1885.

NEW ZEALAND.

CONTROL AND INSPECTION OF MINES

(REPORT ON).

Presented to both Houses of the General Assembly by Command of His Excellency.

To the Honourable W. J. M. LARNACH, C.M.G., Minister for Mines.

SIR, Mines Department, Wellington, 26th June, 1885.

I have the honour to forward you the general and detailed reports on the inspection of mines, under "The Regulation of Mines Act, 1874," for the year ending 31st December, 1884.

I have, &c.,

JAMES MCKERROW,

The Hon. the Minister for Mines. Secretary for Mines.

REPORT.

IN writing this the Seventh Annual Report of the Mines Department, it is gratifying to observe, that from year to year, there has been a progressive increase in the production of coal, which the output of 1884 has fully maintained on that of the previous year.

But as this report has to deal more particularly with the carrying out of the provisions of "The Regulation of Mines Act, 1874," it is matter for congratulation, that the increased development of coal mining has not been attended with any great disaster such as has been but too common in the coal mining districts of Great Britain. There were three fatal accidents during the year (the same number as the preceeding year) all from the same cause, so common in mining operations in every part of the world, viz:—falls from the roof. It is so far well that no serious accident has occurred or is attributable to any breach of the Act. This satisfactory record is due to the generally ready co-operation of the mine proprietors and managers, with the inspectors, in observing every reasonable precaution, and also, no doubt very much to the safe character of our coals, and the mines, being as yet only in their infancy, with no great depth or intricacy of workings. As they become opened out, greater or more minute attention will have to be given to many details, which for the present are not necessarily insisted upon by the inspectors. However, in the essential matter of ventilation, the defects in which, have been the cause of most disasters in coal mines, the inspectors are especially careful to ascertain that there is a sufficient current of fresh air to every part of the mine, and that the safety lamp is used wherever there is the slightest indication of gas.

Mr. H. A. Gordon, Inspector of Mines, who recently returned from a visit to the Australian colonies, states in his Report H.—9, 1885, that more attention has been given to systems of ventilation in coal fields of New South Wales, than in those of New Zealand, and further, that in the larger experience gained in the coal fields of that colony, the systems of underground haulage, conveyance of coal from mine

to port, and the loading of vessels, are altogether much superior to the systems in vogue here. With regard to winding machinery and safety appliances, in cages and hooks, Victoria is greatly in advance of all the colonies. As Mr. Gordon has entered into detailed explanation of these different appliances, and as we can only hope to become self-supporting in the matter of coal, by cheapening its production, copies of his report will be widely distributed, throughout the colony with the object of affording information on these subjects to those engaged in mining pursuits.

Statistics.

The rapid development of the coal resources as shown in the tables as under, is all the more gratifying as maintaining the usual ratio of increased output that has marked the history of each successive year of the coal industry of the Colony for the last seven years.

The production of coal from the mines of the Colony during 1884 was 480,831 tons, and the quantity imported 148,444 tons, making a total of 629,275 tons. Of this amount 6,354 tons have been exported, principally for gas purposes in Victoria, which shows the consumption of coal within the Colony during 1884 to have been 622,921 tons, against 538,132 tons during the previous year: thus showing an increase over the consumption of 1883 to be 84,791 tons.

Notwithstanding the increased output, the mines are still unable to keep pace with the demand. The imports, which, for the last four years had been kept pretty stationary by the increased output from year to year, have however, this year, increased by 24,904 tons. No better criterion of the trade of a country can be adduced than the consumption of coal, it being the motor of most industries. The largely increased consumption of coal, is no doubt due, in a great measure, to the establishment of the direct steam service with England, and the refrigerating works that have been recently established in different parts of the Colony.

The following table shows the progressive increase in the output of coal, and total quantity imported into the Colony during the last seven years:—

Year.	Coal raised in the Colony.		Coal Imported.		
	—	Yearly Increase.	—	Plus or Minus.	Increase or Decrease.
	Tons.	Tons.	Tons.		Tons.
1878	162,218	...	174,148	...	...
1879	231,218	69,000	158,076	–	16,072
1880	299,923	68,705	123,298	–	34,778
1881	337,262	37,339	129,962	+	6,664
1882	378,272	41,010	129,582	–	380
1883	421,764	43,492	123,540	–	6,042
1884	480,831	59,067	148,444	+	24,904

The number of mines at work in 1883 was 99, and the number now standing on the list is 94.

The following table shows the number of mines; the number of men employed; and the output of coal during 1884:—

Number of Mines.	Number of Men employed in each Mine.	Total Number of Men employed.	Output of Coal in Tons.	Output in Tons per Man.
64 mines	1 to 4 men each ...	123	26,367	206
7 mines	5 to 10 men each ...	50	11,159	224
8 mines	11 to 20 men each ...	117	49,737	425
15 mines	21 men and upwards ...	993	393,568	395
—				375
94 mines		1,283	480,831	

It will be seen from the above table that 94 mines are being worked; 64 of which have produced 26,367 tons of coal, while there were 122 men employed: thus showing an average output for the year of 206 tons, the same as the previous

year. The reason of this low average, as explained in last Annual Report is, that these 64 mines are brown coal or lignite seams worked for local consumption as required. The average output per man from all the mines is 375 tons, or 22 tons more per man than the previous year.

The total average number of men employed in the coal mines in 1883 was 1,249, and 1,282 in 1884, being an increase of 33 men in the year.

The following is a summary of the output of coal from the several mining districts, showing the comparative increase and decrease for the years 1883 and 1884, together with the total approximate quantity of coal produced since mines were opened :—

Name of District.	Output of Coal.		Plus + or Minus −	Increase or Decrease 1884.	Approximate Total Output of Coal up to 31st December, 1884.
	1883.	1884.			
	Tons.	Tons.		Tons.	Tons.
Kawakawa	29,271	30,274	+	1,003	547,455
Whangarei (Kamo and Whauwhau) ...	25,198	27,395	+	2,197	122,535
Waikato	38,293	46,234	+	7,941	228,534
Pelorus	100	475	+	375	711
West Wanganui	2,900	3,700	+	800	14,832
Westport (proper)	39,297	80,176	+	40,879	203,303
Reefton	2,533	1,351	−	1,182	22,928
Greymouth (proper)	86,074	97,357	+	11,283	498,643
Malvern	32,780	23,834	−	7,946	174,869
Timaru	292	294	+	2	726
Otago	149,296	151,823	+	2,527	1,140,424
Southland	15,730	17,918	+	2,188	52,238
Total	421,764	480,831		59,067	3,007,198

From this it will appear that there is an increase in the output for every district, except Malvern, which shows a falling off of 13,946 tons, or about one third less than previous return. In the North Island, Kawakawa and Kamo show a steady output, but Waikato has nearly doubled its output within the last two years, showing the effect of the railway, both as a consumer and as affording means for distribution. This increase is likely to be more than maintained, as fresh ground has recently been leased at Taupiri, on the University Reserve.

In the Middle Island, the increase of output is very marked in the Westport Returns, due to the Banbury Mine, of the Westport Coal Company, giving a return of 74,187 tons, as against 31,550 tons the previous year. On the same field, the output of Koranui for 1883 and 1884, was respectively 3,000 and 5,989 tons. The Brunner Mine, near Greymouth, also shows an increase of 10,235 tons, and the Coal Pit Heath Mine an increase of 1,049 tons. The following shows the output for 1883 and 1884, arranged according to class of coal :—

Name of Coal.	Output of Coal.		Plus + or Minus −	Increase or Decrease 1884.	Approximate Total Output of Coal up to 31st December, 1884.
	1883.	1884.			
	Tons.	Tons.		Tons.	Tons.
Bituminous	156,542	211,982	+	55,440	1,264,708
Pitch	90,029	65,877	−	24,152	493,611
Brown	161,058	186,874	+	25,816	1,152,142
Lignite	14,135	16,098	+	1,963	16,737
Total	421,764	480,831	+	59,067	3,007,198

An inspection of the foregoing tables shows that the increase in output, is mainly in the bituminous coals of Westport and Greymouth. This is important, as it is in the development of these coal fields that New Zealand has to depend, to

become self supporting in the supply of steam and smithy coals. An essential factor in this development is the improvement, now begun, of the bar harbors of Westport and Greymouth. In the success already attained at Greymouth, there is good promise of that most desirable object being attained there, for the depth of water on the bars, determines the class of vessels that can be used as colliers. At Greymouth, only about three years ago, vessels, carrying 200 tons, had difficulty in crossing the bar, whereas now, vessels carrying 600 tons can as easily be employed. The s.s. Taupo recently left with 900 tons. In contrast to this the colliers from Newcastle load up to 3000 tons or more, and there are much greater facilities there for loading as well. All this clearly shows the importance of improving, as rapidly as possible, the harbors and appliances at Greymouth and Westport, so as to enable a much larger class of vessels to be engaged in the trade, as it is the quantity carried on the same bottom, and the facility of despatch, that lessens the cost of distribution. At present, a ton of coal can be delivered at Port Chalmers or Lyttelton by the class of vessel engaged in the Newcastle trade, about as cheaply as from the West Coast.

Accidents.

There were three fatal accidents during the year, each resulting in the death of one man, and one very serious accident, probably disabling one man for life, all from the same cause, viz. :—Falls from the roof. Several of the minor accidents were due to the same cause.

This points to the necessity of great care, both on the part of the managers and miners, in securing the roof as they proceed. It is difficult for inspectors to guard against this class of accident, for, under varying circumstances, it becomes a matter of judgment, when extra precautions should be taken, in timbering the mine.

There were accidents to other 19 men; 3 had each a leg broken; 2 were slightly burned by explosion of gas; and the injuries to the rest, were comparatively trivial, the men resuming work within a day or two.

The number of accidents has been: 1 for every 56 men employed, or 1 for every 20,906 tons produced; and the number terminating fatally has been 1 for every 427 men employed, or one for every 160,283 tons of coal raised.

