employers and the employees you are surely not going to hand over one class to the other.
208. *Chairman.*] I am not asking you what may be done in the event of an agreement, but if they do not agree, are we to understand that what you desire is that whereas one skip in eight is weighed, in future every skip shall be weighed as it comes to the screen? My answer is that if there is no agreement between the parties the law should see justice done between them.
209. What you mean by justice done is that every skip shall be weighed? Yes; whilst the men are paid by the ton every skip should be weighed.
210. *Mr. Combes.*] What I understand is that if the employers and the employees agree as to the weight of the skip, you are in favour of that arrangement? Yes.
211. *Chairman.*] I would ask whether you are aware that the system to which I have referred has been in operation for nearly thirty years, and no difficulty has arisen? I cannot say more than I know.
212. Are you aware of any difficulty having arisen in weighing the skips as heretofore carried out by the Wallsend Colliery? I have not come here to represent the Wallsend Colliery. I speak of collieries that I know, and I say that there has been friction between the employers and the employees as to the weighing.
213. Can you say which mine? I can remind you of Catherine Hill Bay Mine. We had a strike there in reference to the weight.
214. What is the system there? The system there was day-shift work. A number of men were brought out from England to do the work, and when their time expired they wanted to work either on piece or contract, and they wanted the skips filled altogether and weighed altogether. There was friction at that colliery. On the other hand, there were some collieries working on what is termed tribute shift work. When there are a certain number the Act requires that the skips shall be weighed if so demanded by the employees. We have had friction time after time about the weighing of coal.
215. *Mr. Vickery.*] You object to the arrangement made that the men should be paid by the skip and not by weight; you insist on every skip being weighed? Unless the employers and the employees agree to something definite.
216. You know that when they are opening up a mine they have not got weighing machines? The Bill provides for that.
217. You know that in new mines they have not got weighing machines, and therefore they have to pay by the skip-full? Yes.
218. And you object to that? No; there is this provision in the clause—

Where it is proved to the satisfaction of the Minister, in the case of any mine or class of mines employing not more than twenty persons under ground, to be expedient that the persons employed therein should, upon the joint representation of the owner or owners of any such mine or class of mines and the said persons, be paid by any method other than that provided by this Act, such Minister may, if he think fit, by-order allow the same either without conditions or during the time and on the conditions specified in the order.

R 1.

AMBULANCE WORK: BY R. LAWTON ROBERTS, M.D.

Ambulance Lectures—Introductory.

Pages 4 and 5.—I have told you what medical men think about the Ambulance Association; but you have only to consider the events of everyday life, and the risks attending the various occupations by which men earn their daily bread, in order to understand for yourselves the necessity that exists for every one to be able to give aid in cases of serious injury or sudden and alarming illness. In military campaigns enormous numbers of sick and wounded troops are constantly demanding immediate attention and proper conveyance

conveyance from the scene of action to places where they will be subjected to skilled treatment; and it is perfectly impossible for the medical men present to give succour to all requiring it, when there are perhaps several thousands requiring their services at the same instant. Turning to civil life, it is stated that in the year 1833 no less than 1,230 persons were killed and 8,123 injured by accidents on the different railways of the United Kingdom; that "during ten years the fatal accidents in London streets from vehicles amounted to 2,195, while the injuries were 28,071"; that "in collieries and mines the annual loss of life is at least 1,000"; that "no less than 100,000 accidents, large and small, occur in the mines in this country in one year"; that about 3,000 people are drowned annually in our rivers, lakes, canals, and other inland waters alone—not counting similar losses at the seaside and the mouths of rivers; and that in the twelve months ending October, 1884, in factories alone 8,501 various bodily injuries, not fatal, were caused by machinery.

But I need not dwell longer on statistics, you have only to consider your own experiences.

There are some among you who work in coal-pits, and others in brickworks, ironworks, and chemical works; and you know how, in spite of the utmost care, accidents will every now and then occur. One man gets burnt, it may be by hot metal, an explosion of gas, or some powerful chemical agent, as oil of vitriol or carbolic acid; another gets scalded by hot-water or steam; another falls suffocated by some poisonous gas; and another gets badly hurt, a large blood-vessel being opened, perhaps, or a bone fractured. You know also that it is impossible always to obtain *at once* skilled assistance in cases of emergency. A medical man in active practice is a very busy and hard-worked individual, and he can seldom be got hold of at a minute's notice.

I say that you are, from your experience, perfectly aware of all this, and therefore, you are in a position to appreciate fully the desirability of becoming acquainted with the readiest methods of giving *immediate* help to a suffering comrade until the arrival of your doctor; and also of carrying him, if necessary, to his home or the nearest hospital in such a way that his suffering will not be rendered more acute nor his injury aggravated by the process of removal.

S.

HAMILTON PIT DISASTER, 1889.

Notification from Colliery Manager to Examiner of Coal-fields.

John Mackenzie, Esq., Examiner of Coal-fields,—

Sir,

A.A. Company, Hamilton, 22 June, 1889.

Mr. Turnbull desires me to inform you that a heavy fall of roof has occurred in Hamilton pit cross-cut. There are about fourteen men entombed, and no likelihood of getting them out at present.

HY. COX,

Clerk.

Mr. Inspector Dixon for the usual report in compliance with sections 28 and 29 of Coal Mines Regulation Act (1876), as soon as the circumstances in connection with this sad accident will admit of its being made.—J.M., 24/6/89. Mr. Dixon, Inspector of Collieries. B.C., 24/6/89. Returned with report.—J.D., 6/8/89.

S 1.

FINDING AND RIDER OF JURY, HAMILTON PIT DISASTER, 1889.

Department of Justice,

Inquest No. 817, Sydney, New South Wales, 31/7/89.

New South Wales }
to wit. } County of Northumberland.

INQUISITION held at the dwelling-house of William Taylor, known as the sign of the "Glebe Hotel," at Merowether, in the district of Newcastle, in the Colony of New South Wales, this 2nd day of July, and adjourned to the Council Chambers, Watt-street, Newcastle, on the 9th, 10th, 12th, 15th, 17th, 18th, 23rd, and 25th July, 1889, and concluded on the 26th day of July, 1889, before me, George Cannon Martin, one of the Coroners of our Sovereign Lady the Queen, for the Colony aforesaid, on view of the body of Herbert Pettit, then and there lying dead.

Upon the oaths of Frederick Alcock, John Ash, William Thomas Brain, Michael Joseph Moroney, Henry Cree, Edward Stallard, George Hale, William Powell, Samuel Hughes, Joseph Bowtell, Joseph Britton, James Robinson, twelve good and lawful men, of the district of Newcastle aforesaid, who having been sworn and charged to inquire (on the part of our said Lady the Queen) when, where, how, and by what means the said Herbert Pettit came to his death, do, upon their oaths, say that—We find that the said Herbert Pettit was found dead in the Hamilton pit, owned by the Australian Agricultural Company, at the Glebe, in the district of Newcastle, in the Colony of New South Wales, on the 2nd day of July, 1889; we further find that his death was caused by a fall of stone and coal in the aforesaid pit, which said fall occurred on the morning of the 22nd day of June, 1889. This fall entirely covered the said Herbert Pettit, whilst he was at his duties in the said pit, and though great exertions were made by Edward Blackburn to rescue the said Herbert Pettit, they were without avail, and the said Edward Blackburn had to leave the said Herbert Pettit to preserve his own life. For this action of Edward Blackburn the jury desire to record their highest praise and commendation.

Rider.

From the evidence we are of opinion that the late terrible accident was caused through the weakness of the pillars. We recommend, for the sake of life and property, that a clause should be inserted in the new Mining Bill to the effect that in future all pillars on each side of all main ways be of 16 yards, and that the pillars in the headings be 8 yards wide, and that the bords be turned away 6 yards wide, and drove in 6 yards before opening out to 8 yards wide.

We further recommend that more Government Inspectors with greater power be appointed, as we are of opinion that two inspectors are totally inadequate for the proper supervision of the large number of coal-mines now opened or being opened in this district.

We

We consider that — the overman neglected his duty in not calling the men out when it was reported to him that the pit was working so badly.

In witness whereof, as well the said Coroner as the jurors aforesaid, have to this Inquisition set their hands and seals, this day and year aforesaid.

GEORGE C. MARTIN, Coroner.
FREDK. ALCOCK, Foreman.

MICHAEL JOSEPH MORONEY,
HENRY CREE,
JOHN ASH,
SAMUEL HUGHES,
GEORGE HALE,
EDWARD STALLARD,
JOSEPH BOWTELL,

JOSEPH BRITTON,
JAMES ROBINSON,
WILLIAM THOMAS BRAIN,
his
WILLIAM + POWELL,
mark
Witness to mark—GEO. C. MARTIN.

Jurors.

With the view of giving effect to the opinion of the Jury, the depositions and other papers in this case might be forwarded to the Under Secretary for Mines for his information, and for such further action as may be deemed to be necessary. Papers to be returned. Submitted.—H.F. 31/7/89. Approved.—A.G., 1/8/89. The Under Secretary for Mines, B.C., 2/8/89.

S 2.

Department of Mines, New South Wales, 8 August, 1889.

REPORT upon a "crush" which took place in the A. A. Company's Hamilton pit on the morning of Saturday, 22nd day of June last, extending over an area of about 50 acres of coal-land, and in consequence of which five miners, one deputy, four shiftmen, and one wheeler lost their lives. The body of H. Pettit, one of the shiftmen, was recovered on 2nd July, last month, and the bodies of J. Peate, junr. (miner), and T. Banfield (wheeler) were discovered yesterday (Friday), 2nd instant, the others are still entombed in the mine.

Sir,

Merewether, 3 August, 1889.

It is with regret I have to report a very serious loss of life, caused by a "crush" which took place in the A. A. Company's Hamilton pit on the morning of Saturday, 22nd June last. On that morning about 9 a.m., I was informed by a person passing my residence that the roof had fallen in the cross-cut district in the Hamilton pit, and that all the workmen were shut in. Being within a short distance of the Hamilton pit, I immediately descended the shaft, and without delay made my way into the cross-cut district, where I found a deputy from the No. 2 pit (George Embleton, senr.) at work putting up timber at a point between Robson's and Murphy's headings on the main cross-cut road, about 13 chains beyond the entrance to the cross-cut. At this point the roof was not much fallen, but was literally moving overhead. Seeing a large fall of roof in front of us, the deputy and I twice endeavoured to reach it, in the hope that we might find an opening to enable us to pass through in search of the persons entombed beyond; but on each occasion we were driven back, and found that it was futile to attempt to get over the fall, and I advised Mr. Embleton to come a certain distance down the cross-cut, and with his men commence to timber in over, so as to work in as much safety as possible.

In the course of a few minutes several shiftmen arrived from the No. 2 pit, and work in the direction of the large fall was begun. Search parties were also organised to travel all the available old workings adjacent to the cross-cut headings, in order to rescue any person who might have escaped from the vicinity of the fall in the cross cut workings. Such search was kept up for several days after the disaster occurred, until it was placed beyond all doubt that no person had wandered into the old workings.

2. The Hamilton pit is situated near the Globe, and is about $1\frac{1}{2}$ miles south-west of Newcastle, and about 45 chains south-east of the A. A. Co.'s No. 2 pit. There are several connections between the workings of the No. 2 and Hamilton pits, and one main road, known as the old galley horse-road, extends from the bottom of the No. 2 pit to the Hamilton pit cross-cut workings, a distance of about 87 chains in a south-westerly direction. The Hamilton pit is about 190 feet deep, and the main engine road into the workings is about 47 chains in length from the pit bottom to the entrance to the cross-cut in a south-westerly direction. The cross-cut where the "crush" took place was commenced about six years ago, and driven at a bearing of south 88° west, for a distance of about $40\frac{1}{2}$ chains. On the right of the cross-cut main road, headings were from time to time turned away and driven in the direction of the old galley horse-road, four of which headings, viz., Thomas's, Tracy's, Robson's, and Murphy's, penetrated the galley horse-road: Thomas's at about 30 chains from cross-cut, Tracy's at about $26\frac{1}{2}$ chains, Robson's about $23\frac{1}{2}$ chains, and Murphy's at about $20\frac{1}{2}$ chains. Johnson's heading was driven to the right of main cross-cut to within about a chain of the galley horse-road, and Hayes's heading on the same side of cross-cut was stopped at a point about 5 chains short of the galley horse-road. On the left of the main cross-cut, bords were turned away narrow for a few yards and afterwards widened out to the ordinary width (about 8 yards), and brought into Deakin's, Donnison's, and Harding's headings, towards the boundary of the Newcastle Coal Mining Co.'s Colliery. In course of time, as the cross-cut workings extended, other headings were formed on the left side, viz., Bishop's, Martin's, and Burt's, and from these headings bords were also driven towards the Newcastle Co.'s boundary. The system of working the coal in the cross-cut district is known as the bord and pillar system, with 8-yard bords and 4-yard pillars, and the full height of coal wrought was from 7 feet to 9 feet. About sixteen months ago the work of extracting pillars was commenced at a point about $10\frac{1}{2}$ chains back from the face of the cross-cut. In this $10\frac{1}{2}$ chains the coal was found to be rather impure, and much thinner than the general run of the seam in the other portions of this district, and with the exception of the back and front cross-cuts only two bords were turned away and driven for a short distance in this area, and the work of extracting pillars only commenced where the coal was deemed marketable.

In course of time the work of extracting pillars was also begun in Hayes's, Johnson's, Murphy's, and Robson's headings on the right of cross-cut, also to some extent in Bishop's, Martin's, and Burt's headings on the left of the cross-cut. For some time prior to, and at the time the "crush" took place there were only about eleven working-places in the cross-cut pillars. On the day of the disaster (being the last day in the cavel, or what is known as "shifting tool day") some of the miners stayed at home; eighteen however, went into work in the cross-cut district on that morning. Of this number, six returned on hearing the disturbance in the roof in their working-places, seven were afterwards rescued, and five were entombed with the fall. The names of the miners who would not remain at work are D. Inglis, J. Chappel, H. Bell, R. Pringle, J. Acton, and W. Thomas, and of those who came out alive after the crush took place are R. McDougall, D. Moore, F. Ford, E. Sullivan, Wm. Galloway, R. Thompson, and G. Duncan. The names of the miners who lost their lives are Jabez Roberts, D. Procter, D. Masson, J. Peate, senior, and L. Peate, junior (father and son). The body of the younger Peate has since been recovered. These two latter had cavilled into this district and took their tools in and commenced to work their new place on that fatal morning, instead of the following Monday, which would have been (according to custom) the proper day to commence the new cavel. In addition to the miners who went to work in the cross-cut district on that morning, there were three wheelers, D. Regan, M. Ryan, and T. Banfield. The two former escaped, but the latter was caught in the "crush" on the cross-cut flat, jammed between the skips, and his body was not recovered until Friday, 2nd instant. The body of L. Peate, junior, was also discovered on the same flat, and jammed between a loaded timber trolley and a full skip, and strange to say, the two young men (Banfield and Peate) who had been comrades in life were found lying close together feet to feet in death. On the morning of the disaster there were also in the cross-cut district one deputy (James Hodson) and seven shiftmen, viz., J. Beaumont, J. Meadows, B. Roarty, A. Grant, R. Bourke, G. Dudley, and J. Blackburn. These shiftmen belonged to the cross-cut district, but just prior to the fall taking place, some shiftmen from the Church heading district went into the cross-cut district, and were at the out end of the cross-cut main flat near the entrance to Murphy's heading when the disaster happened. These were G. Turnbull, J. Blakemore, W. Wilson, H. Pettit, and G. Jackson. These latter, along with Roarty, Dudley, Blackburn, Ryan, Regan, and Bourke, made their escape, but the deputy (Hodson) who along with Beaumont, Grant, and Meadows were on Murphy's heading flat, endeavouring to get the rails and Tangye pump out, were caught in the fall and are at the present time entombed in the mine. One of the shiftmen from the Church heading (H. Pettit) was buried by a fall of coal whilst sitting at breakfast with some of the other shiftmen on the main cross-cut near the entrance to Murphy's heading, and his body was not recovered until the 2nd July, last month, ten days after the "crush" took place. From the time abovementioned, when I saw Deputy Embleton at work timbering the main cross-cut on the morning of the 22nd June (the day of the disaster), rescue work was carried on continuously along the cross-cut in the direction of the flat. The brave men who formed this party in the several shifts faced untold dangers every hour, but with unflagging energy they persevered until the body of poor Pettit was discovered on the 2nd July. After the finding of this body all work was suspended until 4th July, same month, when a party of six men again resumed work and passed through the in-end of the large fall, where, in a comparatively open space on the cross-cut flat, the pony "Sharpo" was found alive. When the flat was reached on this occasion, a thorough search was made in every direction where it was possible to gain an entrance; but no sign was found of any body except that of the pony. This search was made more especially in the hope of finding the body of J. Peate, junior, as it was about this part of the flat where he was last seen alive by B. Roarty and others. Not being able, however, to find the body at the spot indicated by Roarty, it was then surmised that the poor young fellow had run in over along the flat towards where he had left his father at work early in the morning. Subsequent events have proved the truth of this surmise, as his body was found at a spot nearly 40 yards further along the cross-cut flat than where it was at first expected he would be discovered.

3. The escape of the seven miners, McDougall, Moore, Ford, Sullivan, Galloway, Thompson, and Duncan, several hours after the "crush" took place certainly amounts to the "marvellous," as at the time of the fall they were all in beyond the main cross-cut flat, and by the extreme force of the wind caused by the fall they were left in darkness, as their lights were extinguished. None of this party appear to be able to state the exact route taken by them during their attempt to escape (and this is not to be wondered at as the physical aspect of the whole section of cross-cut workings would at that time be changed). But by statements made by the survivors, it would appear that the route in the first instance was along the cross-cut flat out over to the place near the entrance to Murphy's heading, where the pony "Sharpo" was found alive, for some of the members of this party built a chock with round timber on the top of an empty skip, and it was alongside of this chock that the pony was found by the rescue party. From this point it is evident that Ford and the others found their way into Murphy's heading around the then fallen coal and stone on the cross-cut at the entrance to this heading. Travelling this heading for some distance (for they had at this time obtained a light) they evidently found entrance to an old bord on the right of Murphy's heading, and thus keeping as near as possible on the line of bords they would of necessity cross Robson's, Tracy's, Thomas's, and Hodson's headings, into what is known as the Fault or Long heading. When the party reached Hodson's heading they knew it by the rope, as this heading was the engine plane into the galley workings. This heading, however, appears to have been fallen on right and left of where they entered, and as no egress could be found from this heading except by following down an old bord into the long heading, this was done, and on reaching this (long heading) one of the number (Ford) knew it by certain work he had performed in it some years ago, and he told his comrades that they were now near the main road in the Hamilton pit. Soon after this they came to a stopping built of refuse, and whilst endeavouring to pull this stopping down (which was inside of a brick stopping) they were heard by a person named Wm. Grant, who was in the main road at the time. He (Grant) and one of the rescue party, named Ralph Paul, at once knocked a hole through the brick stopping, and a few minutes later, to the great joy of both rescued and rescuers, the poor fellows were got through the opening in the stopping, and found themselves once more in safety, after having battled for hours with what must have appeared to them at times as almost certain death.

4. The shiftmen, A. Turnbull, Dudley, Blackburn, Milson and others, who were with H. Pettit on the cross-cut, near Murphy's heading end at the time the "crush" took place, had also a narrow escape, for when a portion of the roof fell in the vicinity of Murphy's heading end, these men were to all appearance shut in. But fortunately a small opening over the then fallen roof was discovered, and they were

were thus enabled to make good their escape. One of this party (Blackburn), under most trying circumstances, made a gallant effort to rescue Pettit, but eventually was compelled to desist, and rush out in order to save his own life.

5. On the afternoon of the day on which the body of Herbert Pettit was brought to the surface, Tuesday, July 2nd, 1889, an inquest on said body was commenced before the District Coroner, Mr. G. C. Martin, J.P., and a jury of twelve, at "Taylor's Hotel," Glebe. The gentlemen who formed the jury were Messrs. Frederick Alcock, John Ash, Michael Moroney, W. T. Brain, of Newcastle; Messrs. J. Bowtell, S. Hughes, Joseph Britton, William Powell, James Robinson, Edward Stallard, S. Cree, and George Hale, of Morewether.

Only two witnesses were examined on the first day, and at this stage the inquest was adjourned for a week.

The adjourned inquest was held in the Council Chambers, Newcastle, on Tuesday, 9th July, 1889, and continued on 10th, 12th, 15th, 17th, 18th, 23rd, 25th, and concluded on 26th July, same month.

After the first day, Mr. William Sparke, solicitor, watched the proceedings on behalf of the Government, Mr. H. J. Brown, solicitor, on behalf of the A.A. Company, and Mr. James Curley (Miners' General Secretary) attended each sitting except one, on behalf of the Miners' Association, and during his absence, on one occasion, Mr. James Thompson (District Chairman) acted in his stead. After the first day I attended nearly the whole of the time, and heard nearly all the evidence that was given.

6. From the evidence adduced at the inquiry, it would appear that there was no very great extent of goaf where pillars had been extracted in the cross-cut district, and that no great fall of roof had taken place in any part of the goaf prior to the final crush on 22nd June; neither does there appear to have been any serious apprehension of a large fall up till that morning. From evidence of survivors it would appear that Deputy Hodson had visited the working-places prior to the men going to work, and as he marked the date on the working faces it appears to have been taken as conclusive evidence by some that the pillar-workings were safe. Notwithstanding this, however, we find that when some of the miners went into the cross-cut workings, especially into Murphy's and Johnson's headings, between 6 and 7 a.m., they discovered most unmistakable signs of a serious disturbance in the roof.

Joseph Acton states:—He went down the pit at about 6.30 a.m. on the morning of the disaster, and went into Murphy's heading with a miner named Chapple, and when on Murphy's heading flat he heard the roof working. He (Acton) did not stay to work, but returned towards the pit bottom between 7 and 8 a.m., and on the road out he saw Hodson and J. Sharp (overman), and informed them of what he had heard in the vicinity of Johnson's and Murphy's headings. At and during this interview he stated to the overman "that she would ease herself in Murphy's heading," and with this view he (Sharp) appeared to coincide. Acton appeared to be so convinced that a large fall was about to take place that, besides speaking to the overman and deputy concerning the matter, he warned some of the miners whom he met going in to work in the cross-cut district, as he was coming out.

David Inglis, a miner employed in Murphy's heading, states that he passed along Murphy's heading about 7 a.m. on the morning of the "crush," and at that time the roof was thundering most awfully in the direction of Johnson's heading, and coal was being crushed from the pillar ends in Murphy's heading to such an extent as to make it necessary to clear the road on the flat, so that the wheeler might take the loaded skips out to the cross-cut. He (Inglis) distinctly says that at about 7.15 a.m. the roof was *working badly* in Murphy's heading and was starting to *boom* at the pillars, and whilst helping the wheeler to get some skips off the flat in this heading he (Inglis) says that he saw the overman and the deputy (Hodson), with Meadows, Beaumont, and Grant (shiftmen) come into the flat, and adds that they went straight up past and never spoke. About this time a wheeler named Ryan ran down to the Murphy's heading flat and told Inglis that the roof was working badly up towards the cross-cut. He (Inglis) then began to look for his tools with a view to getting out as quickly as possible, and just at this time, he adds that the overman and deputy passed out over along Murphy's heading towards the cross-cut. From the whole tenor of the statement made by Inglis, it would appear that from the time he entered Murphy's heading on that particular morning, he seemed to think that a very large fall of roof was near at hand, but although he noticed signs of crushing on some of the pillar ends along Murphy's heading flat on the Thursday before the final "crush" took place, he does not appear to have apprehended danger until the Saturday morning. He (Inglis) further states that, in his opinion, the roof on this occasion gave five or six hours warning, and even after he first heard it on that morning, there was ample time to *warn all the men and get both men and beast out safely*.

Another miner named Robert Pringle, who was working a pillar in Robson's heading, went down the Hamilton Pit about 6.20 a.m. on the morning of the disaster, and lost no time in getting into the cross-cut district. When going through the fault on the main road he saw the deputy, Mr. Hodson, who informed him "that his working-place was quite safe." He (Pringle) found everything quiet until he got to the far end of Murphy's flat, where he saw that one of the pillars was nipping. He stopped to examine it, and thought the roof was quiet, and then went on into his working-place, where he worked for some time preparing a shot in order to blast some coal down. He (Pringle) was warned by Chapple and Thomas, who visited him in his working-place, and told him that their place was working in Johnson's heading, and that he (Pringle) had better come away as there would be no skips for him that day. He, however, still went on with his work, and was in the act of fixing the fuse to fire his shot when he heard the roof give three heavy bumps above his head, and then he retreated as quickly as possible. He (Pringle) took some of his tools on to Murphy's heading flat, and just as he got there he passed James Sharp (overman) and some shiftmen; at this time he remarked to Sharp, "My God, Jimmie, did you hear those thuds?" meaning bumps in the roof, and Sharp replied, "Oh, yes, I hear it." He (Pringle) did not leave the flat for a few minutes, but sat down to have some breakfast, and one of the shiftmen passed out at the time (this was Beaumont). Pringle spoke to him, and just then the roof gave three more very loud bumps, and Pringle remarked, "My word, George, these are loud enough," and Beaumont replied, "Yes." The shiftmen were at this time taking rails out in a trolley, and Pringle advised Beaumont to clear away out of danger. He (Pringle) then left Murphy's heading flat, and proceeded towards the cross-cut, but before leaving he cried out to Beaumont, "Take care of yourself, George, she'll soon come."

Robert McDougall went down the Hamilton Pit about 6.20 a.m. on the morning of the "crush," and into his working-place (a pillar) in Hayes's heading on the right side of the cross-cut. He and his mate filled two skips, and then they heard the roof above them working to such an extent that they ran away towards the flat on the cross-cut as quickly as possible, but found that the flat was falling before them.

D. Moore,

D. Moore, another miner, reached the cross-cut flat at about 6:30 a.m. on the morning of the disaster, and heard a very heavy "bump" in the roof in the direction of Johnson's heading at the far end of the cross-cut flat on the right; he stood and listened, but heard no more at that time. He then went on to Hayes's heading, where he heard the roof working; but the rock was not making much noise, the pillars appeared to be squeezing. He (Moore) and his mate (Proctor) then cleared some stone off the coal in their working-place. This stone had fallen during the night. At this time Moore heard the roof working further along Hayes's heading, and bits of shaly rock were falling. Shortly after this Moore told his mate (Proctor) that he would go out, as he did not think it good enough, and that he would not do any more. He (Moore) then gathered up his tools and came away; but his mate did not appear to take much notice of the disturbance in the roof, and remarked, "It will settle, I will have my breakfast,—let her come!"

F. Ford, another miner, who was working in a pillar up the cross-cut, and a little to the left of main cross-cut road beyond the flat, states that he went down the Hamilton Pit a little after 6 a.m. on the day of the "crush," and everything seemed quiet in the vicinity of his working-place; but a little after 8 a.m. the roof began to rattle like thunder, and he eventually had to run for his life. Wm. Galloway went into Martin's heading on the morning of the disaster about 6:25 a.m., and found the roof in that heading in a disturbed state, and thought there was danger. He (Galloway) went to look for the overman (Mr. Sharp), and found him on the cross-cut flat, and told him the place was working. Sharp replied, "Let her come in, I cannot help it." This is denied by the overman (Sharp), but corroborated by a miner named John Steavenson, who was in the cross-cut flat at the time.

The overman (James Sharp) states that he did not notice anything amiss in the mine on the day before the disaster, and went round the cross-cut district early on the Saturday morning; he was in Murphy's heading, and heard one bump only; it was in the coal, and did not sound in any way alarming. He (Mr. Sharp) further states that on that morning he neither saw nor heard anything to make him uneasy, and saw no reason to withdraw any man from the mine that morning except perhaps from that part near Murphy's and Johnson's headings.

After hearing Acton state that his place was working, he (Mr. Sharp) told the deputy (Mr. Hodson) that he believed she was going to come, but gave no instructions to have the rails and other property brought out; but ordered preparations to be made as he thought the roof *might* come in; but he adds that he gave no orders to the under officials to warn the men in the district where he feared a "creep." There is no direct evidence to show the state of Bishop's heading on the morning of the disaster; but B. Roarty states that J. Peate, jun., told him that he had left his father in this heading, and had informed him (J. Peate, sen.) that he would not work in that place any more. Several other witnesses were examined at the inquest, and nearly all of the miners who had been in the various headings bore testimony to the disturbed condition of the roof from about 6:30 a.m. to about 8:45 a.m., the supposed time of the final crush on the morning of Saturday, 22nd June, 1889.

7. After all the evidence had been taken during the several sittings of the Coroner's Court, the Coroner (Mr. G. C. Martin, J.P.) addressed the jury, and reviewed the evidence at some length.

The jury was locked up at twenty minutes to 11 o'clock, and at about a quarter-past one the following verdict was agreed to:—

The Verdict.

"We find that the said Herbert Pettit was found dead in the Hamilton Pit, owned by the A. A. Company, at the Glebe, in the district of Newcastle, in the Colony of New South Wales, on the 2nd day of July. We further find that his death was caused by a fall of stone and coal in the aforesaid pit, which said fall occurred on the morning of the 22nd day of June, 1889. This fall entirely covered the said Herbert Pettit whilst he was at his duties in the said pit, and though great exertions were made by Edward Blackburn to rescue the said Herbert Pettit, they were without avail, and the said Edward Blackburn had to leave the said Herbert Pettit, to preserve his own life. For this action of Edward Blackburn the jury desire to record the highest praise and commendation."

The following rider was also added:—"From the evidence, we are of opinion that the late terrible accident was caused by the weakness of the pillars. We recommend, for the safety of life and property, that a clause be inserted in the new Mining Bill to this effect—that in future all pillars on each side of all main ways be 16 yards, and the pillars in the headings be 8 yards wide, and that the bords be turned away 6 yards wide and driven in 6 yards before opening out to 8 yards wide. We further recommend that more Government inspectors, with greater power, be appointed, as we are of opinion that two inspectors are totally inadequate for the proper supervision of the large number of coal-mines now opened or being opened in this district. We consider that ——— (the overman) neglected his duty in not calling the men out when it was reported to him that the pit was working so badly."

8. With the "verdict," as returned by the jury on this occasion, I most fully agree, and also agree with the recommendations contained in the "rider" for the safety of life and property.

9. In conclusion, I beg to state that, in my opinion, the overman (———) who was in charge of the Hamilton Pit (and in the absence of the manager was the agent for the A.A. Company at the time of the disaster) ought to have warned the miners and wheelers to cease work and go out of the pit, after it was reported to him that the roof was working in the headings on both sides of the cross-cut. According to the evidence, such report was made to Mr. ———, and as this was what is generally known as the "first fall" after pillar extraction, and as no person can tell where a fall of this description will make a break, the calling out of the men and boys was rendered all the more imperative. I am also of opinion that (according to what I have seen since the disaster occurred) the standing pillars were too weak to withstand the pressure brought to bear upon them by the enormous weight of the superincumbent strata.

I herewith beg to forward a sketch of the Hamilton Pit cross-cut district, showing the position of the various headings, &c. (See Plan No. 5.)

John Mackenzie, Esq.,
Examiner of Coal-fields.

I have, &c.,
JOHN DIXON,
Inspector of Collieries.

I fully concur with the verdict and rider of the Jury; also with the conclusions arrived at by Mr. Dixon from evidence given at the inquiry, &c., that the overman (———) is to blame for not having warned the miners and wheelers to cease work and go out of the pit after it had been reported to him by several persons at work in the cross-cut district that the roof was working in the headings on both sides of the cross-cut.

W.

[See Plan No. 8 showing the Hetton Coal Company's leases, position of the two shafts, and main winning places.]

X.

[See Plan No. 9 showing position of bores, leading places, creep, and dams, Wickham and Bullock Island Colliery, and illustrating the evidence of James Fletcher, jun., Colliery Manager.]

Y.

Copy of notice posted at the Mount Kembla Colliery, Wollongong.

15 June, 1895.

FOURTEEN days from this date miners and other workmen employed at this colliery will be required to work on Pay Saturdays for such number of hours as the exigencies of trade demand, and to start work at any time up to 9 a.m. as on other days, when required, and employment will be subject to acquiescence in this rule.

J. H. RONALDSON,
Manager.

Z.

Inspection—Stockton Colliery.

Department of Mines, New South Wales.

Sydney, 5th October, 1893.

On the 17th February last the Manager of the Stockton Colliery withdrew the men from the mine, presumably in terms of General Rule 5, and on the following day an inspection was made by Inspectors Dixon and Humble, who were unable to report the mine safe. Nevertheless, the Manager subsequently set the men to work again in the mine, and it is thought they have continued since to work therein; but as proceedings have on two separate occasions been taken against the Manager, and on each occasion a penalty was recovered, it is submitted that the law has been thereby sufficiently vindicated, and that no further action need be taken in regard to that offence.

Section 24 of the Coal Mines Regulation Act provides that the Examiner or an Inspector shall have power, at least once in eight weeks, to make an examination and inquiry respecting the state and condition of any mine. From this it is presumed that the Act does not make it compulsory upon the Examiner or Inspector to make an inspection within a given period, but it is felt that if an accident involving loss of life should occur in any mine which has not been inspected at least once in eight weeks, the Examiner or Inspectors would be blamed, and, therefore, as no recent inspection of the Stockton Mine has been made, it may be proper that it should now be inspected, if it is possible to do so without incurring the risk of having to withdraw the workmen.