Conclusion.

The gold and coal production of New Zealand have had a very material bearing on its advancement as a Colony, and as no country can become commercially great, that is destitute of mineral productions, it is of the first importance to develop those which the Colony possesses, by every rational and attainable means. One way is to invite the attention, of those possessing capital and skill in mining, to what is in the Colony, so that its resources may become developed by them, and occupation be found for an increasing population, in a greater variety of industries, than exists at present.

The approaching Colonial and Indian Exhibition in London will afford such an opportunity of drawing attention to the mineral resources of New Zealand as may not occur again within a generation. The Department will, therefore, for that reason, and in compliance with the invitation of the Commissioner to the Exhibition, Dr. Von Haast, collect mineral specimens representative of the Colony's resources, and as this is no mere Departmental concern, but is in the interests of all, circulars have been issued inviting the assistance and co-operation of public bodies, and those engaged in mining throughout the Colony. It is all the more necessary to use every exertion to secure a good representation, inasmuch, as New South Wales, and the other colonies, are already making elaborate preparations, to have their resources displayed to the best advantage.

J. McKerrow.

APPENDIX.

No. 1.

ANNUAL REPORT UPON INSPECTION ON COAL MINES, NORTH ISLAND DISTRICTS.

Mr. Inspector McLaren to the Under-Secretary for Mines.

Sir,— Inspector of Mines' Office, Thames, 15th June, 1885.

I have the honour to forward herewith coal statistics for districts of Kawakawa, and Waikato, for year ending 31st December, 1884, having just completed a visit to these districts, I bring my report, up to date. The number of working colleries are the same as the previous year, but the output of coal is greater being 103,856 tons in 1884, against 92,761 tons in 1883.

1. *Taupiri Colliery, Huntly.*—I visited on the 5th instant, and found it to be in good working order, both as regards the mine and machinery. It is now well opened up, and ready for a large output, over one thousand feet of narrow work having been driven during the year, ready for opening bords from. A number of main headings have been driven in a northerly direction to within 1½ chains of the swamp opposite Lake Hokanoe. In them all, the coal thins off, becomes broken, and gives every indication of running out altogether, these indications are similar to what was met in approaching towards the edges of the swamp to the westward. The ventilation throughout was very good, I pointed out, however, that some of the faces in what is known as upper workings could be greatly improved. Mr Collins still manages this mine, the output from which continues to increase, it being 35,470 tons in 1884.

2. *Waikato Mine, Kupakupa, near Huntly.*—Under the management of Mr Taylor this mine is being steadily opened out by driving headings in a westerly, and south-westerly direction. The former is now driven a distance of 12 chains from the entrance, and will be worked for 7¼ chains by a self-acting incline, the coal from that point (head of incline) up towards face lying tolerably level. The second heading is in 6 chains from the starting point. It is intended to continue this heading through to an outcrop in a gully, on western boundary, so as to give ventilation and alter its system by dividing the mine into two, and cut off entirely the old and disused workings from the present, each being separately ventilated. The coal won recently has improved in quality and does not appear to be so much affected by the weather. From appearances this improvement should continue, both in a southerly and westerly direction. The coal on the north side has not yet been proved, except by boreholes, which shew, the manager informs me, the seam thickens to 38 feet, and to a distance of about 35 chains. On the 1st June fire was discovered in an old waste, near the crop, on N.E. side of the mine, which, fortunately, was got under after several hours hard work. It occurred spontaneously, through a small fall from the roof which contains pyrites. The water appears to have got at this during the wet weather and caused the combustion—the cover overhead here is only a few yards in thickness. The mine is in a safe condition throughout, and entirely free from gas.

3. *Kamo Colliery, near Whangarei.*—An accident in this mine occurred, in October last, to the Manager (Mr. Kerr) through gas firing in one of the headings that were being driven from the new shaft, towards the old workings, to secure ventilation. It appears indications of gas were reported to Mr. Kerr as no trace of gas had ever previously been observed in the mine; the company had no safety lamps. Mr. Kerr hunted among the old home miners, and at last found one—a wretched, small, old thing, without even a pricker to regulate the flame, he, however, thought it would be better than none, but it did not prove so. Before allowing the men to go down the shaft in the morning he went down himself. On going through an opening—a short distance from where the gas was stated to be—it suddenly caught, and instantly (as Mr. Kerr described it) the whole of the heading appeared to become one sheet of flame. He thinks he came through about 70 feet of it. His own pluck, and coolness, saved him, though he was very much burned, especially about the face and hands. As soon as possible, after receiving the information, I went to Kamo. As there was about 300 feet yet to drive before communication could be made with the old workings, I saw (with the danger of gas) it would never do to allow that additional distance being driven without a larger supply of air. I therefore instructed large fans to be erected, and air driven into the face. This was done as quickly as possible with good results. On the 20th December, Mr. Kerr wrote me, saying, "I feel sure you will be glad to hear that the fans have acted well, and enabled me to connect with the old workings to-day. This has made a marked difference and improvement in the ventilation, and, as you said it would, the current is now travelling quite the reverse way. I will not require the fans any longer." The total length of the heading driven from shaft to old workings is 699 feet. On my last visit (6th instant) I found the mine under the charge of a new manager, Mr. T. L. Bates. There is still gas shewing at the same place, but the air current is strong enough to dissipate it. A self-acting incline has been arranged to facilitate the conveyance of coal to workings. The workings were all in good order and the ventilation good. The present workings are only on the top seam: the shaft is now being sunk to the lower seam, which is over 40 feet deeper, 34 feet of this has now been sunk. One of Regg's patent screens is being fitted to the poppet legs, and the formation of branch line to same from railway is completed.

4. *Whau Whau Mine, near Whangarei.*—There is a slight increase in the output for 1884, being 8000 tons, against 6743 tons in 1883. On my last visit (8th instant) I found work had ceased since the beginning of the year, so far as winning coal. This was on account of the old tramway—3 miles long—becoming rotten, and, as a branch was being constructed from the railway, it was useless repairing it.

5. *Kawakawa Colliery.*—Work is progressing satisfactorily at this mine. The principal present output is from new ground lying southerly of old workings. This has been connected with No. 2 level; the

seam is thin at this place, averaging from 3 to 6 feet; the roof changeable in its nature, requiring constant watching and attention. Considering the large number of men employed, the great extent, and difficulties necessary to be overcome in this mine, its complete immunity from accident, speaks in the highest terms of the careful management of Mr. T. P. Moody, and his underviewer, Mr. Swinbourne. At the date of my last visit, 11th and 12th instants, the works and machinery were in good order. Ventilation was also good, except in a few faces to which the air was being brought. With the exception of the accident mentioned in the Kamo mine, there has been none in any of the others. There are several places at which new mines will shortly be started in the Waikato District. One Company has sunk a shaft 1200 to 1300 feet N.E. from Foot's old mine, at the head of the Maramarau river, and have sunk through 63 feet of coal. It is only intended, however, to work 47 feet, as there is a band at that depth, and the coal below this band is not considered so good as that above. The machinery erected at present is only temporary. A canal is being cut through the swamp, 53 chains in length from the Maramarau river, which will enable the barges being brought right up to the mine. The late wet weather has caused a rise of the swamp water level, this work is, therefore, for the present, suspended. All the operations are being conducted under the plans and superintendence of Messrs. Stewart and Hunter, civil engineers, Auckland. On portion of the Education Reserve, at Huntly, lately leased by the Commissioner of Crown Lands, a seam 15 to 16 feet thick was struck when I was there on the 4th instant. At Ohinemuri the coal has been followed in on the level for a considerable distance, and, according to my latest information, it is improving. Another company purpose laying about 15 miles of a tramway from the Miranda side, to join the Auckland railway, but I have no information as to the nature or thickness of the seam or seams intended to be worked.

I have, &c.,
JAMES M. MCLAREN,
Inspector of Mines.

To the Under-Secretary for Mines, Wellington.

No. 2.

INTERIM REPORT UPON INSPECTION OF COAL MINES, MIDDLE ISLAND DISTRICTS.

Mr. Inspector BINNS, F.G.S., to the UNDER-SECRETARY for MINES.

SIR,— Offices of Inspector of Mines, Dunedin, 2nd June, 1885.

I have the honour to make the following Report, in anticipation of my usual Report on the control and inspection of mines, which will be sent up in a few days.

Number of Coal Mines during 1884.—During the year 1884, 16 mines were struck off the list, and 11 were added,—leaving a decrease of 5, and a total of 89 remaining, This diminution in number is a healthy sign, if accompanied by an increase in production as the average annual output must obviously be larger. These small one-man mines are seldom of much value to anybody. The owner is generally too short of capital to work very safely; the return to him is generally very small, and only in some rare instances are they of much value. Among the mines struck off, only the Brockley, in Canterbury, was of any importance, and that will, no doubt, re-commence operations at no very distant date. The new undertakings do not merit much attention.

Number of men employed.—During 1884 there was very little change in the number of men, which was 1017, above and below. The output, per man, however, is largely augmented, being 370·5 tons per man, as against 311 during the previous year.

Output of Coal.—The output for 1884 was 376,828 tons; an increase of 48,826 tons over 1883. The principle advance in quantity being—Banbury Mine, 39,190; Brunner Mine, 10,235; Walton Park Colliery, 8416; Fernhill Colliery, 8236; Koranui Mine, 2689; and Green Island, 2831. Those mines which shew a falling off, are—Shag Point, 20,238; Homebush, 6741; Canterbury, 3708; and Kaitangata, 2958.

Death-rate in South Island.—During 1884, there were 3 fatal accidents in this Island; the death-rate, therefore, is—125, 609 tons raised, and 339 men employed per life lost; or 2·95 lives lost for every 1000 men, which is by no means a good result.