Before making such inspection it is desirable, in order to avoid incurring the risk aforesaid, that the following questions be settled:—

- (1.) If a mine, or any part of a mine, is found by the Examiner or Inspector to be dangerous, does (under General Rule 5) the obligation to withdraw the workmen from the mine rest upon the Examiner or Inspector, or have those officers simply to report the condition of the mine, and record such report in a book to be kept at the mine for that purpose, leaving the Manager to withdraw the workmen?
- (2.) Is the Examiner or Inspector required, under General Rule 5, or Section 25, to anticipate danger? In other words, is he required to take notice of any matter or thing which does not threaten immediate danger, but which tends to danger in the more or less remote future?

HARRIE WOOD.

Attorney-General's Department, N.S.W.

Department of Mines, New South Wales, 14,850, 5/10/93. 93. 10,876. Crown Solicitor, 26/7/93. Submitted—W.S., 4/10/93. I should be glad if my honorable colleague, the Attorney-General, would be good enough to favour me with his opinion on the two questions.—W.W.S., 4/10/93. The Crown Solicitor—H.W., B.C., 5/10/93.

Subject: Inspection—Stockton Colliery.

Crown Solicitor's Office, Sydney, 4 December, 1893.

- (1.) If a mine or any part of a mine is found by the Examiner or Inspector to be dangerous, does (under General Rule 5) the obligation to withdraw the workmen from the mine rest upon the Examiner or Inspector, or &c., &c.?
- (2.) Is the Examiner or Inspector required under General Rule 5 of Section 25 to anticipate danger?

Sir,

I have the honor to return herewith the papers relating to the above matter which were forwarded to me from your Department on the 5th day of October, 1893, and to state that I have submitted them to Mr. Attorney-General Barton, a copy of whose advising thereon will be found upon the other side of this letter.

I have, &c.,

ERNEST A. SMITH,
Crown Solicitor.

The Under Secretary, Department of Mines.

Copy Opinion of the Honorable the Attorney-General.

1. Although the Coal Mines Regulation Act does not expressly mark out the person on whom the obligation rests of withdrawing the workmen when the mine becomes dangerous, there is scarcely room for doubt that the person intended is the person in charge of the mine, or the particular part. By General Rule

Rule 5, what the Examiner or Inspector is to do is clearly defined, and what is to be done by some *other* person—namely to withdraw the workmen from the mine or part where the mine or such part is found to be dangerous—is indicated with equal clearness. As the Statute confers no express power on the Examiner or Inspector to withdraw the men, and as the men are to be withdrawn, the necessary presumption is that this act is to be done by the person who, ordinarily, has alone the power to do it. If the “owner” or “agent,” being in charge, does not in such circumstances withdraw the men, he ought to be prosecuted under section 31. If the offence is committed by the person in charge, not being the “owner” or “agent,” it is within section 34. s. 12, Subs. (5)

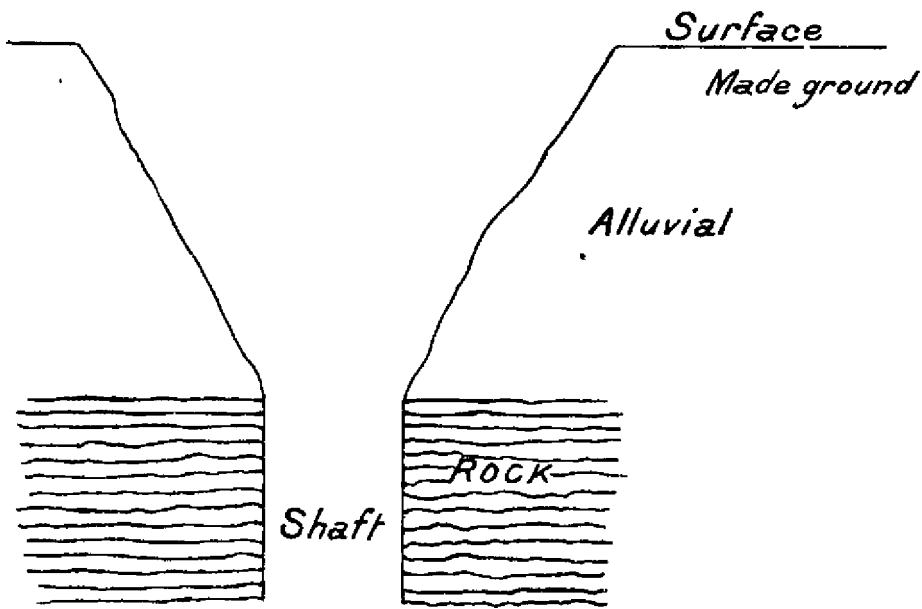
2. The second question involves a matter of degree rather than of principle, and is therefore not an easy one to answer satisfactorily. I am not clear that it is a question of law at all. It would be hard to enlarge the scope of the 5th General Rule. If the Examiner or Inspector finds the mine to be dangerous, every workman is to be withdrawn. Section 25 in no way limits the operation of this Rule. It provides a course of procedure by way of *remedy* if in any respect any mine or any part thereof is dangerous or defective. If danger is *impending* it is futile to say the mine is not dangerous, and therefore I think that the Examiner or Inspector is required to act in anticipation of an impending danger. But the danger must not be too remote. In a sense, every mine is dangerous; but the danger here aimed at is a danger of injury sensibly within reasonable probability.

EDMUND BARTON, A.G., 28/11/93.

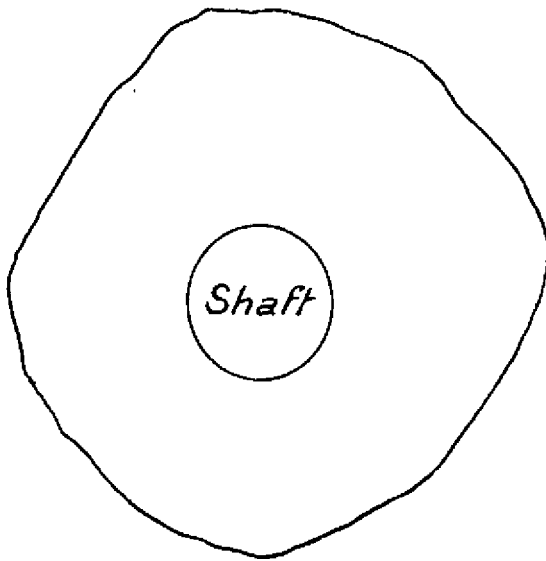
No. 93/632. Department of Mines, N.S.W., 18/411, 5/12/93. See also 93/18,412 herewith. Mr. Burcher to enter in Opinion Book—W.H.T., 5/12/93. Entered—S.B., 6/12/93. D.E.M.G. The Examiner of Coal-fields may be informed of the Attorney-General's advising—H.W., 6/12/93. Submitted. In view of the opinions herein, and the prosecutions that have taken place, the inspection of the Stockton Mine may be made in the ordinary course—H.W., 11/12/93. Submitted. Approved—W.W.S., 11/12/93. Messrs. Dixon and Humble for an early inspection and report—J.M., 11/12/93. Mr. Inspector Dixon, B.C. Seen—J.D., 12/12/93.

Section.

Plan No 1.



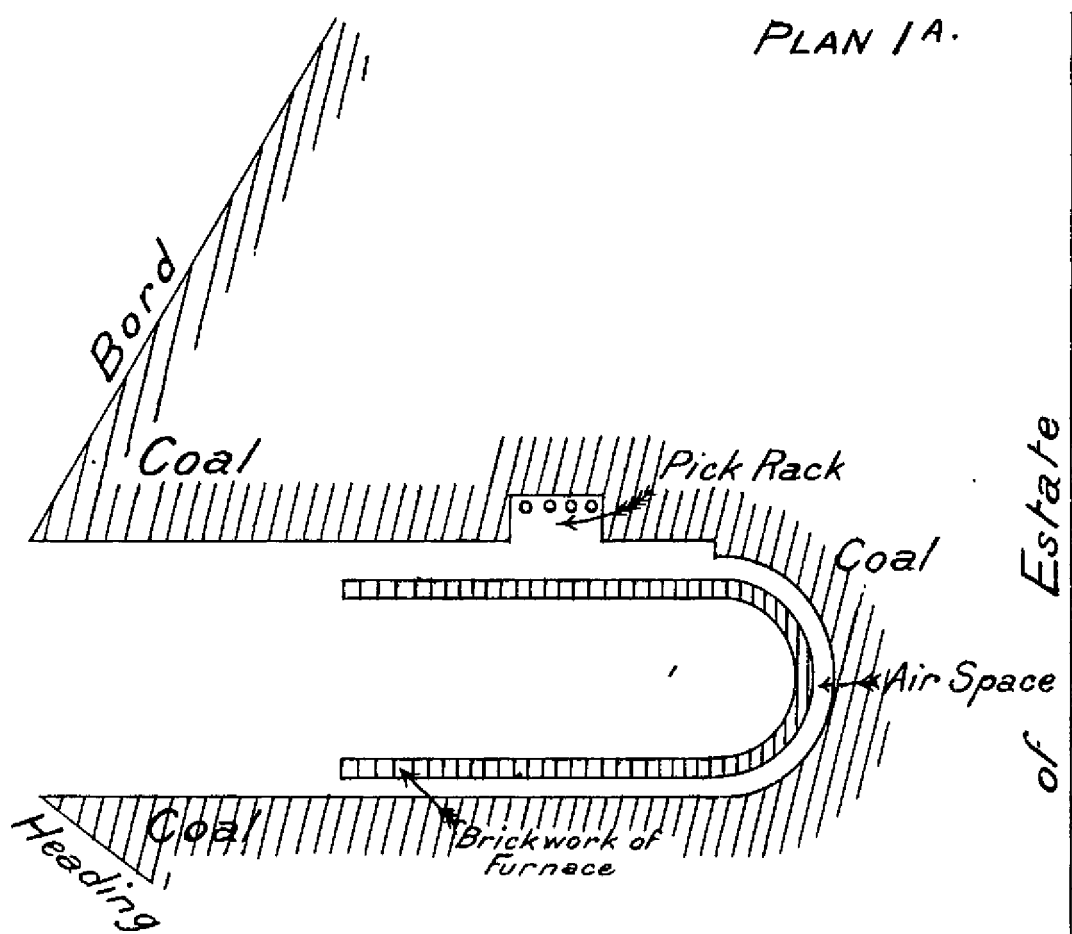
Plan.



**SOUTH WARATAH
COLLIERY**

*Sketch illustrating Questions, Minutes of
Evidence 6493 to 6512.*

(Sig 92)



SOUTH WARATAH COLLIERY

*Sketch illustrating Questions Minutes of Evidence,-
6530 to 6532.*

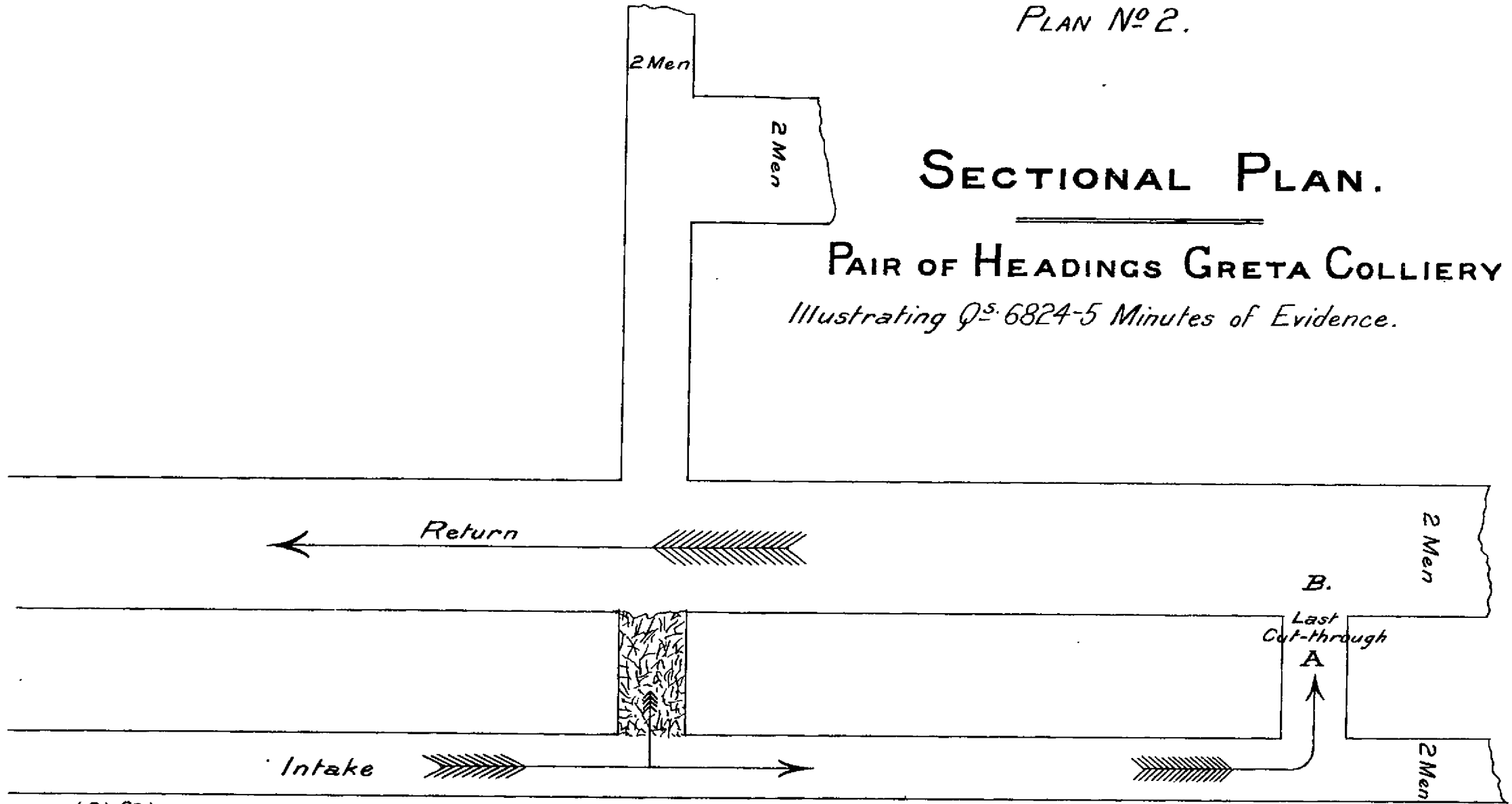
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PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

PLAN No 2.

SECTIONAL PLAN.

PAIR OF HEADINGS GRETA COLLIERY
Illustrating Q^s 6824-5 Minutes of Evidence.

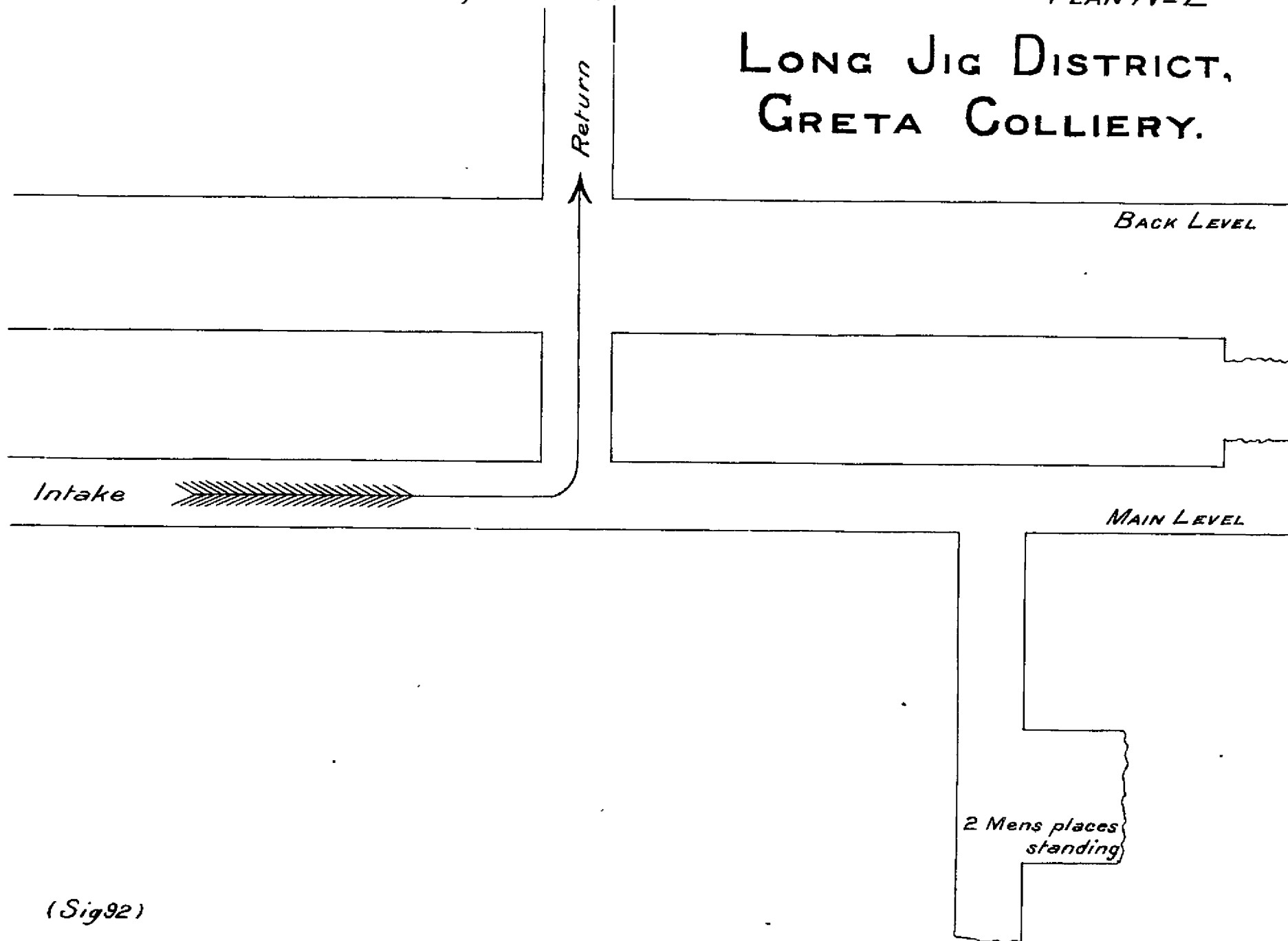


(Sig 92)

Reference:- Minutes of Evidence Q^s6828-6842.