General Remarks.—The principal subjects of general interest since my last Report are as follow:—The vigorous commencement of harbour works at the coal ports on the West Coast, by which the mines in that district will be able, not only to increase their output very considerably, but also to undertake a steady trade, which is of the greatest importance. I have frequently pointed out how an intermittent trade damages coal mines, partly by causing too many hands to be employed, who, on account of inconstant employment, require higher wages; but, principally, by creating rushes for coal which never fail to leave their damaging marks on the condition of the workings. Had it not been for the recent unfortunate disagreement at the Westport Coal Company's Banbury Mine we might already have looked for a very large increase on the West Coast. As it is, however, the Koranui Coal Company have got into regular work (producing, Capt. Williams tells me, 150 tons per day) and the Brunner Mine, having been proved beyond a large fault, which has for years kept the works in check, will assist to make up the deficit. On this Coast, the Shag Point Company have recommenced work with fair prospects, and the Kaitangata Company have opened up a new coal area which will, no doubt, yield a large output. The Canterbury mines have done badly, but a short extension of railway communication in that province would open up seams of coal of such quality as to command a market. In Southland, a good deal of attention has been called to a deposit of very excellent coal on the slopes of Mount Hamilton. The existence of this has been known for many years, but the latest discovery was much lower down, and the seam much thicker. It is, however, so heavily faulted that no commercial value could be placed upon what is at present known.

I have, &c.,
GEORGE J. BINNS,
Inspector of Mines.

The Under-Secretary for Mines, Wellington.

No. 3.

EXTRACT FROM THE ANNUAL REPORT ON INSPECTION OF COAL MINES, MIDDLE ISLAND DISTRICTS.

Mr. Inspector BINNS, F.G.S., to the UNDER-SECRETARY for MINES.

SIR,— Dunedin, 9th June, 1885.

I have the honour, in accordance with section 40 of "The Regulation of Mines Act, 1874," to make the following Report, for the information of His Excellency the Governor :—

During the 12 months that have elapsed since my last Report, I have been unable to devote so much time as usual to the actual inspection of coal mines for various reasons, among which, may be mentioned, 3 weeks' attendance in Wellington during the hearing of Messrs. Rich and Williams' Petition; 6 weeks' illness in the summer, and about five occupied in examining some coal outcrops on Mount Hamilton, and in accompanying the Hon. the Minister on two tours—one to the Wilberforce Quartz Reefs, and the other to the Auckland District. With these exceptions, the whole of my time has been occupied in carrying out the duties incident to my position as inspector under the above Act, and under "The Westland and Nelson Coal Fields Administration Act, 1877." Attached to the Report are tables of statistics and accidents; the latter, unfortunately, very numerous. I have to thank those managers and owners who have kindly furnished particulars of outputs, &c. The following is a *résumé* of the work done in connection with each mine; or, at least, so much as is necessary for a report of this nature.

PELORUS DISTRICT.

6. *Picton Coal Mine.*—Examined the 10th October, 1884. The law was neglected in the following respects, viz :—(1) Shaft unfenced; (2) no plan; (3) no special rules; and, (4) no report kept. On the other hand attention had been paid to (1) cage cover; (2) good ladders and platforms; (3) powder regulations; (4) hours of work for engineman; and, (5) signals in shaft. This mine is still working, but doing very little.

WEST WANGANUI DISTRICT.

7. *Collingwood Coal Mine, Collingwood.*—Examined the 16th October, 1884, at which date 16 men were employed, but, owing to the thin seams and various difficulties, the output per man is not large. Most of the coal was raised from No. 1 seam, and lowered 135 feet by a very efficient self-acting aërial tramway. Another useful piece of machinery is a self-acting water-balance tramway for taking slack to the shoot. The mine was pretty well aired, and a daily report kept, but Mr. Rees (the general manager) had omitted to make a weekly report on the machinery. General and special rules were distributed. Altogether the Act was well kept, and the mine apparently carefully managed.

WESTPORT DISTRICT.

8. *Koranui Coal Mine, Westport.*—Not visited since my last report. Has been worked only during a portion of the year. A fatal accident, which occurred here on the 14th July, is mentioned in its proper place. This property is now in the hands of Capt. W. R. Williams, of Wellington, who informs me that 150 tons a day is the present output.

9. *Banbury Coal Mine, Westport.*—Visited the 24th October, 1884, at which date the mine was in pretty good order, though the new workings, in the thick coal, were not very well ventilated. Mr. Elliott was making a new travelling road to obviate the necessity of men walking alongside the moving chain. An unfortunate strike having occurred here, the output for 1885 will doubtless greatly suffer; that for last year showed an increase of nearly 40,000 tons on 1883, and Mr. Dickson informs me that during the year 1884, owing to the bad state of the bar at the mouth of the river, the Company's three steamers short-carried 26,191 tons, being a difference in net earnings of over £13,000. Owing to this cause, and the above-mentioned strike, the production was seriously restricted. Now that the harbour works are in hand, and a good port in prospect, no doubt, the output will be correspondingly large. The custom of riding on the surface incline has now, I hope, completely died out, as a good track exists from the foot of the hill to the summit. As will be seen from the accident list the casualties at this mine have been very numerous; some of them, however, were of a very slight nature.

None of the Reefton mines have been visited since my last Report; the whole of them (7 mines) employ only nine men below ground.

17. *Brunner Colliery, Greymouth.*—The great event of the year, as regards this mine, has been the discovery of coal beyond the large fault, which has retarded the *exploitation* of this mine so long. This was done by means of the level drive commenced many years ago at the suggestion of Dr. Hector, F.R.S. The dislocation, it will be remembered, died out at the extreme rise, and appears to increase to the dip. Now that the position of the coal is known, somewhat costly works will be required to reach this portion of the field. On the 28th October I examined the mine and found no gas, though a small district in the dip was being worked with lamps, on account of the occasional appearance of fire-damp. The whole of the coal from the rise-working was at this time brought down by a self-acting endless rope, 830 yards long, with one curve in its course of about 16 degrees from the straight line. The accidents in this mine during 1884 were not numerous, but included one man killed and one slightly burned. During 1885 one man has been killed by a fall of coal. Under the head of "Prosecutions" will be found an account of action taken by the manager of this mine against a workman who entered his place, before it had been examined.

18. *Coal Pit Heath Colliery, Greymouth.*—This mine was last visited on the 30th October, 1884, on which occasion there was a little gas in some of the places which were worked with locked safety lamps. The report was 3 days late. Since my last report working has been carried on in the dip, and the ventilation of the mine, having become somewhat difficult, Mr. Alexander is now fitting up a fan. The result of working pillars in the Brunner Colliery has already been referred to in the report on that mine. With every feeling of sympathy for the Coal Pit Heath Proprietors, I cannot see any way out of the difficulty, unless some arrangement could be arrived at by which the two companies could work from one shaft, thus enabling the lower mine pillars to be worked, and saving the expence of hauling and pumping machinery in the Brunner dip. It is now, however, probably too late for any combination of this nature.

MALVERN DISTRICT, SOUTH MALVERN.

20. *Springfield Colliery, Springfield.*—The mine has been generally in good order. Mr. A. Lindop has been for some time acting as general manager, during Captain Parker's absence from the Colony. On the 31st March, 1885, I found all in very good order. The workings are now confined to the dip, and as no second outlet has yet been provided, only ten men can be employed in the mine at one time.

21. *Bowick's Wallsend Colliery, Springfield.*—Examined 3rd November, 1884. Only 2 men were employed. The Act was not fully observed at this mine, which is now closed.

23. *Homebush Colliery, South Malvern.*—The output of this Colliery has fallen off very considerably—nearly 40 per cent. The continuation of the seam on the level has not been proved, work having been confined to the rise. Mr. Brown, the manager, keeps the mine in very good order, and observes the regulations *re* reports, &c.

24. *Hartley Colliery, South Malvern.*—Has not been continually worked. On the 24th March last, the mine was being worked by a new drive a little to the north of Saunders' old workings. Two seams are being worked—one a brown coal, 11 feet thick, and the other, an altered coal, 3 feet 6 inches thick with a 4-inch band of dirt. At the foot of the incline, a down-throw fault had been met with. The Act is observed, except in the matter of special rules, of which a draft copy was sent to the former manager; these appear to have been lost, and none have been sent up. The workings are well aired, and very limited in extent.

WHITECLIFFS COAL MINE.

25. Since the last Report, special rules for this mine have been gazetted. On the 28th March last, when I visited the mine, no one was about, so I went through alone;—the air and timber seemed good; special rules were up, but no general. On subsequent inquiry, Mr. Wilson, the owner, informed me that only 2 men were employed; and that Mr. W. Smart was manager, which statement, however, was not borne out by Mr. Smart himself; so, it seems, there *is* no manager. I have again written to the owner, but received no answer. A very unsatisfactory feature of the present law is, that it is not obligatory on any mine owner to definately appoint a manager.

SMITH'S COAL MINE.

26. *South Malvern.*—A new mine on the same line of outcrop as the last. Only one man works in the drive, who, as he has no capital locked up, may do well.

27. *Snowdon Colliery, Rakaia Gorge.*—This is a private mine in the gorge of the Rakaia river, and, although not previously included in the list, has been worked for some years. The features of the district have been frequently described in the geological reports. There are four outcrops, and probably two seams; the seam at present worked is a superior brown coal. The appliances are very primitive, and if a larger output were desired it would be advisable to erect a water-balance to bring the coal from the mouth of the adit to the top of the terrace—about 50 feet vertical.

28. *Acheron Coal Mine, Acheron River.*—On account of the valuable quality of this coal, which is anthracite, this deposit has attracted a good deal of attention. The seam is 5 feet 3 inches in thickness, and dips at 18 degrees; below this seam, and separated at the rise side by only 9 inches, is another seam 2 feet 8 inches in thickness. If these could be worked together, they would be easily and cheaply got The coal is altered by a dolerite floe, which is plainly visible above the creek, and the only question is, as to what extent of country has been subjected to this action. If large, the coal field would be exceedingly valuable; if small, its value would be correspondingly decreased. Boring on the flat would give some valuable information.