PLAN No 2A.

LONG JIG DISTRICT, GRETA COLLIERY.



(Sig92)

PLAN N^o 3.

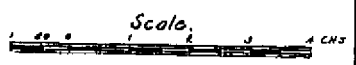
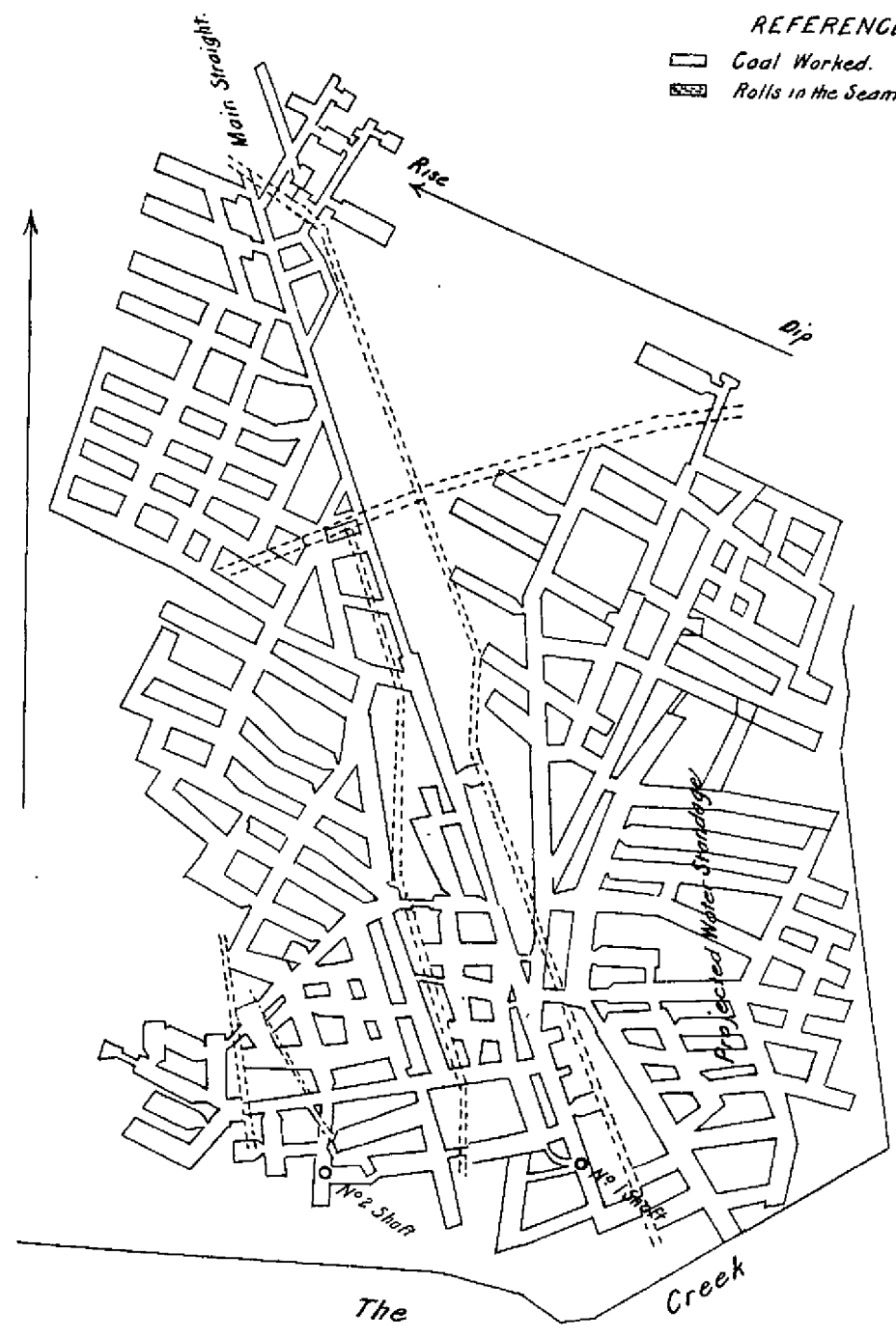
—Oakey Park Colliery—

—LITHGOW—

The average thickness of this Seam, is 5 feet 6 inches.

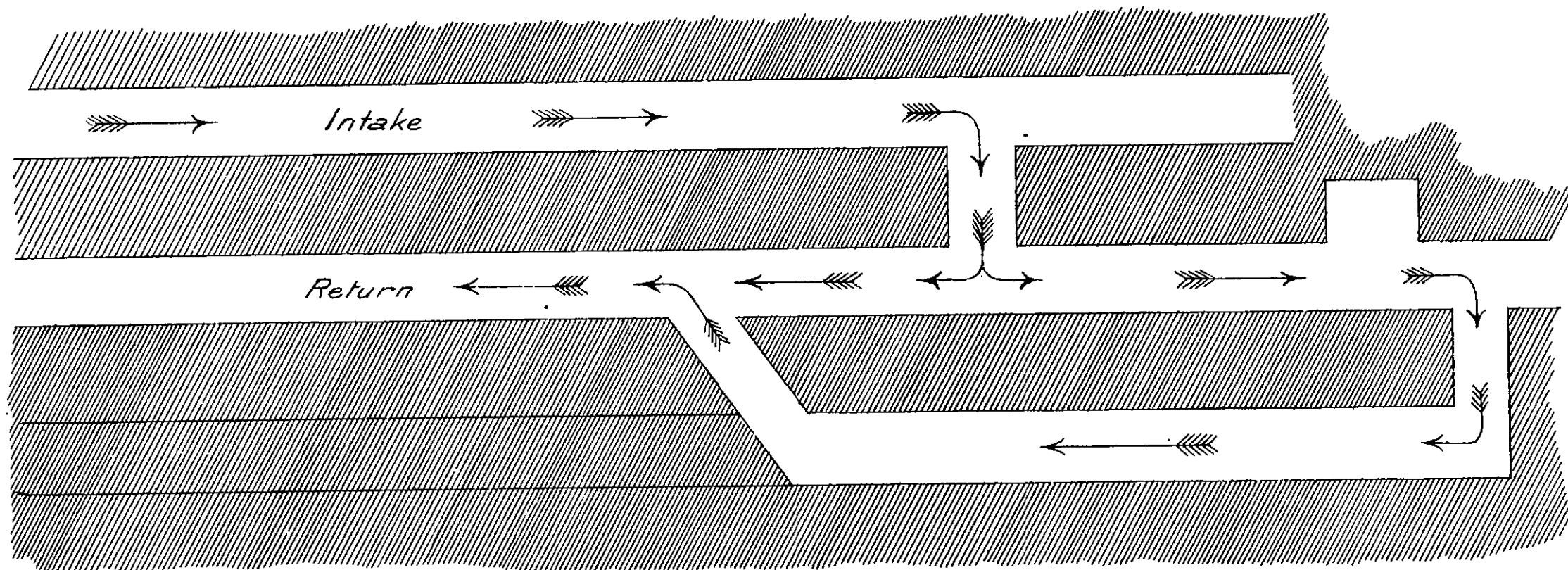
REFERENCE.

- Coal Worked.
- ▨ Rolls in the Seam.



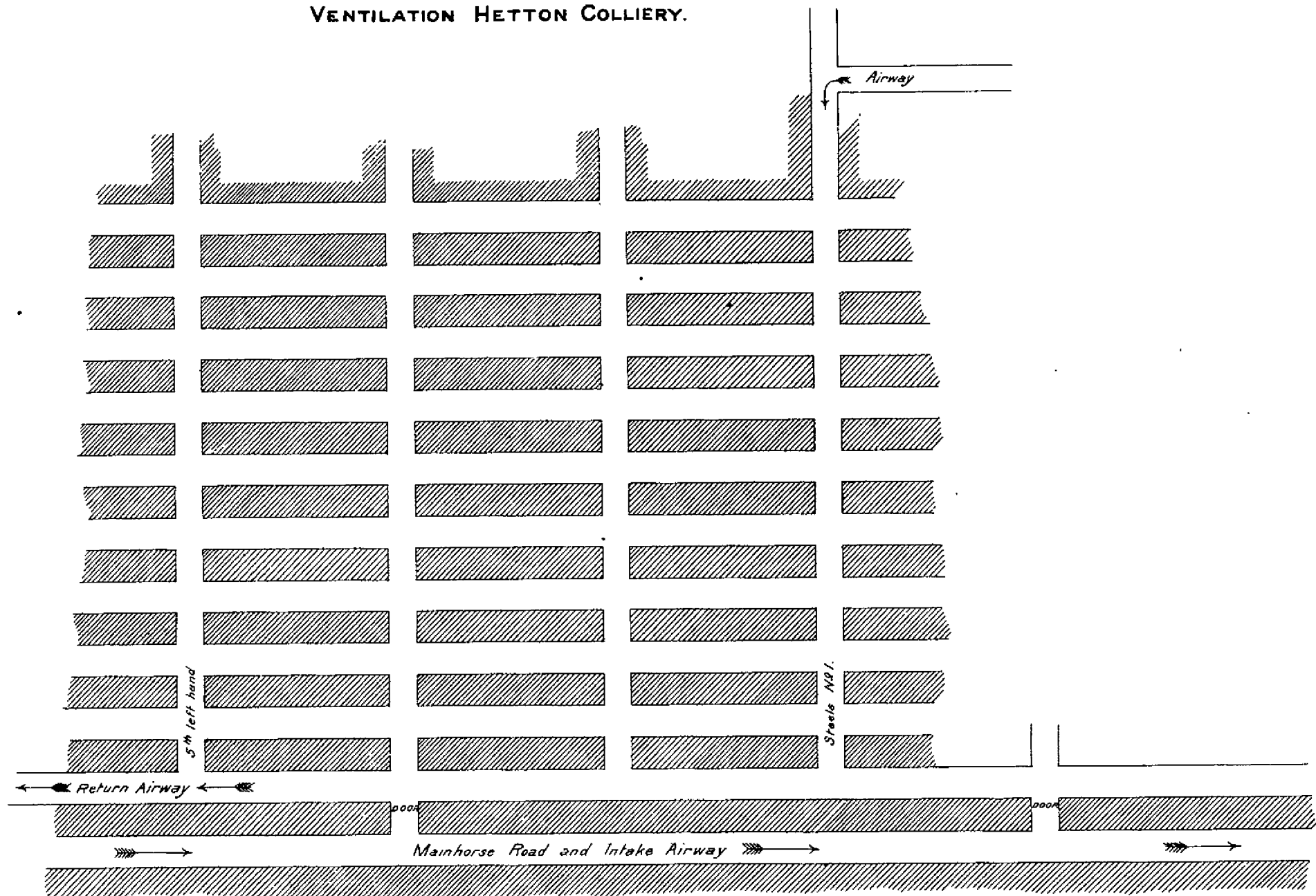
(Sig 9R.)

VENTILATION HETTON COLLIERY.



(Sig 92)

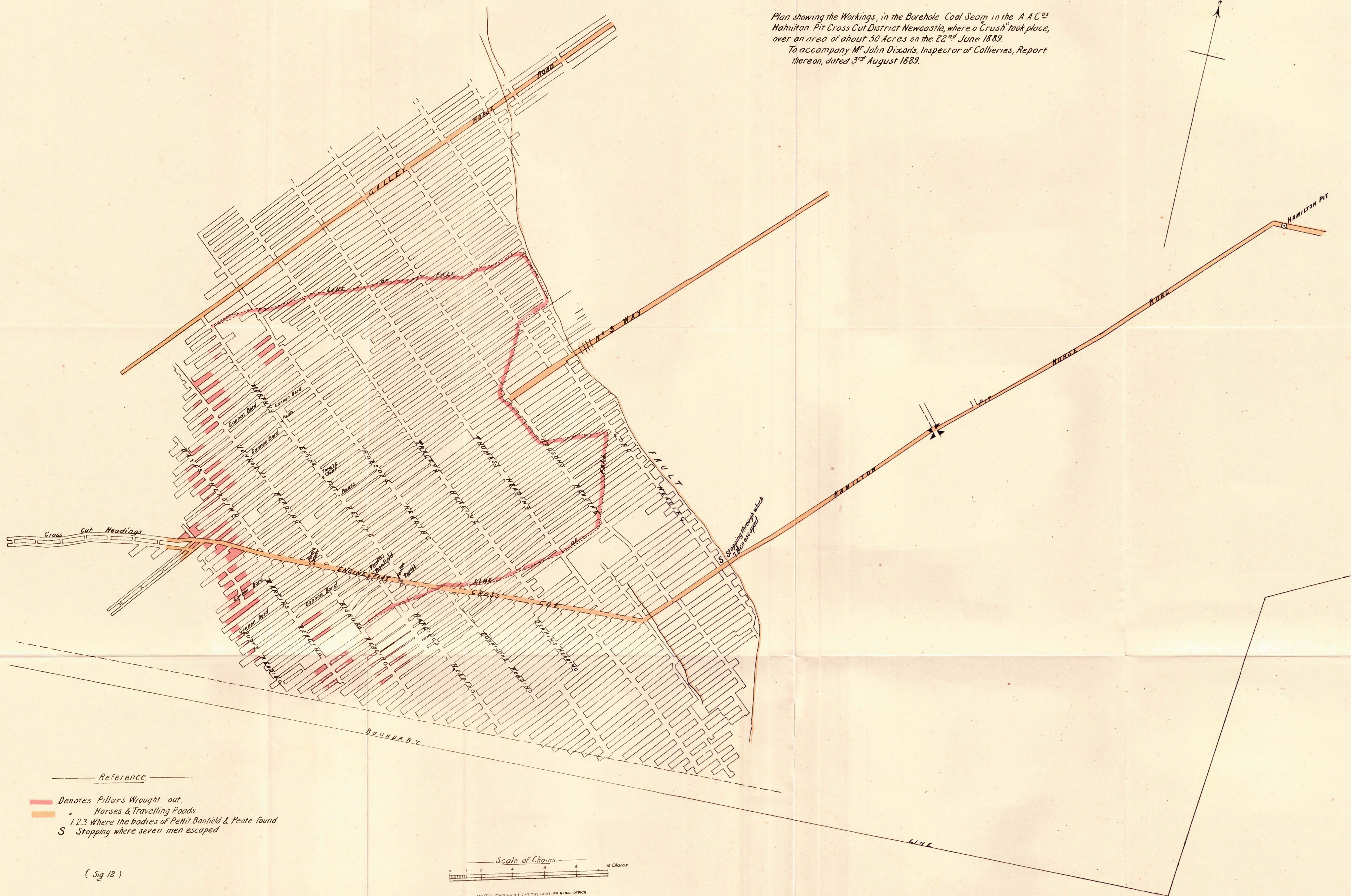
VENTILATION HETTON COLLIERY.



(Sig 32)

PLAN N^o 5.

Plan showing the Workings, in the Borehole Coal Seam in the A A C^o Hamilton Pit Cross Cut District Newcastle, where a "Crush" took place, over an area of about 50 Acres on the 22nd June 1889. To accompany Mr John Dixon's, Inspector of Collieries, Report thereon, dated 3rd August 1889.



- Reference
- Denotes Pillars Wrought out.
 - Horses & Travelling Roads
 - 1, 2, 3 Where the bodies of Pettit Banfield & Peate found
 - S Stopping where seven men escaped

(Sig 12)

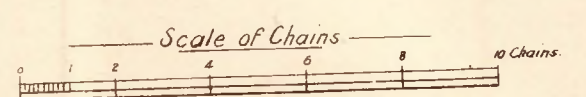


PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

To follow Appendix.