OTAGO DISTRICT.

31. *Wharekuri Coal Mine, Wharekuri.*—On the 9th September, 1884, the mine was in a better condition than ordinary, but still the air was close. The report was kept and the rules up. Mr. Cairns is starting a new mine about 2 miles to the east, on the same line of country, but no good coal had been met with at the time of my last visit.

32. *Kurow Coal Mine, Kurow.*—On the 9th September, 1884, the owner, manager, and workman at this mine was away; the workings did not look very well kept.

33. *Prince Alfred (No. 1) Coal Mine, Papakaio.*—On the 8th July, 1884, the working places were badly aired, though a good current was flowing in the mine. On the 4th March, 1885, the old mine had been abandoned, and a new working commenced, in which the air was good. Report kept. Special rules only up. Mr. Willetts has taken over this mine as well as the No. 2.

34. *Prince Alfred (No. 2) Coal Mine, Papakaio.*—This old mine still keeps turning out coal, but the seam varies much in quality, and, consequently, the workings are very irregular. The Act is kept except as regards a plan, which I do not require.

35. *St. Andrew's Coal Mine, Papakaio.*—On July 8th, 1884, the manager was away, so I did not see the report. Plan was surveyed but not plotted. Since that time I have seen both. The mine was in very good order.

36. *Ngapara Colliery, Ngapara.*—This has been inspected twice since last Report. Everything is always in good order, and the Act kept.

37. *Shag Point Colliery, Palmerston.*—This mine was standing entirely for nearly seven months. In September, Mr. Williams opened out an old drive of Rowley's and put out a few tons of coal. Nothing of importance was proved by the diamond drill. In January last, Mr Rich wrote explaining a project he had for opening the mine from the old main shaft—this was, to draw the water out in tanks until the dams were reached, and then proceed to line the shaft with concrete tubbing, to well below the old lowest-workings, then to sink further and drive out on the level, seawards, to catch the seam. On the 10th March, I visited the mine to discuss a system of work proposed by Mr. Rich, who is now sole proprietor. When the dams were reached they were found to be holding moderately well, but the pipes in the east dam had broken off, and thus a free passage on that side existed. The water was coming in very slowly and could easily be kept down by the tanks. The proposed system was to keep the water down below

the floor of the dams; to start in about 10 feet above the old levels, and drive level to the west until the seam was footed; then make a communication with the old ventilating shaft, and work the solid coal and pillars in that district; also to continue the level, and tap the lower seam in the same way. There appeared to be nothing objectionable in this plan of works, provided that the water could be kept down, and the flow appeared to be very slight—probably the channel had, to some extent, silted up. There are many cases on record of the sea having established a means of ingress to a mine, which subsequently filled up; but those have been usually where there was a stratum of mud underlying the water. In this case, the shore is merely rock, with sand some distance out; however, the influx seems to be very small at present. I took some water from the pipe through which the steam flows, and sent it to the Colonial Laboratory for analysis; also some from a feeder which, Mr. Williams says, comes in at 40 feet from the surface. That would be, supposing the distance given to be exact—3·09 feet above low water-mark, and about the same distance below high water-mark. The result of these analyses was as follows: the water coming through the dam was returned as common sea water diluted with its bulk of ordinary spring water, but its proportion of sulphates, in regard to its salts, raised—the sulphuric acid being undoubtedly derived from the coal beds themselves. The other sample, from what was supposed to be a mineral spring, was returned as sea water with about 3-fifths of its volume of fresh water. Now, supposing this 40 feet to be a little over 40, there is no reason to doubt the fact of this small feeder being a natural influx from the sea, diluted *en route* by fresh water. The shaft is close to the shore, and it will be remembered, how, at Whitburn Colliery, near Sunderland, feeders of salt water were tapped, and pumping stopped only when 12,000 gallons per minute was being raised; that was, however, in the Magnesian limestone, which is very open in texture.

57. *Fernhill Colliery, Green Island.*—There is very little to report on this mine, which has usually been in good order. At the end of last year a spontaneous fire was threatened, but the danger was, happily, averted. The stoppings were not at first made quite tight, and, occasionally, choke-damp came out in great quantities, to remove which, Mr. Shaw has added to his chimney above the air shaft.

58. *Green Island Colliery, Green Island,* has been frequently inspected. I have had occasion to find fault with several details of management, but nothing of importance. A slant drive has been made, and the old engine put down for hauling. On the 18th December, a shaft was required for air.

59. *Saddle Hill Colliery (Christies'), Saddle Hill.*—The general condition of this pit is always good, and the Act kept. On the 26th November, 1884, the main spindle, attaching the horse to the whim, gave way, and the whim revolved with great rapidity; finally the spindle at the foot jumped out of the cup—the broken spindle was quite new. Nobody was hurt.

60. *Saddle Hill Colliery (Harris'), Saddle Hill.*—This is a small colliery which was originally started in connection with the Saddle Hill Quartz Mining Company, and has since been taken up by a new party. A tramway 37 chains has been made to the district road, and the trade is limited to landsale. No plan exists, but the workings are pegged out on the surface.

61. *Glenochiel Colliery, Green Island.*—This is a small mine, employing about 2 men, and turning out about two tons a day. The workings are safe and the shaft also, though the Regulation of Mines Act is not very carefully observed.

62. *Walton Park Colliery, Green Island.*—On the 3rd July, 1884, boys were not all supplied with rules, and the report was three days late. On all occasions the mine has been carefully worked, and the air good.

63. *Abbotsroyd Colliery, Green Island,* has been visited several times. A communication was made with Proudfoot's old Otago Colliery. At the end of the year an engine for pumping and hauling was erected, which required fencing.

65. *Bruce Coal Mine, Milton,* has been, whenever visited, in excellent order.

66. *Real Mackay Colliery, Milton.*—Last year it was reported that the pillars were too small, and now the whole of the old workings have fallen in, and will probably spontaneously ignite.

67 *Fortification Coal Mine, Milton,*—This is a new mine in which the Act was introduced in May, 1884. In December, I found the rules exhibited and distributed; but the report was very much neglected. Otherwise the mine looked well and safe.

71. *Benhar Coal Mine, Balclutha.*—In spite of repeated warning, the owner of this mine continued to take too much coal out, and the inevitable result was a creep, which came on in March last, and closed the mine. At my last visit, on the 27th April, the works were being re-opened. The Act has been pretty well kept here, and the air generally moderately good.

72 and 73. *Kaitangata Railway and Coal Company's Mines, Kaitangata.*—These have received a good deal of attention during the year, having been visited no less than 16 times since my last Report, and may conveniently be reported on together. The burning flue, which was mentioned last year, was shut off with some difficulty about the end of June, 1884;—that is, nearly six weeks after its commencement; but, very shortly after this the south side of the dip commenced to weight very heavily. The difficulty of obtaining coal from pillars in such a thick seam, lying at an angle of 33 degrees, was referred to in last year's Report, and this, unfortunately, was solved by a creep which pervaded the whole district. The work of removing loose coal, only, was proceeded with by day-work, under most minute supervision; at the same time the conditions of working were anything but conducive to safety; and after I had repeatedly visited the mine Mr. Shore agreed to close that side on the 25th August. Subsequently, the creep was stopped by the pillars left for the protection of the engine-plane, after having spread over about nine acres, and threatened both the hauling engine and the engine plane itself. Meanwhile, the north side was shut off, on account of the fire; and, on the 27th August an attempt was made to effect an entrance, which was, however, found impracticable on account of the heat. Water was then turned on, and the whole of the loose slack in the flue sluiced down to the bottom level, whence 700 boxes full were taken away. As the old winding engine at the shaft was not in good condition, Mr. Shore effected, during the Christmas holidays, the necessary repairs. On the 19th January, 1885, the hemp rope at this shaft, having become worn at the point of attachment to the drum, broke, and fell down the shaft. As the imperfections had been noticed, and men forbidden to ride for some days previously,

no one was hurt; since then new round steel ropes have been put on. The new works carried out by this Company for winning a somewhat difficult field, are very substantial and well constructed. The stone drive, which was mentioned last year, proved a very valuable seam of coal at about 1100 feet. The large hauling and compressing engine is now used for the latter purpose only, a small double-cylinder engine having been geared to the large drum for the purpose of raising coal. The compressed air is taken down the shaft and used for hauling and pumping purposes, in a new slant drive which the manager has laid out, to explore the field to the dip. This is the first time in the Colony that compressed air has been used for those purposes, and its utility as a motive power, under somewhat trying circumstances, is proved by the fact that when, about the 21st February, a large feeder of water broke into the stone drive and flooded the pump, it continued to work for seven days, although covered with water. Opinions may differ as to the advisability of putting down a compressed air plant where hydraulic power could be used; but there can be no difference of opinion as to the energy and courage displayed in carrying out large works of this description. On the 8th April, 1885, an unfortunate fatal accident occurred here, which is described later on. The ventilation has usually been good, the steam pipes in the long drive forming a powerful ventilating current; while the intake passes through the deep shaft. A main shaft, for ventilating purposes, is now being sunk to the rise; this is 6 feet 3 inches in diameter, and, at present, 150 feet in depth; it is expected that in another 100 feet coal will be reached. The above-mentioned feeder of water gradually decreased and eventually gave way to a powerful blower of explosive gas, which filled all the workings and prevented the men from entering. The supply continued with unabated vigour for some time, but has now almost entirely died away; and on the 6th instant, at the mine, Mr Shore informed me that naked lights were again used in the district. I may mention that this company has imported a quantity of brattice cloth, a material which, for years, I have been endeavouring to persuade mine-owners to use.

75. *Lesmahagow Coal Mine, Wangaloa,* (formerly Wangaloa Coal Mine.)—When examined, this mine was in good order, and properly timbered.

76. *Wangaloa Coal Mine, Wangaloa.*—The remarks on No. 70 are equally applicable to this.

85. *Pukerau Coal Mine, Pukerau.*—This mine is still worked by an adit, and when visited, on the 16th December, 1884, was in moderately good order; the only point requiring attention was the distribution of rules.

Southland District.

90. *Nightcaps Colliery, Southland.*—Visited the 17th February, 1885. There are now actually three separate mines worked by this Company; viz: the old dip drive in the thin coal; the openwork area, where an immense quantity of thick coal has been stripped by a very complete system of hydraulic sluicing; and a drive, in the thick seam, situated between the two Pillars are being worked in the thin seam by taking off five yards at a time, going in-bye; it seemed to me that by cutting down the end of the tub a little, the whole pillar, which is only ten yards, might, with advantage, be worked at one operation, in coming back. Reports were kept by the deputy and engine-man, but I thought the manager should also keep a weekly report. The hauling engine required fencing. Special rules were not exhibited. On the 23rd February I wrote to Mr Lloyd about these matters.

94. *Orepuki Coal and Shale Mine, Orepuki.*—The railway has recently been opened to this mine, but I have been unable to visit the locality.

Prospecting.

Prospecting has been carried on in several localities, among which may be mentioned the following:—At Collingwood, it is proposed to open up a new field close to the present Colliery. A better harbour here would enable this first-class coal to be more generally used. In the Greymouth District a new Company is projected. At Kaitangata, the new mine mentioned last year, is not yet at work. The lease adjoins the Kaitangata Railway and Coal Company's field, and there are ample evidences in the numerous outcrops, of an area which not only contains, apparently, a large quantity of coal, but which would be very easily worked. A railway 7½ miles in length would reach the main line at Lovel's Flat. At Mount Hamilton, in Southland, a further discovery was made in the coal measures, which have been known for so many years to contain bituminous coal. This was an outcrop only about 1200 feet above the flat, and measuring 16 feet of coal. This may sound very good, but it is right to mention that the seam is very much faulted, and crushed—so much so, that within a few feet it pinches out to 6 inches and the whole district is, so far as my cursory examination went, fearfully disturbed. The analysis is as follows:—

Fixed carbon	45·99
Hydro-carbon	43·82
Water	4·01
Ash	6·18
Total	100·00
Evaporative power	5·9

Dr. Hector remarks, "The sample No. 2 from the thick outcrop is a very valuable coal for, though somewhat inferior in heating power, to much of the Buller and Grey coal, it has this advantage over them; viz., the coke does not swell, but remains close, firm, and strongly coherent."

Accidents.

During the year 1884, the accidents in the coal mines, in this Island, increased altogether out of proportion to the output. There were 22 accidents attributable to coal mining, of which 3 terminated fatally, and 2 (both, however, very slight) were due to explosions of gas. The following necessary particulars are given, (the numbers refer to the list given later)—

1. This was very slight. Ansell walked home, and was soon again at work.

2. This accident, on the contrary. was very serious, Brookes being quite recently unable to work; in fact, he appears to be permanently disabled. No blame was attributable to the management.

3. The particulars of this explosion, and the consequent prosecution, were given last year.

8. This was also fully reported on last year.

9. R. Lane, a putter at Hartley Colliery, was injured, on the 14th May, 1884, by a set of tubs. It appears that the set got fast on the incline, and that, in order better to release them, Lane took off the trailing pin. When, by some accident, the rope was jerked off, of course the set ran back. The mine was closed before this account could be verified.

10 and 12. Two men had each a leg broken at Walton Park Colliery, where accidents have been hitherto almost unknown.

11. The accident to Thomas Henderson, in the Banbury mine, was mentioned last year, and there is nothing to add now. No bones were broken, and death appears to have been due solely to internal injuries. Henderson, who was an experienced miner, was engaged in wedging down coal when a thin, but somewhat large piece of "false roof," which exists in some portions of this mine, fell, and inflicted injuries which proved fatal.

13. On the 23rd July, 1884, Andrew Blackie was very slightly burned by gas in the Brunner Mine dip workings; he was off work only one day, but an explosion of gas, however slight, is, in my opinion, a serious matter, more especially so, under circumstances of the following nature. Ord, the underviewer, without any authority, deputed the deputy (Tennant) to examine his district. Either Tennant made a very poor examination, or else the gas accumulated very rapidly; at any rate, Blackie was burned very slightly. Ord's culpability would have been the same had there been no explosion; the fact of an accident merely bringing it to light. He has been at the Brunner mine for some time, where he was always considered a careful man. Although Mr. Bishop, at the time of the accident, decided to prosecute, he subsequently seemed inclined to allow it to pass by. I, therefore, had to press the matter, and, on the 10th November, Ord pleaded guilty to a charge of violating Special Rule 1, and was fined 5s. and costs.

14. At the Brunner mine, on the 8th August, 1884, John Willis was killed by a fall of stone. From the evidence, it appeared that the deceased and his mate were working at one of the faces in the dip, where an intercalated band of stone occurs in the seam. The lower division was being worked, and Willis was engaged in getting some slightly over-hanging coal, which fell upon him, bringing down with it a piece of the band. This killed him instantaneously. The witnesses were unanimous in the opinion that there was no scarcity of timber, or negligence on the part of the management.

18. On the 5th September, 1884, Patrick Woods was injured in the Prince Alfred Coal Mine (No. 2) by a fall of coal, no bones were broken, and the man appeared more frightened than hurt. This accident was not reported.

Classification of Accidents During 1884.

Below:			
Falls of roof and sides	15		
Explosives	1		
Trucks	3		
Explosions of gas	2		
		——	21
Above:			
Inclines	1		
		——	1
			22

In addition to the ordinary mining accidents, there are generally some casualities about mines, with reference to which I follow the example of the British inspectors of mines, by noticing them, though they are not included in the list. The report on the fatal accident on the Westport Colliery incline has already been published. On the 14th July, 1884, John McCormack had been discharged from his work at the Koranui Mine, and was descending the incline, for the purpose of leaving the premises, when he was caught by a truck and killed. There is ample room on this road, but the deceased was walking between the rails instead of outside.

Accidents in 1885.

Already, during the present year, there have been 2 fatal accidents in the Middle Island. The circumstances of the first are as follows:—

On Thursday, the 9th April, 1885, at about 4.30 a.m., George Carr was engaged attending to the pump at the foot of the new engine-plane in the Kaitangata Mine. Some distance above him two men, named Mackie and Blaney, were engaged in ballasting the incline; the method adopted, was, to fill a truck, and, having spragged it, to lower it to the necessary point, and there tip out the gravel. Of course, had anybody been engaged below, on the incline, this method would have been inadmissable; but there was no reason why Carr should have been in danger from a runaway tub. Unfortunately, however, at the hour mentioned, he was in the way, and when the loaded tub, having overpowered Mackie, and caused Blaney to slip, rushed to the bottom, Carr received serious injuries which, at 8.40 the same morning, proved fatal. From the evidence it may be gathered that after the accident Carr was conscious, and conversed, but could give no account of his position at the time the tub struck him; also that very few hours before the occurrence Mr. Shore charged the deceased with having on the previous night fallen asleep at his work, which he denied. I was at Mount Hamilton, in Southland, when the unfortunate man died, and upon arriving at Kaitangata, within about 32 hours, was astonished to find the inquest over, and the verdict recorded as "accidental death" with the following rider attached. "The jury are of opinion that the mode adopted by the Kaitangata Coal Company in lowering boxes on the incline

where the accident occurred, by hand labour, is deserving of censure." On making enquiry, I elicited the following information: On the Sunday previous to his death, Carr informed Robert Davidson, engine-man, that it was his intention to go down and have a good sleep, and in the ensuing conversation he stated that he was in the habit of sleeping at the pump. Coupled with Mr. Shore's suspicions and the fact that, not only did he not get out of the way of the truck, but was unable to give any account of the way it struck him, I came to the conclusion that the unfortunate young man was sleeping at the time.

On the 28th May last, a miner named Sheard was killed in the Brunner Mine by a fall of coal. At the time I was on my way from Auckland, and it was quite impossible for me to go the West Coast. It will be remembered that on the recommendation of a jury at Greymouth, Mr. Gow, of Kumara, was appointed to act at inquests when it was impossible for me to attend.

Prosecutions.

It has not been necessary, during the past year, for me to institute any proceedings under the Act; but several cases have occurred which will doubtless have a better effect than if the initiative had been taken by the Department.

On the 2nd September, 1884, the police, acting at the request of the Westport Coal Company, prosecuted three miners for riding up the incline; the penalty in each case was 10s. and 30s. costs. There is now an excellent track, and Mr. Dickson informs me that he has forbidden the practice of walking up the incline.

On the 23rd Sept, 1884, William Heffernan, who was prosecuted by the Brunner Coal Company for having, on the 8th of that month, passed the appointed station in the mine before his working place had been examined by the underviewer, pleaded guilty, and was fined 5s. and costs.

On the 10th November, 1884, John Ord, underviewer of the Brunner Mine, was prosecuted, as described in the accident report.

Number of Men Employed.

During 1884, there was very little change in the number of men, which was 1017, above and below. The output per man, however, is largely augmented, being 370·5 tons per man, as against 311 the previous year.

Output of Coal.

The output for 1884 was 376,828 tons—an increase of 48,826 tons over 1883; the principal advances in quantity being:—Banbury Mine, 39,190 tons; Brunner Mine, 10,235 tons; Walton Park Colliery, 8,416 tons, Fernhill Colliery, 8,236 tons; Green Island Colliery, 2,831 tons; and Koranui Mine, 2,689 tons. Those mines which show a falling off, are—Shag Point Colliery, 20,238 tons; Homebush Colliery, 6,741 tons; Canterbury Colliery, 3,708 tons; and the Kaitangata Mines, 2,958 tons.