PLAN N^o 6.

METROPOLITAN COLLIERY

HELENSBURGH

Main Air-ways

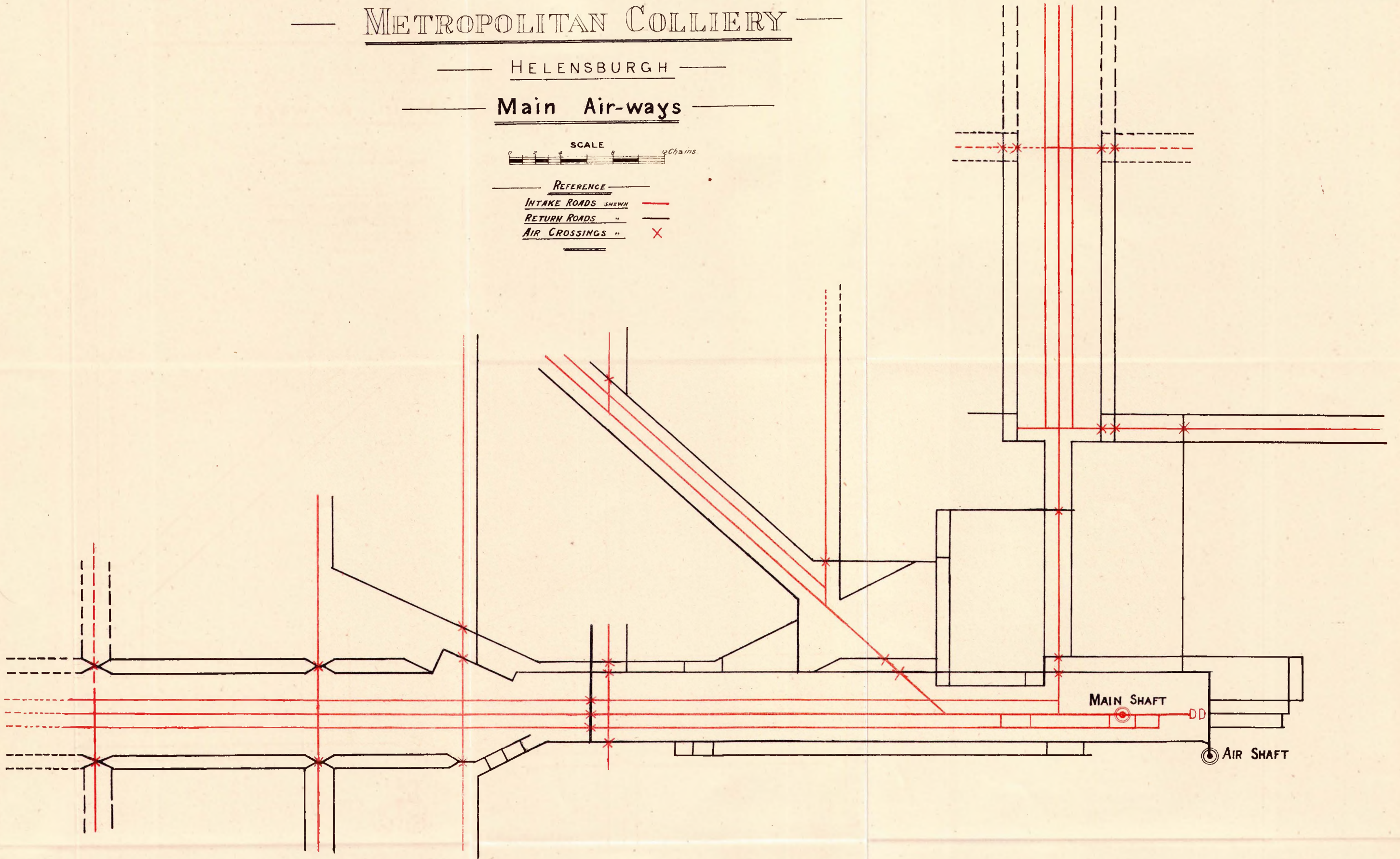


REFERENCE

INTAKE ROADS *shewn* ———

RETURN ROADS " ———

AIR CROSSINGS " X



(Sig 12.)

PLAN N^o 7

W.A. 7.32.9



MAP OF THE
TOWN OF STOCKTON
PARISH OF STOCKTON
COUNTY OF GLOUCESTER
LAND DISTRICT OF NEWCASTLE
N. S. W.
1893

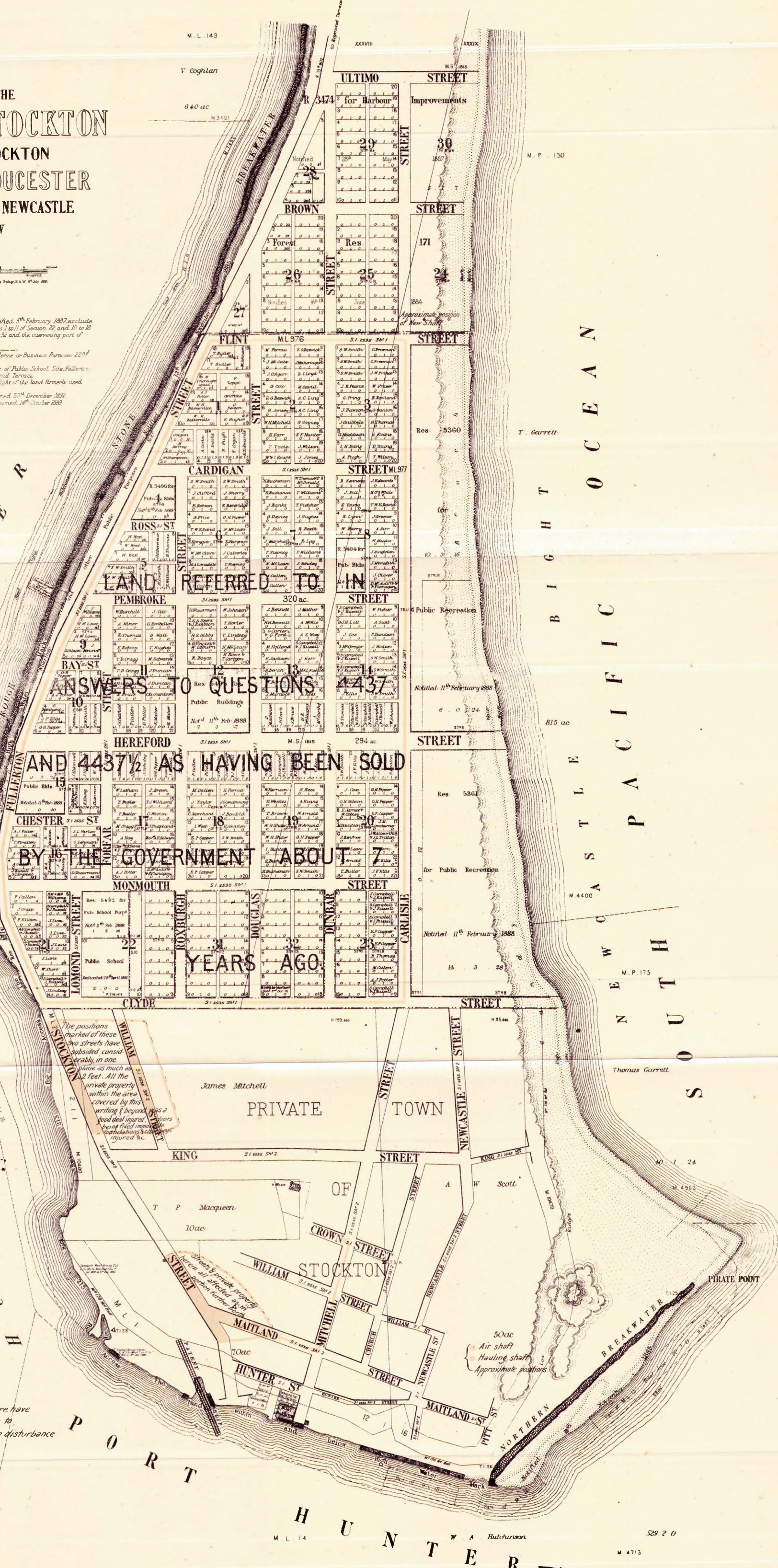


Notes

Proclaimed a Town 5th February 1887
Town Boundaries shown thus
Notified 5th February 1887 exclude
the lands within Sections 31 and 32 and allotments 1 to 11 of Section 22 and 10 to 16
of Section 23 and the lanes within Sections 23 and 32 and the intervening part of
Coylyns Street
Heavy boundaries show those
from lands reserved from Occupation for Mining Resilience or Business Purposes 22nd
December 1851
M.L. 976 for 38 of 30 ac to exclusive of Surface Right of Public School Site Fuller-
ton Street and a part of the road from Stockton to Barrard Terrace
M.L. 977 for 39 of 294 ac to exclusive of the Surface Right of the land referred to
as a title Range
Within Boundaries under Towns Police Act Proclaimed 30th December 1887
Within the Borough of Stockton Boundaries Proclaimed 16th October 1888

RIVER
HUNTER
PORT

OCEAN
PACIFIC
SOUTH



ANSWERS TO QUESTIONS
AND 4437% AS HAVING BEEN SOLD
BY THE GOVERNMENT ABOUT
7 YEARS AGO

PRIVATE TOWN

STOCKTON

Memorandum -
In various parts of the Borough there have
been slight disturbances and injuries to
buildings although there has been no disturbance
visible on the surface of the ground

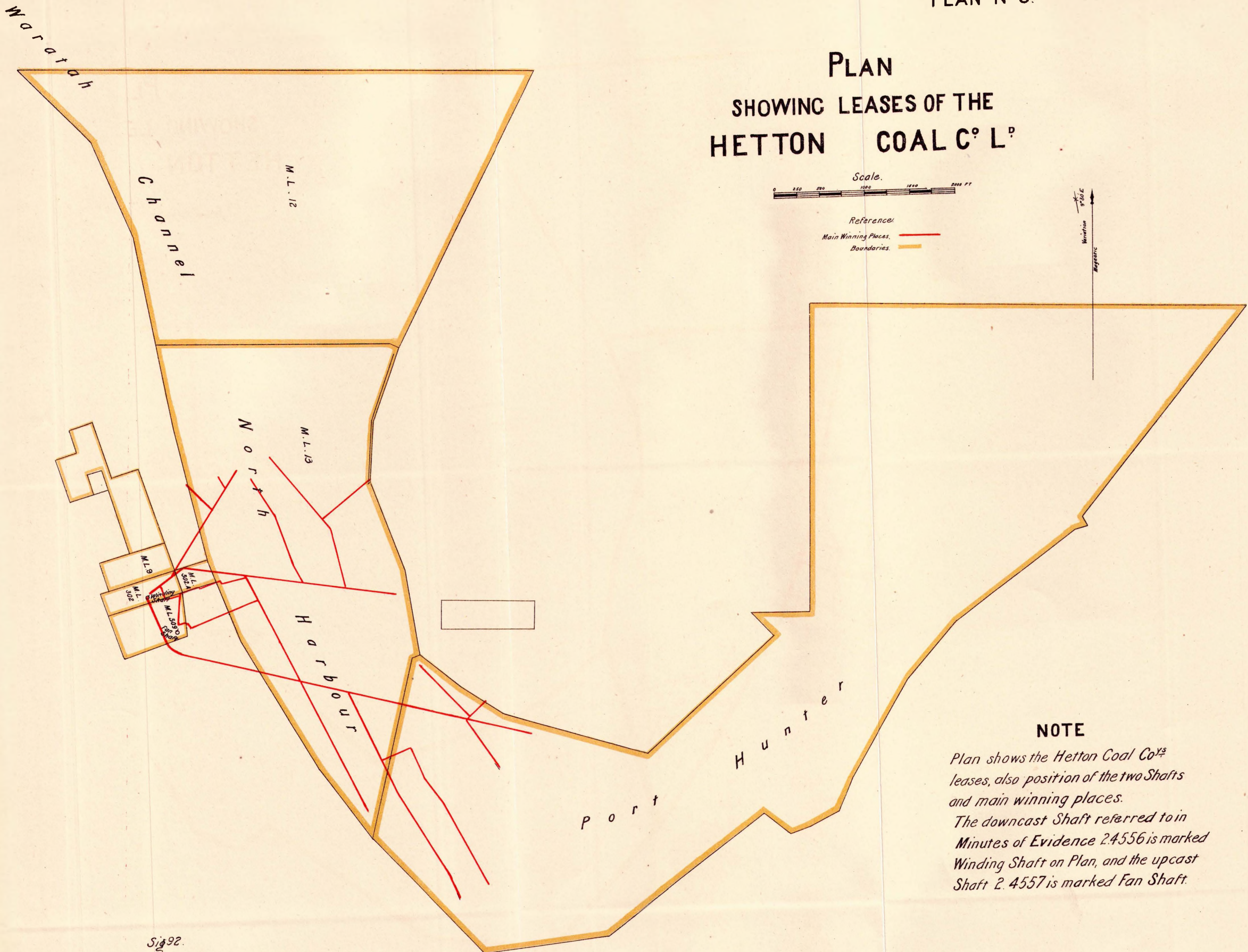
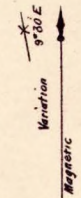
(Sig 12-)

PLAN N° 8.

PLAN SHOWING LEASES OF THE HETTON COAL C^o L^d



Reference:
Main Winning Places. ————
Boundaries. ————



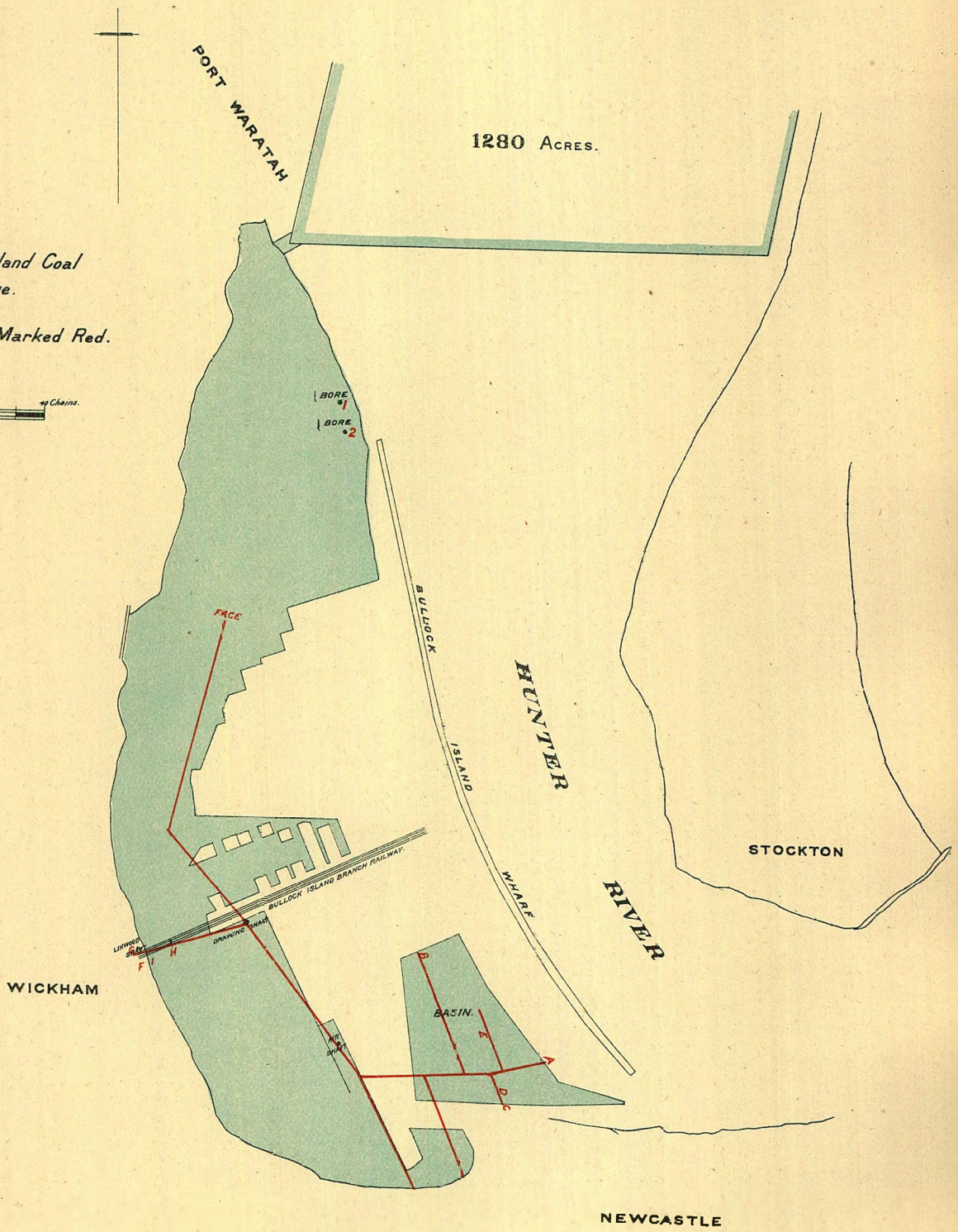
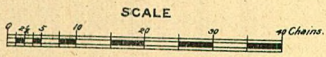
NOTE

Plan shows the Hetton Coal Co^{ys} leases, also position of the two Shafts and main winning places. The downcast Shaft referred to in Minutes of Evidence 2.4556 is marked Winding Shaft on Plan, and the upcast Shaft 2.4557 is marked Fan Shaft.