Death-rate in the South Island.

During 1884, there were 3 fatal accidents in this Island; the death-rate, therefore, is 125,609 tons raised, and 339 men employed per life lost; or 2·95 lives lost for every 1000 men, which is by no means a favourable result.

Methods of Working.

Worked by Shaft:			
Steam-power used	8		
Horse-power used	5		
		13	
Worked by Adit:			
Horse-power used	8		
Hand-power used	32		
Engine planes	7		
No information	3		
		50	
Open work:			
Open work	26		
		26	
		89	

I have, &c.,
George J. Binns,
Inspector of Mines.

The Under-Secretary for Mines, Wellington.

Statistics of Workings in Coal Mines, 1884.

Name of Mine and Locality.	Name of Manager.	Number of Years worked.	Quality of Coal.	No. of Seams worked.	Thickness of Seams.	Thickness worked.	Dip of Seam.	System of Underground Working.	Number of Shafts.	Dimensions of Shafts.		Output delivered by	Output for 1884.			Approximate Total Output to 31st December, 1884.	Number of Men ordinarily employed.			Power used for drawing Mineral.	Pumps.			Means of Ventilation.	Date of Inspector's Last Visit.
										Size of Shaft or Tunnel.	Depth of Shaft or Length of Tunnel.		Coal.	Slack.	Total.		Above.	Below.	Total.		Stroke.	Size of Barrel.	Height of Column.		
KAWAKAWA DISTRICT.													Tons.	Tons.	Tons.	Tons.									
1. Kawakawa, Bay of Islands	Moody, T. P. ..	20	semi-bitum.	1	2′ 6″ to 15′	varies	varies	bord and pillar	4	7′ x 10′	..	engine-incline	30,274	..	30,274	547,455	85	24	109	engine	6′	12″	247′	furnace	11/6/85
2. Kamo, near Whangarei..	Bates, T. L. ..	8	brown	2	4′ to 12′	″	″	″	3	6′ x 15′	..	shaft	19,395	..	19,395	83,444	50	14	64	″	3′ to 7′	10″	221′	natural	6/6/85
3. Whauwhau, near Whangarei	Love, Alexander	20	″	1	5′ to 10′	5′ to 10′	″	″	1	..	..	tunnel	8,000	..	8,000	39,091	10	5	15	horse	..	..	..	″	6/6/85
WAIKATO DISTRICT.																									
4. Waikato, Kupakupa, near Huntly	Taylor, W. ..	8	″	1	6′ to 18′	6′ to 18′	″	″	1	..	..	″	10,764	..	10,764	60,847	16	5	21	″	..	..	..	″	4/6/85
5. Taupiri, Huntly ..	Collins, William	9	″	1	6′ to 45′	6′ to 35′	″	″	1	5′ 3″ diam.	..	engine-incline	35,470	..	35,470	167,687	44	12	56	engine	tangye	..	..	″	5/6/85
PELORUS DISTRICT.																									
6. Picton, Picton	Coombe, F. ..	4	bitum.	2	12′ x 5′	all	90°	stoping out	2	10′ x 4′ 6′ x 4′	140′ 60′	shaft	445	30	475	658	2	4	6	engine, 14 h.p.	3′	6¼″	140′	″	10/10/84
WEST WANGANUI DISTRICT.																									
7. Wallsend, Collingwood ..	Rees, J.R., M.I.C.E.	16	″	1	..	″	W. 12½°	long wall	..	..	..	adit	3,120	580	3,700	14,832	5	12	17	hand	..	..	..	..	15/10/84
WESTPORT DISTRICT.																									
8. Koranui, Westport ..	Jamison ..	4	″	1	7′ to 10′	″	N. 1 in 6	bord and pillar	1	..	..	″	5,010	979	5,989	13,891	..	32	32	″	..	..	..	natural	24/5/84
9. Banbury, Westport ..	Dickson, W. H., General Manager Elliott, R., Mine Manager	6	″	1	16′	″	..	″	1	8′ diam.	98′	″	66,609	7,578	74,187	189,412	21	170	191	endless chain	..	..	..	furnace	24/10/84
10. Crowell's, Westport ..	Crowell, Charles	1	pitch	1	..	5′	E. 10°	narrow work	..	..	..	″	20	..	20	20	..	2	2	hand	..	..	..	natural	23/10/84
11. Golden Treasure, Reefton	Gilbert, John ..	13	″	1	6′	all	S. 30° E.	″	..	..	..	″	300	..	300	1,620	..	1	1	″	..	..	..	″	21/9/83
12. Lankey's Gully, Reefton	Notman, A. ..	..	″	1	11′	9′	W. 8°	″	..	..	..	″	330	..	330	2,760	1	1	2	″	..	..	..	″	21/9/83
13. Murray Creek, Reefton ..	Trennery, J. ..	1	″	1	10′	all	level	″	..	..	..	″	335	52	387	387	..	2	2	″	..	..	..	″	..
14. Boatman's Reefton ..	Coghlan, J.	..	″	1	6′	″	W. 1 in 3	″	..	..	..	″	160	58	218	1,284	1	1	2	″	..	..	..	″	22/9/83
15. Burke's, Reefton ..		..	″	1	10′	6′	N. 30°	″	..	..	..	″	30	60	90	1,124	..	1	1	″	..	..	..	″	22/9/83
16. Dudley, Reefton ..	Joice, G. ..	11	″	1	21″	all	N. 25° W. 25°	″	..	..	..	″	6	..	6	417	..	1	1	″	..	..	..	″	17/5/84
17. Brunner, Greymouth ..	Bishop, J. ..	20	bitum.	1	8′ to 16′	″	S.W. 1 in 4	bord and pillar	..	..	..	″	63,292	15,076	78,368	372,904	22	120	142	endless rope (self-acti'g) and eng.-pln.	..	..	..	fan 16′	28/10/84
18. Coal-pit Heath, Greymouth	Alexander, T. ..	8	″	1	16′	″	″	″	2	10′ x 6′ 8′ diam.	280′ 75′	shaft	15,848	3,141	18,989	113,616	13	57	70	engine, 30 h.p.	4′	10″	250′	furnace	30/10/84
GREYMOUTH DISTRICT.																									
19. Wallsend, Greymouth ..	Harrison, J., F.G.S.	8	″	1	16′	″	S.W. 1 in 3½	″	2	11′ diam. 14′ diam.	670′ unfin'sh'd	″	..	..	½	12,123	..	3	3	engine, 48 h.p.	5′	10″	670′	fan 15′	20/5/84

Statistics of Workings in Coal Mines, 1884—*continued.*

Name of Mine and Locality.	Name of Manager.	Number of Years worked.	Quality of Coal.	No. of Seams worked.	Thickness of Seams.	Thickness worked.	Dip of Seam.	System of Underground Working.	Number of Shafts.	Dimensions of Shafts.		Output delivered by	Output for 1884.			Approximate Total Output to 31st December, 1884.	Number of Men ordinarily employed.			Power used for drawing Mineral.	Pumps.			Means of Ventilation.	Date of Inspector's Last Visit.
										Size of Shaft or Tunnel.	Depth of Shaft or Length of Tunnel.		Coal.	Slack.	Total.		Above.	Below.	Total.		Stroke.	Size of Barrel.	Height of Column.		
Malvern District.													Tons.	Tons.	Tons.	Tons.									
20. Springfield, Springfield ..	Parker, O. G., Gen. Manager Moore, W., Mine Manager	8	brown	1	7′ 6″	″	S.E. 1 in 6 to 1 in 12	″	1	12′ x 5′ 2″	246′	″	4,788	1,380	6,168	51,100	5	16	21	engine	22″	8″	263′	steam	31/3/85
21. Bowick's, Wallsend ..	Bayles, John ..	5½	″	3	1′ 7″, 9″, 1′ 6″	″	S.E. 1 in 4	″	1	4′ 6″ x 5′ 6″	60′	adit	450	30	480	4,023	1	3	4	horse	9″	4″	60′	natural	31/3/85
22. Canterbury, Sheffield ..	Austin, J. ..	22	″	2	2′ and 1′ 6″	″	S.E. 1 in 3	″	1	5′ diam.	25′	″	864	60	924	28,855	3	6	9	″	..	..	..	furnace	22/4/84
23. Homebush, South Malvern	McIlraith, J. A., General Manager Brown, T., Mine Manager	12	″	2	7′ and 3′ 6″	″	E. 10° S. 1 in 3	″	2	3′ 6″ x 3′ 3′ 6″ x 3′	60′ 20′	″	10,123	330	10,453	63,274	3	30	33	″	..	..	..	natural	17/4/85
24. Hartley, South Malvern	Ferguson, A. ..	..	altered brown and brown	2	3′ 5″ and 11′	″	S. 60° E. 1 in 3½	″	..	..	..	engine-plane	2,728	..	2,728	13,505	5	13	18	engine, 14 h.p.	15″	6″	45′	″	28/3/85
25. Whitecliffs, South Malvern	..	4	brown	1	7′ 6″	″	S. 52° E. 30°	″	1	..	..	adit	2,800	..	2,800	4,600	4	7	11	hand	..	..	..	″	28/3/85
26. Smith's, South Malvern	Smith, James ..	1	″	1	11′	″	″	″	..	..	..	″	75	..	75	75	..	1	1	″	..	..	..	″	28/3/85
27. Snowdon, Rakaia Gorge	Gerard, W. (owner)	..	altered brown	1	9′ 3″	″	N. 80° W. 32°	″	..	..	..	″	..	..	..	..	..	1	1	″	..	..	..	″	18/4/85
28. Acheron, Lake Coleridge	..	17	anthracite	1	5′ 3″	″	S. 45° W. 18°	″	..	..	..	″	50	..	50	50	..	..	..	″	..	..	..	″	18/4/85
29. Mount Somers, Mount Somers	Milne, James ..	19	brown	1	25′	20′	..	open work	..	..	..	″	156	..	156	3,781	..	1	1	..	..	..	..	..	27/12/79
Timaru District.																									
30. Elephant Hill, Waimate	Lindsay, D. ..	4	″	1	14′	7′ 6″	N. 70° E. 15°	bord and pillar	..	..	..	″	294	..	294	726	..	1	1	hand	..	..	..	natural	4/10/82
Otago District.																									
31. Wharekuri, Wharekuri ..	Cairns, W. B. ..	18	″	1	25′	14′	S. 60° W. 60°	narrow work	1	4′ x 3′	80′	″	450	..	450	6,820	1	3	4	″	..	..	..	″	9/9/84
32. Kurow, Kurow	Muir, R. ..	5	″	1	18′	8′	N.E. 63°	″	..	..	..	″	100	..	100	860	..	1	1	″	..	..	..	″	9/9/84
33. Prince Alfred (No. 1), Oamaru	Willets, J.	15	″	1	8′	all	N. 50° E. 12°	″	1	4′ diam.	42′	″	2,251	..	2,251	20,098	1	7	8	″	..	..	..	″	4/3/85
34. Prince Alfred (No. 2), Oamaru	Willets, J.	8	″	1	9′	″	E. 10° S. 1 in 5	″	1	3′ 8″ x 3′ 6″	60′	″								″	..	..	..	furnace	4/3/85
35. St. Andrews, Oamaru ..	Nimmo, John	6	″	1	6½	″	E. 13°	″	1	4′ diam.	26′	″	1,090	..	1,090	5,973	1	3	4	″	..	..	..	natural	4/3/85
36. Ngapara, Ngapara ..	Nimmo, John	6	″	1	25′	7′ to 8′	N. 5°	″	1	4′ 6″ x 2′ 8″	36′	″	927	..	927	5,428	1	2	3	horse	..	..	..	″	23/12/84
37. Shag Point, Palmerston South	Williams, W. H.	21	pitch	2	8′ to 12′ 4′ to 6′ 6″	all	E. 1 in 4	bord and pillar	2	5′ 5″ x 6′ 13′ x 5′	50′ 247′	shaft eng.-pln.	3,904	280	4,184	165,027	5	18	23	engines	..	..	..	steam	10/3/85
38. Hill's Creek, Hill's Creek	McKnight, James	20	lignite	1	6′	6′	S.S.W. 40°	open work	..	..	..	..	74	..	74	217	..	1	1	..	..	..	..	..	24/3/84

39. Diamond Hill, Hampden	Donaldson, J. T.	1	brown	1	3′ 6″ to 4′	all	N.E.	bord and pillar	1	..	30′	adit	174	..	174	174	2	2	4	hand	..	..	..	natural	..
40. Idaburn, Rough Ridge ..	Grant, W. G. ..	14	lignite	1	23′	〃	N. 10°	open work	..	..	..	..	2,028	..	2,028	11,029	..	2	2	..	..	..	..	..	25/3/84
41. Border, Rough Ridge ..	Turnbull, George	14	〃	1	..	21′	..	〃	..	..	..	..	232	..	232	232	..	2	2	..	..	..	..	..	..
42. Cambrian's, St. Bathan's	Jones, J. R. ..	23	〃	1	25′	all	W. 10°	〃	..	..	..	..	1,736	..	1,736	6,547	..	2	2	..	..	..	..	..	24/3/84
43. Kyeburn, Naseby ..	McCready, D. ..	11	brown	1	25′	〃	W. 60°	narrow work	1	2′ 6″ x 4′	20′	adit	475	237	712	11,447	..	3	3	hand	..	..	..	natural	26/3/84
44. Perseverance, Naseby ..	Stuart, John ..	6	〃	3	6′ to 16′	12′	W. 60°	〃	2	2′ 3″ x 6′ 2′ 6″ x 5′	50′ 50′	〃	146	200	346	3,736	1	2	3	〃	..	..	..	〃	26/3/84
45. Archer's, Naseby ..	Archer, C. ..	2	〃	1	14′ to 15′	6′ to 7′	S. 75° W. slight	〃	..	..	..	〃	250	..	250	250	1	1	2	〃	..	..	..	〃	26/3/84
46. Alexandra, Alexandra South	Thomson, W. ..	6	brown	1	12′	6′	N.W. slight	bord and pillar	2	2′ 9″ x 5′ 6″ 2′ 6″ x 4′ 6″	60′ 50′	shaft	728	..	728	8,281	1	1	2	horse	..	..	..	natural	19/3/84
47. Macqueenville, Alexandra South	Steele, W. ..	..	〃	1	5′	all	..	〃	1	3′ x 5′	42′	〃	253	..	253	2,173	3	2	5	〃	..	..	..	〃	..
48. Excelsior, Cromwell ..	McNulty, E. ..	3	〃	1	12′	7′	E. 65°	narrow work	1	3′ x 4′	70′	adit	652	..	652	652	..	2	2	hand	..	..	..	〃	21/3/84
49. Bannockburn, Cromwell	Parcell, William	13	〃	1	12′	6′	N. 70° W.	bord and pillar	..	..	..	〃	520	80	600	6,412	1	2	3	engine, 8 h.p.	3′	6″	50′	〃	21/3/84
50. Kawarau, Cromwell ..	Pryde, John ..	7	〃	1	15′	all	W. 1 in 4	〃	1	2′ x 6′	30′	〃	852	..	852	4,622	..	2	2	hand	..	..	..	〃	21/3/84
51. Clyde, Clyde	Holt, James ..	4	〃	1	20′	..	E. 1 in 1	narrow work	2	3′ 6″ x 4′ 3′ x 3′ 6″	36′ 160′	shaft	395	..	395	16,797	1	1	2	horse	..	..	..	〃	20/3/84
52. Clyde, Clyde	Marie, C. T. ..	13	〃	1	20′	10′	S.E. 5°	bord and pillar	2	3′ 6″ x 4′	36′	adit	207	9	216	3,232	1	1	2	hand	..	..	..	〃	20/3/84
53. Earnscleugh, Clyde ..	Buckley, John ..	8	〃	1	14′	8′	S.W. 1 in 8	〃	1	3′ x 4′	32′	〃	128	42	170	2,262	1	2	3	horse	..	..	..	〃	20/3/84
54. Gibbston, Arrow ..	Gibson, James ..	17	〃	1	40′	..	S.W. 30°	〃	..	..	..	〃	1,800	..	1,800	8,070	2	5	7	hand	..	..	..	..	22/3/84
55. McPherson's, Roxburgh	Jones, John ..	14	lignite	1	25′	20′	W. 1 in 7	open work	..	..	..	..	201	..	201	*1,891	..	3	3	..	..	..	..	..	19/3/84
56. Robertson's, Roxburgh ..	Robertson, James	21	〃	1	28′	20′	W. 1 in 7	〃	..	..	..	..	769	196	965	8,586	..	3	3	..	..	..	..	..	19/3/83
57. Fernhill, Green Island ..	Shaw, J. E. ..	7	brown	1	19′ 6″	7′	N. 10° E. 1 in 10	room and rance	1	3′ 6″ x 4′ 9″	40′	adit	10,230	3,755	13,985	34,997	2	14	16	horse	..	..	..	rnace	9/3/85
58. Green Island, Green Island	Richardson, D. ..	12	〃	1	14′	7′	E. 10° N. 1 in 10	〃	1	4′ 6″ x 12′	130′	〃	5,880	2,929	8,809	80,982	3	14	17	〃	..	..	..	〃	18/12/84
59. Saddle Hill, Green Island	Campbell, J. ..	10	〃	1	19′ 6″	11′	E. 1 in 10	〃	2	4′ 4″ x 8′	60′	shaft	3,628	1,828	5,456	47,887	3	7	10	〃	..	..	..	〃	13/3/85
60. Saddle Hill, Green Island	Harris, A. ..	1	〃	1	20′	6′	〃	〃	1	2′ 4″ x 5′	35′	adit	70	6	76	76	1	2	3	〃	..	..	..	natura	13/3/85
61. Glenochiel, Green Island	Bryce, D. ..	3½	〃	1	10′	7′	varies	〃	1	4′ x 8′	48′	shaft	356	257	613	1,906	1	2	3	〃	..	..	..	〃	16/3/85
62. Walton Park, Green Island	Loudon, J., General Manager Lindsay, W., Mine Manager	14	〃	1	18′	7′	E. 1 in 9	〃	3	4′ x 11′ 12′ 6″ x 4′ 6″ 4′ x 5′	175′ 173′ 25′	shaft and adit	24,500	5,750	30,250	270,199	8	52	60	engine and horses	4′ 6″	11″	175′	furnace	16/3/85
63. Abbotsroyd, Green Island	Walker, James ..	3½	〃	1	16′	7′	E. 10° N. 1 in 10	〃	1	3′ 8″ x 4′ 6″	42′	adit	9,228	2,718	11,946	74,656	7	17	24	horses	2′ 6″	6″	47′	natural	18/12/84
64. Brighton, Green Island ..	McColl, D. L. ..	4	〃	1	5′	all	N.E. 1 in 10	〃	..	..	..	〃	116	..	116	572	..	1	1	hand	..	..	..	〃	10/1/83
65. Bruce, Milton	Hardwick, N. ..	10½	pitch	1	12′ 6″	6′	varies	bord and pillar	..	..	..	〃	1,452	..	1,452	10,364	1	3	4	〃	..	..	..	〃	14/2/85
66. Real Mackay, Milton ..	Young, A. ..	16½	〃	1	25′	8′	N.E. to E. 1 in 8	〃	..	..	..	〃	600	..	600	11,869	..	2	2	〃	..	..	..	〃	14/2/85
67. Fortification, Milton ..	Reid, T. ..	1	〃	1	12′	6′ to 7′	S. 60° E. 5°	〃	..	..	..	〃	384	..	384	384	2	2	4	〃	..	..	..	〃	12/12/84
68. Cannon's, Lovell's Flat ..	Cannon, Thomas	14	lignite	1	20′	all	varies	open work	..	..	..	..	650	..	650	2,460	..	1	1	..	..	..	..	..	1/9/84
69. Bryce's, Lovell's Flat ..	Bryce, J. ..	6	〃	1	12′	8′	〃	〃	..	..	..	..	50	..	50	830	..	1	1	..	..	..	..	..	13/3/84
70. Paskell's, Glenore ..	Paskell, J. T. ..	20	〃	1	8′	all	N.E. 1 in 6	〃	..	..	..	..	56	15	71	202	..	1	1	..	..	..	..	..	31/12/83
71. Benhar, Balclutha ..	Nelson, John ..	20	brown	1	40′	8′	S. 17°	bord and pillar	1	4′ x 4′	38′	engine-plane	4,500	1,400	5,900	36,340	1	10	11	engine, 8 h.p.	3′	6″	45′	furnace	27/4/85