Sig 92.

Wickham and Bullock Island Coal
Cos. Royalty Coloured Blue.

Winning Places in Mine Marked Red.

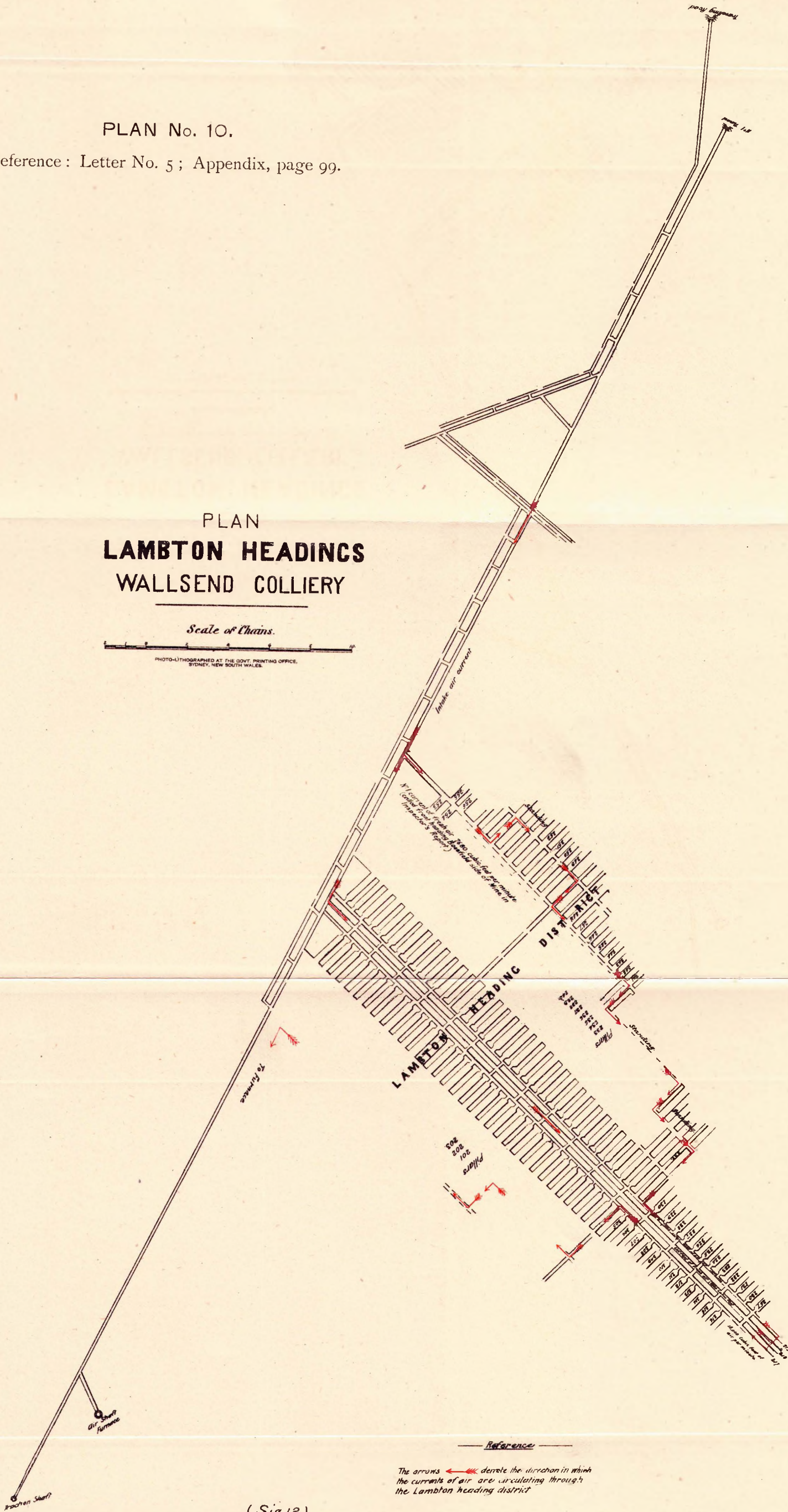
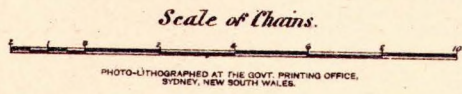


(Sigs 92

PLAN No. 10.

Reference: Letter No. 5; Appendix, page 99.

PLAN
LAMBTON HEADINGS
WALLSEND COLLIERY



(Sig 12)

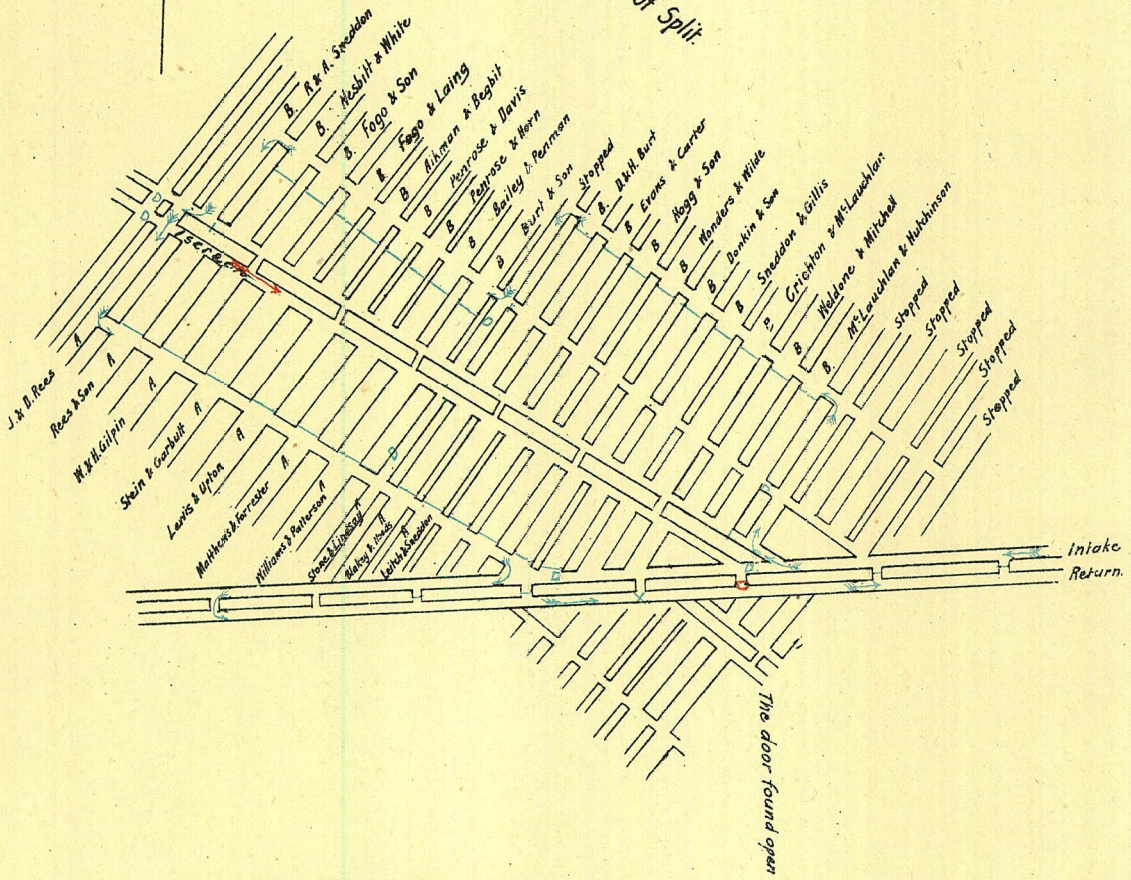
PLAN No. 11.

Reference: Letter No. 10; Appendix, page 109.

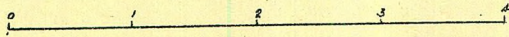
APPENDIX B.

Tracing referred to in Examiner
of Coal Fields' report dated 3rd
February 1886.

Northern side of Split



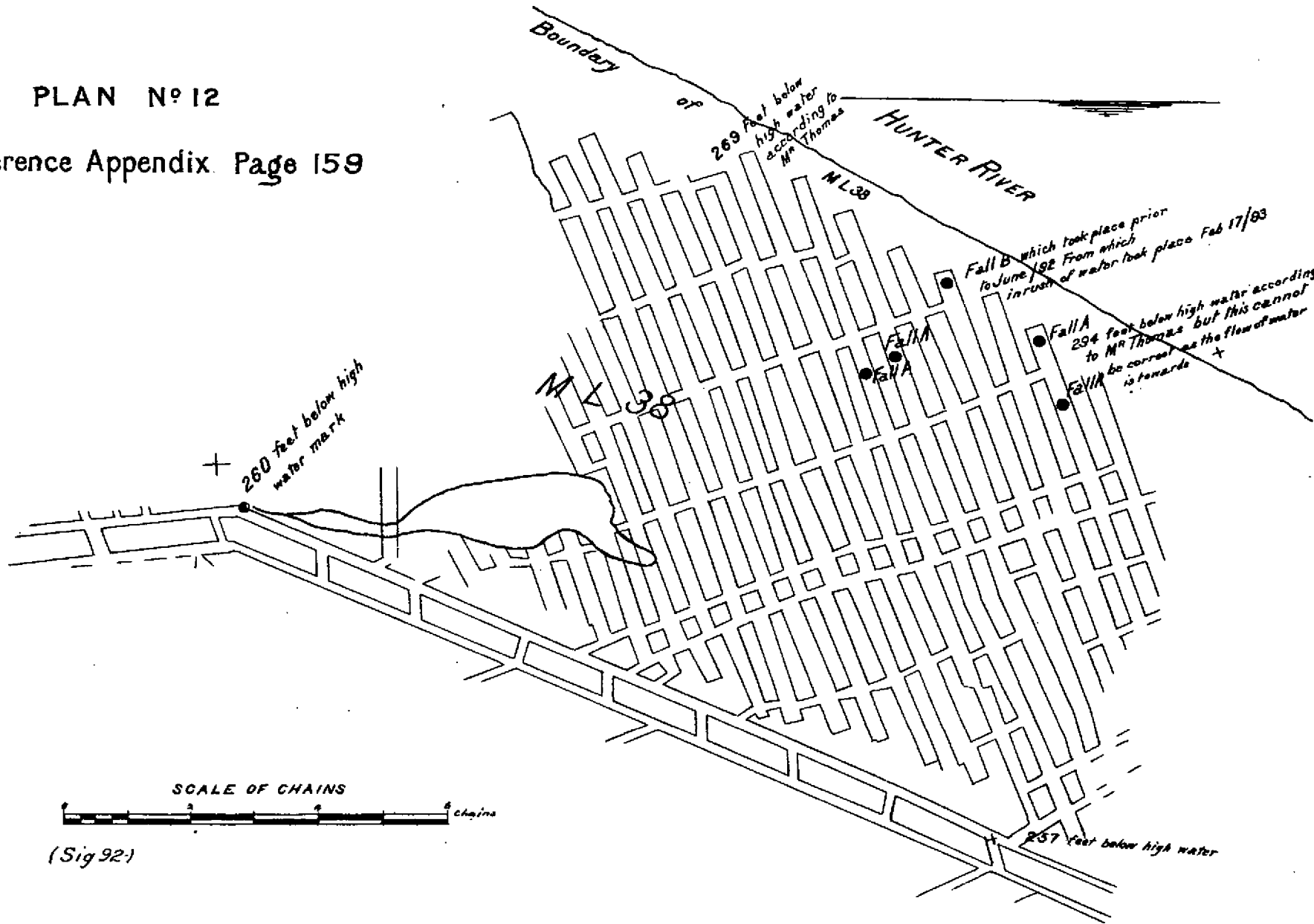
Scale of Chains.



(Sig 12)

PLAN N^o 12

Reference Appendix Page 159



1896.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

ROYAL COMMISSION ON COAL MINES REGULATION BILL.

(STATEMENT OF PRESIDENT REGARDING SITTINGS, FEES, &c.)

Printed under No. 10 Report from Printing Committee, 23 July, 1896.

[Laid upon the Table of this House in answer to Question No. 2 of 16th July, 1896.]

Question.

(2.) FEES PAID TO MEMBERS OF THE ROYAL COMMISSION ON COAL MINES REGULATION BILL:—
MR. CHAPMAN asked THE COLONIAL SECRETARY,—

- (1.) What fees were paid to the members of the Royal Commission on the Coal Mines Regulation Bill at per sitting, and total amount?
- (2.) Is it a fact that at the first meeting a resolution was carried defining the hours of each sitting?
- (3.) If so, is it a fact that in a number of instances the Commissioners charged and were paid for two sittings which were held within the hours fixed by the resolution defining the hours of sitting?
- (4.) If so, will he take steps to obtain a refund of these overcharges?

Answer.

F. E. Rogers, Q.C., President, 54 sittings, at £12 12s.	...	...	£680 8s.
James Curley, member, 54 sittings, at £7 7s.	...	...	£396 18s.
Jesse Gregson, member, 54 sittings, at £7 7s.	...	...	£396 18s.

The President, Royal Commission on Coal Mines Regulation Bill, to The Chief Secretary.

Dear Sir,

Wigram Chambers, 20 July, 1896.

In answer to your letter of the 17th instant, enclosing a copy of certain Questions asked in the Legislative Assembly relative to the fees paid to the members of the Royal Commission on the Coal Mines Regulation Bill, I have to furnish the following information:—

At the first meeting of the Commission it was found that the members would be able, consistently with the convenience of the Commissioners from Newcastle, to meet at 2.30 p.m. on Mondays, and at 10 a.m. on Tuesdays and Wednesdays. It was therefore arranged that the Commission should sit on Mondays from 2.30 p.m. to 5 p.m., or later, and that on Tuesdays and Wednesdays the Commission should sit from 10 a.m. to 1 p.m., and again from 2 p.m. to 5 p.m., or later, on Tuesdays, if necessary; and, to the best of my recollection, the Commission generally sat till considerably after 5 p.m. on Mondays and Tuesdays, but only till 5 p.m., or a little after, on Wednesdays, as the Commissioners from Newcastle desired to return to that city by the evening train.

After about five weeks the Commission found it possible to meet on Mondays also at 10 a.m., and therefore, in order to expedite business, it was decided to have two sittings on that day of the same duration as those on Tuesdays.

In all cases heretofore, as far as I am aware, three hours have been the ordinary duration of a sitting of a Royal Commission, and it will be seen that each of the morning and afternoon sittings of the Commission on the Coal Mines Bill extended to at least that average duration. It would have been much more convenient for me if only one sitting had been held on each day; but, if this course had been followed, the delay in presenting the report would necessarily have been considerable. The remuneration offered by the Government was calculated at so much for each sitting, and this could only be regarded as referring to a sitting of ordinary duration, terminated by an adjournment, quite irrespective of the fact that more than one sitting took place on one day.

Considering the importance and the difficulty of the inquiry, I cannot for a moment admit that the remuneration received by the Commissioners was at all beyond what was just and reasonable.

I am, &c.,

F. E. ROGERS.

1896.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

COAL MINES REGULATION BILL.

(PETITION FROM ANDREW DRUMMOND, MAYOR OF WALLSEND, AND ADAM COOK, MAYOR OF PLATTSBURG, IN FAVOUR OF AN AMENDMENT IN)

Received by the Legislative Assembly, 3 September, 1896.

To the Honorable the Legislative Assembly of New South Wales, in Parliament assembled.

The Petition of the Municipal Councils of Wallsend and Plattsburg,—

HUMBLY SHOWETH :—

1. That for many years mining under roads, streets, and property has been carried on within the boroughs of Wallsend and Plattsburg and the district of Newcastle, causing considerable damage to the public roads and streets, depreciating the value of property, and endangering the lives of the colonists and citizens.

2. That during the years 1883-4-5 the Borough Council of Wallsend, at the instigation of the Attorney-General, took legal proceedings in the Supreme Court of New South Wales to obtain an injunction to prevent Messrs. Andrew and Alexander Sneddon from mining under certain streets in Brookstown, borough of Wallsend. The cost of this equity suit amounted to £1,075 10s. 2d., with the unsatisfactory result that mining under these streets was to be carried out under the supervision of Mr. Thomas Croudace, manager, Scottish Australian Coal-mining Company, Lambton, with the view to the permanent safety of the surface of these streets. This supervision, however, was not strictly carried out, as subsequent pitfalls took place, and the Council were not in a position to enter into further costly litigation.

3. Most extensive mining operations under the roads, streets, and property of the borough of Plattsburg are now being carried on by Mr. Andrew Sneddon, and in fact this applies throughout the Newcastle district, as proved by the extensive pitfalls and subsidence of the streets and property, as published in the *Newcastle Morning Herald and Miners' Advocate*, Monday, 31st August, 1896.

4. That with a view to prevent expensive and fruitless litigation, and to conserve the interests of the property-holders, the safety of the public roads and streets, the Municipal Councils of Wallsend and Plattsburg humbly pray that your Honorable Assembly will be pleased to cause the following provision, which has been approved of by the Municipal Association of New South Wales, to be inserted in the Coal Mines Bill now under consideration by your Honorable Assembly :—

“That in order to permanently secure the safety of all public roads, streets, lanes, or buildings adjacent thereto, within the boundaries of any municipality, it shall be the duty of the Minister for Mines, his examiner, or inspectors, to at least once in every six months inspect all mining under such roads, streets, lanes, or buildings, and to take such steps as the Minister or his officers may deem necessary to ensure the permanent safety of such roads, streets, lanes, or buildings.”

And your Petitioners, as in duty bound, will ever pray.

Given under the Corporate Seal of the said petitioning Corporations this 3rd day of September, 1896,—

ANDREW DRUMMOND,
Mayor of Wallsend.

ADAM COOK,
Mayor of Plattsburg.

1896.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

MINING ON PRIVATE LANDS ACT.

(APPLICATION BY JOSEPH DEMPSEY FOR MINING LEASE AT BYNG.)

Printed under No. 27 Report from Printing Committee, 13 November, 1896, A.M.

Application of Joseph Dempsey, "Mining on Private Lands Act."

Précis.

On 20th August, 1894, the executors of late T. G. Webb applied for lease of 375 acres, including 10 acres which was being worked by one Bennett Treloar and H. C. Webb under agreement with the executors.

On 19th October, 1895, Dempsey applied for 20 acres, including the above 10 acres.

On 21st October, 1895, the Warden reported as follows:—

"I have the honor to state, for the information of the Minister, that immediately Dempsey lodged the accompanying application with the Registrar he came to me and applied for an injunction suspending the mining operations on the 10-acre portion, held and worked by Treloar and party, as he had included it in the 20-acre piece he had pegged out and applied for to lease. I refused his request, adding that he had no right to interfere with any holding that was being worked. It was not for him to say whether the occupier's title was good or bad. The Minister would have to determine that ere he would have any right on the ground at all. 'Jumping' is not permitted by the present Act."

On the 5th September, 1895, Treloar wrote to the department asking for the lease to be granted to Webb, and thus secure the ground for himself and mates.

On the 21st October, 1895, the Warden's Clerk reported as follows:—

"I have the honor to inform you, *re* the annexed application No. 33, for lease of 20 acres under the 'Mining on Private Lands Act,' applied for by C. Dempsey, at Byng, being portion 2, parish of Byng, county of Bathurst, which overlaps the whole of the 10 acres mined by Treloar and party, now on good gold, and who were in occupation of this land long before this Act came in force; that Dempsey, when making his application, did not tell me that such was the case. Mr. Warden Lane was the first to draw my attention to the fact, as Dempsey had so informed him, nor does the plan show anyone in occupation of this land, therefore I consider it my duty as Warden's Clerk to give you this information that you may take such action as you may deem necessary."

On the 21st of October, 1895, the executors again applied, but for 10 acres only, being the area worked by Treloar and party. This application was made as the executors thought the first application was informal.

On the 11th November, 1895, the papers were referred to the Crown Solicitor for advice as to the course of procedure that should be adopted in view of the conflicting applications.

On 3rd February, 1896, the Crown Solicitor advised the department. The following is an extract from his letter:—

"Section 22, however, provides that 'nothing herein contained shall be construed as rendering it obligatory on the Governor to grant a lease to any person applying for the same, notwithstanding that he may have complied with the provisions of this Act and the regulations thereunder, but in case his application shall be refused, he shall be informed of the reason for such refusal.' In the present case there are some very strong equitable reasons for refusing Dempsey's application, the principal being that he is practically trying to 'jump' a mine, and in my opinion his application should be refused. The state of things that would be brought about by granting Dempsey's application would, in my opinion, be contrary to the whole spirit of the Act, and where it is seen that a person by reason of his ignorance of the law is in danger of losing his mine by reason of some other person trying to take advantage of such ignorance, I think it only right that the Governor should step in and see that the Act is administered in an equitable spirit.

"I have, &c.,

"GEO. COLQUHOUN,

"Crown Solicitor."

On the advising the Crown Solicitor the Minister decided in the following terms:—"Action may be taken in accordance with the Crown Solicitor's opinion."—S. SMITH, 7/2/96.

Up to this time no notice of any proceedings being brought by Dempsey in the Warden's Court was received by the department.

On the 6th June, 1896, Dempsey's application was submitted to the Executive Council for refusal, the grounds for refusal being that the land applied for was occupied under agreement. Notice was sent to Dempsey on the 3rd July, 1896, of the refusal of the application, setting out the reason therefor, namely, that portion of the land applied for was occupied under agreement by other persons.

On 12th June, 1896, the Warden wrote to the department asking for authority to hold inquiries as to certain matters then in dispute, amongst them being *Webb v. Dempsey*, and he mentioned that Mr. Kearney, solicitor for Dempsey, had applied for a summons against Webb and others for trespass.

The Warden was informed on 17th June of the position of the different cases, and as to Dempsey's application, that it was in course of refusal.

The Warden's letter was the first intimation of any trespass case being brought by Dempsey; and it will be seen that the Minister decided to refuse Dempsey's application some four months before the trespass case was brought under his notice.

On 22nd June, 1896, the papers were sent to the Warden, with instructions to return them when the case was over.

The case of *Dempsey v. Webb* was called on before the Warden, but he adjourned it *sine die*.

No instructions were given to the Warden to adjourn the case.

On 25th June, 1896, Dempsey's solicitor notified the department that he intended to apply for a *mandamus* to compel the Warden to hear the case.

The *mandamus* was subsequently obtained.

The question as to whether the lease should be issued to the original applicants, pending the hearing of Dempsey's case against Webb, was referred by the Minister to the Attorney-General.

On 10th November instant the Attorney-General advised as follows:—

"The fact of there being a trespass case pending cannot in any way affect the right of the department to issue a lease, and the Minister can do this, of course leaving the parties to settle their rights in the Civil Courts.—J.H.W., 10th Novr., 1896."

1896.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

PITFALL AT MEREWETHER, NEWCASTLE.

(RETURN RESPECTING.)

Printed under No. 9 Report from Printing Committee, 16 July, 1896.

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 25th June, 1896, That there be laid upon the Table of this House,—

“Copies of all papers and reports concerning the pitfall that took place at Merewether, Newcastle, in February last.”

(Mr. Edden.)

Mr. Colliery-Inspector Dixon to The Examiner of Coal-fields.

Report on fall of roof and subsidence of surface in connection with the extraction of pillar coal in the No. 3 District of the A. A. Company's No. 2 Colliery.

Sir,

Merewether, 29 February, 1896.

I have the honor to report that on Tuesday, the 18th instant, a fall of roof took place in the goaf in connection with the pillar workings in the No. 3 District, A. A. Company's No. 2 Colliery.

2. I inspected the scene of the fall in the No. 3 District on the following morning, and found that it had crossed the horse-road in the goaf, and extended to the left side, and evidently following the line of extracted pillars, in the direction of the A. A. Company's southern boundary.

3. The No. 3 horse-road branches from the main south-east engine plane at a point about 7 chains from the No. 2 pit bottom, and continues in the direction of a little to the west of south. The greater portion of this road was driven over twenty-three years ago, and it is fully that time since headings and bords were wrought to right and left of said road. The work of pillar extraction has been carried on in this district since 1891, and was commenced in a portion of the 400-acre block leased from Mr. Merewether's Burwood estate. On 20th June, 1892, a heavy fall of roof took place within the area of this block, and caused a subsidence of the surface; but the recent fall took place within the A. A. Company's boundary of their own land. The scene of fall is about 45 chains from bottom of pit, and about 38 chains from main south-east engine plane.

4. Only about twelve miners were employed in this section on one shift, and on the morning of the day on which the fall occurred the roof was found to be in a disturbed condition, and all the men were at once withdrawn. This was about 10 a.m., and as the principal fall did not take place till about 4 p.m., there was no risk incurred by any person, and the men were at work as usual on the following day.

5. No pillar extraction has been carried on nearer than about 2 chains to the southern boundary. I am only able to give an approximation of the fallen area, as I could not get round the fall on every side. But from observations below and on the surface, I am of opinion that the fall in the old workings is not of much greater extent than about $\frac{1}{4}$ acre. A much greater area, however, is shown on the surface, on what is known as the "Wallaby Flat," owing, no doubt, to the fact that for a considerable depth the deposit is quicksand, and at the time of the fall this sand would naturally gravitate towards the lowest level, and show cracks and crevices for a considerable distance. About 2 chains to the north of the "south boundary" the Glebe Hill, which is composed of sandstone and conglomerate rock, rises almost abruptly, and from the flat to top of hill is about 100 feet of rise in about 10 chains. The total thickness of cover over the coal-seam on the flat is about 180 feet, and the total thickness of cover over the

232—

coal

[605 copies—Approximate Cost of Printing (labour and material), £1 12s. 9d.]

coal at Glebe Hill is about 280 feet. From the fall on the flat distinct cracks and crevices can be plainly traced across the Adamstown to Merewether Road, and within a few feet of the north-side fence of public school; thence through several allotments and under dwelling-houses, and through Macquarie-street, which runs along the ridge. The most clearly defined fissure is on the flat, and runs almost due east and west through the bottom of an old clay-hole, and from 2 to 2½ chains to the north of the Adamstown Road.

6. The public school is on the hill, on the west side of Henry-street, and, although the ground is cracked to north and east of school, no damage has been done to the building or teacher's residence.

Water-main.—A 13-inch diameter main, belonging to the Hunter River Water Board, is laid in Henry-street; and it would appear that several of the pipe-joints have been strained and caused to leak for a distance of about 3 chains, from the flat across the main road and into Henry-street.

A bakehouse on the corner of Adamstown Road and Henry-street is cracked in several places, and the oven (brick) has been damaged on sides and floor.

At the top end of Henry-street, opposite the public school, a dwelling-house (weatherboard), the property of B. Barkwell, has been damaged to some extent by the brick chimney being riven from the house a few inches and the hearthstone dislocated, besides damage to brickwork under the front verandah.

From this property to Hughes-street, which intersects Macquarie-street, surface cracks are plainly seen; and at the junction of Hughes and Macquarie Streets the troubled ground is seen, and an underground tank on the allotment, owned by a person named Mr. Charles Dickinson, has been fractured and the water let off.

A four-roomed weatherboard house and kitchen, owned by Mr. John Gray, is strained to some extent, and a splendid underground tank fractured and the whole of the water wasted.

Through Mr. Wilks' ground the cracks in rock are most distinct, and a spacious underground tank was rent and the whole of the water wasted.

In the allotments owned by Mr. John Perry the underground tank is split, and the whole of the water lost.

The same feature is seen in two allotments owned by Mr. G. Jones, where on each allotment the underground tank is rent and water lost.

The four-roomed house (weatherboard) and kitchen owned by Mr. John Wood is considerably out of plumb, by the surface having rent near the back of the house, and the small pipe leading from the water-main to house was broken and water supply cut off.

In Mr. Tom Harvey's yard the surface rock was very much split, but the only damage done to the house (six-roomed weatherboard) was to loosen some of the upright stone pillar supports.

Mrs. Palmer's allotment—the four-roomed weatherboard house on this land has sustained some damage, as the brick chimney is much disturbed and the whole house has a distinct lean towards the west. A nice new weatherboard house, owned by Mr. James Blakemore, had a shock which wrenched the verandah from the front of house.

Mr. M. Watson's four-roomed weatherboard house is also damaged, as the chimney is fractured and metal oven injured; the underground tank is split, and all the water lost.

In the allotment owned by Mr. J. Higgins the rock is very much rent. The house is four-roomed weatherboard, and appears to have been listed towards the west. The brick chimney was set away in the top from the house, and the connecting pipe with the water-main broken.

7. In conclusion, I beg to state that the pillars of coal left under the public school and grounds are supposed to be at least 8 yards in width, and, in my opinion, the recent subsidence on the flat has dragged a portion of the "Glebe Hill" in the form of a landslip. As more pillar coal is extracted the surface will doubtless subside on the flat, but in all probability the next fall will be at a point too far removed from the "hill" to do any further damage.

I have, &c.,

JOHN DIXON,

Inspector of Collieries.

1896.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

HETTON COLLIERY, NEWCASTLE.

(REPORTS ON SOME FALLEN BORDS IN.)

Printed under No. 13 Report from Printing Committee, 18 August, 1896.

[Laid upon the Table of the House in answer to Question, without notice, of 5th August, 1896.]

Question.

CREEP AT HETTON COLLIERY:—Mr. EDDEN *asked* "Has the Secretary for Mines and Agriculture any objection to lay on the Table of the House a copy of any official report he has received relating to the alleged creep in the Hetton Colliery?"

Answer.

Mr. Colliery-Inspector Humble to The Examiner of Coal Fields.

Sir,

Coal Fields Office, Newcastle, 23 July, 1896.

I have the honor to report inspection of a portion of the above colliery yesterday, viz., some fallen bords and headings, in the district known as M'Crae's, on the dip side of the shafts.

With the exception of a very small portion, the whole of the available coal (bottoms $5\frac{1}{2}$ feet, big tops, and top band $8\frac{1}{2}$ feet), has been taken from each bord in this district, the top band coal being, however, left in in each heading and cut through.

The system of working is 6-yard bord and 6-yard pillar. This width of bord is in the bottom coal only, contracting in subsequent working until, when the top band coal is extracted, the bord is not more than 5 yards width at the roof.

Between the bottom and top coal is a band of "Morgan" stone $5\frac{1}{2}$ feet thick, which after the bottom coal is wrought, is allowed to fall on the floor, there to be used as a floor in the subsequent working of the top coal.

This stone, together with other refuse, completely covers up the bottom coal portion of each pillar, thereby increasing its strength and resistance to subsequent pressure and crushing.

It appears that during the recent stoppage of work here due to the strike, the management decided to draw out the rails and what timber remained in each bord of this district, as it was thought the remaining coal could be more economically got by another shorter route. This was done and the bords abandoned.

A thickness of a few feet of roof usually falls behind, as the top hand coal is being extracted, the miners being protected by timber regularly set, drawn, and reset as the working face moves back towards the heading.

Almost every bord was in this condition when the decision was come to to abandon the district.

At the time of this abandonment (so the manager and overman inform me), further falls of roof took place. The area affected is approximately 6 acres; but so far as I could see the pillars showed very little sign of extra weight.

Accompanied by the manager and overman, I travelled through several of these bords, walking and creeping over the fallen roof, which consists of 4 feet of coal and clay bands, and 9 or 10 feet of hard shale. In no case did I see more than about 13 or 14 feet of roof down, and this thickness not only buries the adjacent pillars, but almost fills up the whole space in each bord.

As the volume of rock when broken is about twice that of the rock *in situ*, I do not think it possible for much further falling to take place in any of these bords; certainly not more than a few feet before the whole available space is filled, as there is only "creeping room" now in many of them.

Before going further you will perhaps permit me to say here that the drawing of the timber, which is only intended to protect the men whilst working, and not to keep up the roof for all time, had little or no effect on the ultimate falling of roof in those bords. If the timber had been left undrawn, the roof would soon have broken over or around it, or have fallen directly the timber decayed. This being so, the props, or as many as can be safely drawn, are taken from each bord directly work finishes therein.

This portion of the colliery is under the Hunter River and Harbour of Newcastle.

According to Mr. Mining-Surveyor Thomas' levels of this colliery, taken, I believe, in 1892, the depth from high-water mark to the floor of this coal seam at this point is 280 feet.

Allowing 30 feet for depth of water in the harbour, and 20 feet thickness of workable coal and "Morgan's" stone, we have 230 feet of strata overlying the coal seam at this point, a thickness amply sufficient, in my opinion, to allay any fear of water in dangerous quantities from the harbour finding its way into the mine.

During my travel round and through these fallen bords yesterday I saw no sign of water, nor did I hear any working of the roof indicative of further falls.

Although I do not apprehend danger from this fall, I was very glad to hear Mr. Mathieson, the manager, say he had quite recently taken steps to make the pillars $7\frac{1}{2}$ yards instead of 6 yards wide in the adjoining and more northerly district, where we know the seam is nearer the surface, the strata not so thick, and in all probability not so good and substantial a covering to the coal seam as it is where the fall has taken place.

I have, &c.,

WILLIAM HUMBLE,
Inspector of Collieries.

Forwarded for the information of the Minister,—J. MACKENZIE, 27/7/96. Under Secretary for
Mines and Agriculture.—H.B.S., for U.S., 29/7/96. Secy.—S. SMITH, 30.

Mr. Colliery-Inspector Humble to The Examiner of Coal Fields.

Further Report on some Fallen Bords in Hetton Colliery.

Sir,

Coal Fields Office, Hamilton, Newcastle, 5 August, 1896.

Supplementary to my report of the 23rd ultimo on a fall of roof in some abandoned bords and headings in M'Crae's district, Hetton Colliery, I have the honor to report further inspection of the said workings to-day.

Accompanied by myself and Messrs. Mathieson and Wellford, the manager and overman, I travelled through and all round this area of fallen ground. In one place only did I see a fall I could not get over, and this was because the bulk of the *debris* was top band coal, which had not been extracted from one of the headings. In every other place I saw there was at least sufficient space above the fallen rock to creep through, thus proving that there has been no general movement of the overlying strata as usually occurs when a "crush" or "creep" takes place, breaking down pillars and other supports.

It is simply a series of local falls in each bord, without materially affecting the intervening pillars. Those pillars exhibit very little sign of unusual weight, and this only on the outskirts of the fallen area.

The majority of them are completely covered and immensely strengthened by the fallen roof in each bord, which acts as a stay or buttress to prevent lateral movement or crushing of the same. I saw no sign of water, and heard nothing indicative of further movement in the roof. Every place was quite dry and perfectly quiet.

As stated in my report of the 23rd ultimo, this fall took place during the stoppage of work caused by the last strike of miners in the Newcastle district. Subsequently a rumour spread amongst the men that the mine was "on the creep," and attained such magnitude as threatened to deprive the mine of its full complement of men, many of them leaving and going to work elsewhere.

In order to stop this exodus, which would probably have ended in a panic, Mr. Mathieson wrote to the Miners' Lodge officials, requesting the appointment of some of their number to inspect the mine, and see things for themselves.

The outcome of this was the appointment of three members of the lodge, namely, Messrs. Saml. Ingram, John Mackay Gray, and Benjamin Davis, who inspected the mine on the 29th, 30th, and 31st ultimo, and entered the result of their inspection in a book in the colliery office.

The following is a copy of such report, which speaks for itself, and fully confirms the substance of my report of the 23rd ultimo on the same matter.

[Extract from the *Newcastle Morning Herald*, Tuesday, 4th August, 1896.]

HETTON COLLIERY.—CONDITION OF THE WORKINGS.—REPORT BY MINERS' COMMITTEE.

The following report by Messrs. Samuel Ingram, John Mackay Gray, and Benjamin Davis, miners, has been furnished to the miners of the Hetton Lodge:—

Gentlemen,—We, the undersigned, appointed by your lodge, have made the following inspection of the workings of the Hetton Colliery:—

On Wednesday, July 29, we visited the fall which took place in the workings in Trouton's No. 1 heading, behind Goundry's Flat. We went in on the old fifth left-hand, and went down to the furthest bord, where the top band was not taken out. From there we went right through the cut-throughs to the pillar alongside the horse-road. Going down to Goundry's Flat, we went down to Trouton's No. 1 heading in No. 3 bord. We could get no further, owing to the stones being blocked up to the roof. We then went back to M'Crae's heading, where the cut-through was stopped up. We opened the stopping, and went into No. 9 bord. From Goundry's Flat up Trouton's heading we found a facing of top band, about 4 feet thick, standing with two props under it. At the back side of this was blocked up. On the right side we went to

to the face of the working bord, which was standing at both sides of the stone dyke. We crossed the pillar in the heading, and went into the next bord, which was standing, with the exception of about 18 inches of dirt that had fallen between the props. All the props were standing. We crossed about halfway over the next or third pillar, and then knocked off.

On Thursday, July 30, we commenced where we had left off the previous day. We worked along for about 4 yards further, when we came to where the fall had broken off, so that we could get no further without sinking down for a distance of about 4 feet, to enable us to get under the standing roof. In the meantime the management had caused a road to be made through the stopping put in in Trouton's No. 1 heading, and a road cleaned over the dirt that had been stowed in that enabled them to come to within 2 or 3 yards from where we were working, where the fall had broken itself off. We then went again into the old fifth left-hand down the furthest bord, where the top band was not taken out through the cut-throughs until we came to No. 7 bord. We went down that bord to Trouton's No. 1 heading to the very point where we had found that the fall was broken off in the rock. We went down Trouton's No. 1 heading through the hole made in the stopping on to Goundry's Flat. So that enabled us to go all round the fall right through it, in No. 3 bord, also right through it in No. 7 bord, and about half-way through it in No. 9 bord, when we were blocked by the dirt being too near the roof, and we could not get through.

On the top of the coal in the Hetton Colliery the roof consists of bands of splint with clay partings varying in thickness from about 2 ft. 6 in. to a thickness of about 4 feet, that is, between the top of the coal and the rock. The highest point we found in the fall is not more than 8 feet from the top of the coal, that is to say, about 4 feet of the rock broke down, and only that in isolated places. The greatest fall that we found was leading from M'Rae's heading to Trouton's No. 1 heading. That was from No. 9 bord to where we found that the fall was broken off. That was a distance of about 22 yards long on the heading, and about 4 feet of the rock broke down for this distance, or a fall of about 8 feet high from the top of the coal. The general height of the fall is from 5 to 6 feet from the top of the coal, or to a parting about 20 inches or 2 feet in the rock.

We wish to report in travelling through the fall that we found the whole of the pillars standing intact, and no place more than 6 yards wide. The distance from this fall to high-water mark varies from 51 ft. 6 in. to 59 ft. 6 in. deeper than the top of the coal at the bottom of the shaft. That is to say, from high-water mark to shaft bottom is 230 feet. The nearest portion of the fall to the pit bottom is 281 ft. 6 in. from high-water mark, and the furthest point 289 ft. 6 in., according to the level plan shown us by the management. This includes the second day's inspection.

At the request of the management on Friday, July 31, we made an inspection of the whole of the old workings of the colliery. We commenced in the second left-hand heading, and travelled to the furthest point of the old workings. In this heading we found in the bords where the band had been taken out little or no rock had fallen, and all the pillars were standing intact. From there, we went to the return air-way from Eldson's narrow bords. We then went to the top end of the fifth left-hand. We found in the bords where the bands had been taken out rock down in isolated places to a distance in the highest point of not more than 3 ft. 6 in. All the pillars were standing intact. We then travelled to Steele's No. 1 heading, through the bords where the band had been taken out. The highest point where the rock had fallen in these bords was about 2 ft. 6 in., and only this in isolated places. All the pillars were standing intact. We then went to Trouton's No. 4 heading, where nothing but bottom coal is worked. We then went to M'Rae's heading. We found in the bords where the band had been taken out that little or no rock had fallen, the highest point being about 18 inches of rock. The pillars were all standing intact. We then went to Nos. 11 and 10 headings, where the seam is worked on top of "Morgan." Top all standing with very little falls, and all the pillars standing intact. From there through the old workings of Nos. 9 and 8 headings little or no rock down and all the pillars standing intact. We then went to Nos. 6 and 5 headings; little or no rock down and all the pillars standing intact. We then came to the engine bank and entered No. 1 right-hand heading and travelled the old workings into Hutchinson's No. 1 heading. The highest part of the fall in No. 1 right was about 6 feet of rock, and for a distance of about 4 yards other parts varying from 1 ft. to 2 ft. 6 in.; all the pillars standing intact. We then travelled from Hutchinson's No. 1 to Tighe's headings. We found one fall up to a height of about 6 feet in the rock up to a sharp point (or what is generally known as a horse back) for a distance of about 10 yards long; also, for a distance of about 20 yards the rock was down to a height of about 4 feet. Other parts nothing unusual; all the pillars standing intact. From there to Hutchinson's No. 2 heading, several falls isolated, in some cases 5 feet or 6 feet high, also along to the dyke at the extreme end of Hutchinson's No. 2; little or no rock down in this part and all the pillars standing intact. From there we travelled into the fourth right-hand heading. We found little or no rock down, and all the pillars standing intact. We then travelled the old workings on the right-hand back of shaft; very few bords of band worked; little or no rock down and all the pillars standing intact. We then travelled the workings on left side back of shaft; no band taken out, and all the pillars standing intact.

We wish to report, in travelling through the old workings, that we found the whole of the pillars standing solid, and apparently no weight on them. We wish to further report that during the 3 days of our inspection we have received very great assistance from the manager and his overman,—not to lead us to where they wanted us to go, but to guide us to the several places where we wanted to go. We hereby certify that the above is a correct report of our inspection of the workings of Hetton Colliery.

As stated in my report of that date (23rd ultimo) these fallen bords, &c., are under the harbour of Newcastle, and according to levels made by Mr. Mining-Surveyor Thomas in 1892-93, the thickness of strata overlying the coal seam at this point is about 230 feet, not more than 13 or 14 feet of which has fallen and almost blocked up the entire space in each bord—so much so indeed, that, in my opinion, not more than 3 or 4 feet more can possibly fall before the bords and headings are completely choked up, when of course, no further fall can take place. I do not apprehend any danger from this fall to the men employed in the mine.

With reference to Mr. Curley's letter you sent me (and which is annexed hereto) there appears to be two points only requiring consideration:—

- (1.) The suggested examination to see how far pillars may have been encroached upon, and
- (2.) The suggested additional safeguard of having the width of bords at each end reduced to 6 or 8 feet.

My answer to the first is: that while no one acquainted with practical work in coal mines would venture to say, that pillars of 30 or 35 yards in length can be formed of uniform width throughout to vie with the proverbial "mathematical straight line," a reference to the plan of Hetton Colliery workings made in 1892-3, and since then added to, by Mr. Mining-Surveyor Thomas, who made exhaustive and thorough surveys of the whole of the mine (of which the bords and headings in M'Crae's district form a part and were included in his first survey) to ascertain the boundaries and especially the width of bords and pillars, it will be seen that the conditions of the Company's lease from the Crown, stipulating that the bords shall not exceed 6 yards in width, and pillars shall not be less than 6 yards wide, have been so closely adhered to as can reasonably be expected in practical work.

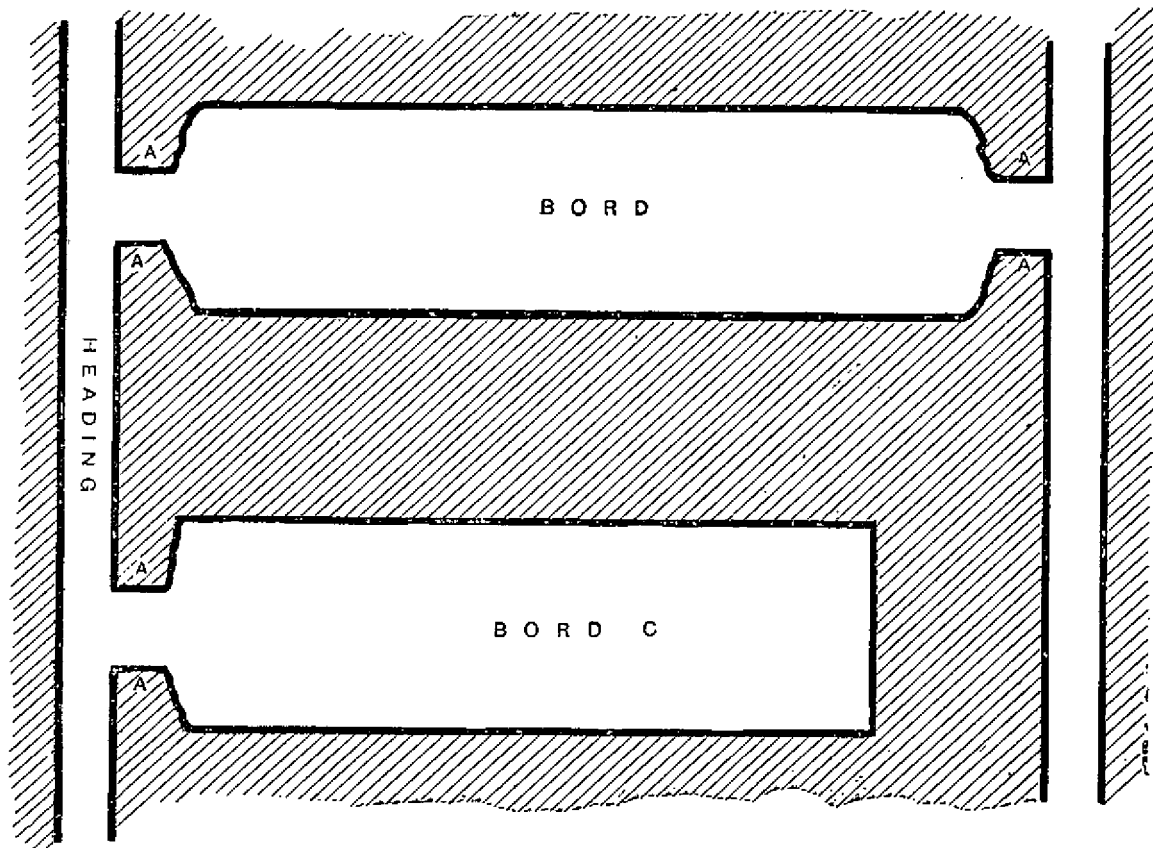
The bords are driven by line, and with ordinary care can never go far wrong, but even if a bord should deviate and encroach, say, on the right-hand side pillar, the adjacent pillar on the left is thereby added to to the extent of the encroachment. Thus the total strength of a series of pillars in a district, as a support to the roof, is unaltered.

(2.) Nothing has transpired at this colliery that, in my opinion, warrants us in calling upon the Company to modify the system of working.

The bords are now 6 yards wide throughout and while there can be no doubt that if such were started and terminated 6 or 8 feet wide, it would be an additional source of strength, but, in this mine the benefits would not be so large as appears probable to many.

With

With a hard coal free from joints, cutters, &c., it undoubtedly would be so, but this Hetton coal (particularly the top coal) is traversed by these lines of fracture to such an extent that the coal proposed to be left at each end of the bord (vide A on sketch)—projecting as it does from the corner of each pillar—



would be subject to the deteriorating influences prevailing more or less in all mines, which tend to the rapid weathering and crumbling of all exposed surfaces, particularly angular pieces, such as these would be.

Thus the benefit to be derived from this practice in hard strong coal free from joints, &c., would not, in my opinion, amount to much in this mine. Further, I do not consider the stability of its roadways—and therefore the safety of the workmen—depends upon such a comparatively small matter.

Another point to be considered is the ventilation of the bord while being driven.

Reducing the width of entrance from 18 feet to 6 or 8 feet would materially retard the flow of air, by diffusion or otherwise, into where the men require it.

It is well known that air flowing along a heading does more benefit to a bord with a wide entrance than with a narrow one. A reference to bord C on sketch will lend colour to the saying that to ventilate a wide bord with a narrow entrance is like "trying to ventilate a bottle," the wide part of the bord and a narrow entrance resembling a bottle laid on its side.

Again, if it were compulsory for the air current to be carried to the working face, this width of 6 or 8 feet would have to provide space for the skip road and air current, and as the skip must have a definite width to turn gradually from the heading into the bord, amounting in some cases to 7 or 8 feet, the result would be that the airway behind the brattice would be contracted to such an extent as to interfere with the satisfactory ventilation of each bord.

I have, &c.,
WILLIAM HUMBLE,
Inspector of Collieries.

I accompanied Mr. Inspector Humble during the whole of this inspection, and I fully agree with this report in every particular.—J. DIXON, 8/8/96. The Under Secretary for Mines and Agriculture.

[Enclosure.]

Trades Hall, Newcastle, 29 July, 1896.

Dear Sir,

May I draw your attention to current rumours respecting an alleged creep at the Hetton Colliery, upon which I have been questioned more than once, and to which I drew Mr. Inspector Humble's attention in conversation with him on Saturday night, the 18th instant, while on the Newcastle Station platform.

These rumours are gaining publicity and are alleged to have some foundation as you will notice from a paragraph appearing in the Press to-day.

You are fully cognisant of the situation of this colliery, and the need of careful exact mining conditions. The top band I understand is worked to the rock. How far there may or may not be encroachments on pillars at the terminations of bords, I would suggest should be a matter for examination. What has also occurred to me as an additional safeguard with this and other collieries so situated, is the width at which bords should be commenced and terminated. A width of 6 or 8 feet would better define locally any fall which might take place.

This view of the question is suggested from what I have noticed when working as a practical miner, when a fall in a bord travelled over the heading, &c.

I mention the matter as a subject worthy of your consideration.

May I ask in conclusion that this alleged creep at the Hetton Colliery receive your immediate attention.

I have, &c.,
JAMES CURLEY,
General Secretary.

The Examiner of Coal Fields.

J. Dixon