Statistics of Workings in Coal Mines, 1884—*continued.*

Name of Mine and Locality.	Name of Manager.	Number of Years worked.	Quality of Coal.	No. of Seams worked.	Thickness of Seams.	Thickness worked.	Dip of Seam.	System of Underground Working.	Number of Shafts.	Dimensions of Shafts. Size of Shaft or Tunnel.	Dimensions of Shafts. Depth of Shaft or Length of Tunnel.	Output delivered by	Output for 1884. Coal.	Slack.	Total.	Approximate Total Output to 31st December, 1884.	Number of Men ordinarily employed. Above.	Below.	Total.	Power used for drawing Mineral.	Pumps. Stroke.	Size of Barrel.	Height of Column.	Means of Ventilation.	Date of Inspector's Last Visit.
Otago District—*continued.*																									
72. Kaitangata, Kaitangata	Watson, W. P., Gen. Manager	9	pitch	1	24′	all	N.N.W. 1 in 7	bord and pillar	2	4′ x 6′ 2′ 6″ x 4′	90′ 64′	adit	30,167	13,654	43,821	242,103	25	85	110	eng. & horses	..	..	..	furnace	11/4/85
73. Kaitangata No. 1, Kaitangata	Shore, W. M., Mine Manager	7	"	1	20′	9′	N.N.W. 33°	"	1	4′ 6″ x 11′ 9″	392′	shaft								engine	..	..	..	"	11/4/85
74. Adams's, Clarkesville ..	Reid, John ..	..	lignite	1	8′	8′	S. 45° E. 12½°	open work	..	..	..	..	40	..	40	78	..	1	1	..	..	..	..	..	5/2/85
75. Lesmahagow, Wangaloa	Sewell, R. M. ..	3	pitch	1	5′	all	N. slight	bord and pillar	..	..	..	adit	159	..	159	430	..	1	1	hand	..	..	..	natural	15/9/84
76. Wangaloa, Wangaloa ..	Smith, Joseph ..	4	"	1	10′ 6″	6′	E. 1 in 6	"	..	..	..	"	44	20	64	680	..	1	1	"	..	..	..	"	15/9/84
77. Wyndham, Wyndham ..	Genge, T. ..	7	lignite	1	4′	all	..	open work	..	..	..	..	120	..	120	*508	..	1	1	..	..	..	..	..	18/2/85
78. Wyndham, Wyndham ..	Milne, D. ..	4	"	1	7′	"	..	"	..	..	..	..	430	..	430	2,027	..	2	2	..	..	..	..	..	18/2/85
79. Dawson's, Gore ..	Sheddon & Dawson	7	"	1	6′	"	..	"	..	..	..	..	60	..	60	448	..	1	1	..	..	..	..	..	19/2/85
80. Sarginson and Telfer's, Gore	Sarginson, J. H.	6½	"	1	8′	"	..	"	..	..	..	..	40	..	40	304	..	..	..	..	..	..	..	..	19/2/85
81. Lieze's, Gore	Lieze, M. ..	1	"	1	5′	"	..	"	..	..	..	..	50	..	50	50	..	1	1	..	..	..	..	..	19/2/85
82. McKinnon's, Gore ..	McKinnon, A. ..	3	"	1	5′	"	..	"	..	..	..	..	80	..	80	612	..	..	..	..	..	..	..	..	19/2/85
83. Chittock's, Gore ..	Chittock, C. L. ..	2	"	1	..	5′	..	"	..	..	..	..	400	..	400	1,128	..	2	2	..	..	..	..	..	19/2/85
84. Chatton, Chatton ..	Pacey, W. R. ..	8	"	1	..	..	..	"	..	..	..	..	700	..	700	2,598	..	2	2	..	..	..	..	..	..
85. Pukerau, Pukerau ..	McKenzie, James	5	"	1	16′	6′	W. 1 in 10	bord and pillar	..	..	..	adit	3,815	..	3,815	8,957	2	10	12	..	..	..	..	..	16/12/84
86. Hay's, Gore	Hay, James ..	3	"	1	6′	6′	..	open work	..	..	..	..	300	..	300	700	..	1	1	..	..	..	..	..	27/11/83
Southland District.																									
87. Mataura, Mataura ..	Beattie, John ..	9	"	1	12′ 6″	8′	..	"	..	..	..	..	1,680	..	1,680	8,717	..	3	3	..	6″	3″	22′	..	15/12/84
88. Mataura, Mataura ..	Culling, Thomas	9	"	1	6′	all	W. 1 in 20	"	..	..	..	..	1,100	..	1,100	5,246	..	3	3	..	..	..	..	..	15/12/84
89. Menzies Ferry, Wyndham	Morris, J. ..	4	"	1	3′ 7″	"	level	"	..	..	..	..	376	..	376	1,091	..	1	1	..	..	..	..	..	18/2/85
90. Nightcaps, Nightcaps ..	Handyside, W., General Manager Lloyd, John, Mine Manager	7	pitch	2	10′ and 2′ 4″	"	S. 10° E. 1 in 3½	open work bord and pillar	2	4′ 6″ x 6′ 3′ x 6′	12′ 138′	engine-plane	13,310	..	13,310	32,990	15	22	37	engine	3′ 9″	6″	135′	furnace	17/2/85
91. Fairfax, Fairfax ..	Todd and Graham	7	lignite	1	5′ 6″	"	S.W. 1 in 20	open work	..	..	..	..	900	..	900	2,800	..	3	3	..	..	..	..	..	17/2/85
92. Wairio, Nightcaps ..	Matheson ..	4	pitch	1	7′ 6″	6′	..	"	..	..	..	..	352	..	352	1,180	..	2	2	..	..	..	..	..	17/2/85
93. Morley Village, Nightcaps	Alley, J. ..	1	"	..	..	..	..	"	..	..	..	..	200	..	200	200	..	3	3	..	..	..	..	..	..
94. Orepuki, Orepuki ..	Lockhart, G. ..	2	"	1	9′	..	..	bord and pillar	..	5′ x 10′ 6″	202′	shaft	..	..	..	14	2	3	5	engine	..	..	..	natural	6/6/83
Totals	..	..	..	104	..	..	..	..	..	..	..	..	418,101	62,730	480,831	2,980,962	393	890	1283	..	..	..	..	..	..
Output from mines whose operations have been suspended, but were included in return for 1883 ..																26,236									
																3,007,198									

* 2,078 tons are included in approximate total output which were omitted in return for 1883, viz., McPherson's, Roxburgh, 1,690 tons, and Wyndham, Wyndham, 388 tons.

TABLE of ACCIDENTS in COAL MINES during the Year ended the 31st December, 1884.

SOUTH ISLAND.

No. and Date.	Name of Mine.	District.	Cause of Accident.	Above Ground.	Below Ground.	Fatal.	Non-fatal.	Name of Sufferer.	Remarks.
1. Jan. 5	Shag Point ..	Otago ..	Fall of stone ..	..	1	..	1	Ansell, A.	
2. „ 19	„ ..	„ ..	„ ..	..	1	..	1	Brookes, E. W.	Very serious.
3. Feb. 11	Coal-pit Heath	Westport ..	Explosion of gas	..	1	..	1	Johns, J. ..	Very slight.
4. „ 15	Banbury ..	„ ..	Incline rope ..	1	..	..	1	Beal, C. ..	Leg broken.
5. „ 15	„ ..	„ ..	Drilling out shot	..	1	..	1	Weston, J. ..	Violating rules.
6. „ 16	„ ..	„ ..	Finger cut off by tub	..	1	..	1	Rearch, W.	
7. Mar. 6	„ ..	„ ..	Fall of stone ..	..	1	..	1	Smith, W.	
8. May 10	Dudley ..	„ ..	„ ..	..	1	1	..	Joice, M. ..	Attended inquest.
9. „ 14	Hartley ..	Malvern ..	Tub on incline ..	..	1	..	1	Lane, R.	
10. „ 16	Walton Park	Otago ..	Fall of coal ..	..	1	..	1	McCluskey, P.	Leg broken.
11. June 2	Banbury ..	Westport ..	„ stone ..	..	1	1	..	Henderson, T.	
12. July 10	Walton Park	Otago ..	„ coal ..	..	1	..	1	Easton, J. ..	Leg broken.
13. „ 23	Brunner ..	Westport ..	Explosion of gas	..	1	..	1	Blackie, A. ..	Very slight; one day off work.
14. Aug. 8	„ ..	„ ..	Fall of stone ..	..	1	1	..	Willis, J.	
15. „ 21	Banbury ..	„ ..	„ ..	..	1	..	1	Evans, D.	
16. „ 26	„ ..	„ ..	Empty tub ..	..	1	..	1	James, H.	
17. „ 26	„ ..	„ ..	Fall of stone ..	..	1	..	1	Walker, J.	
18. Sept. 5	Prince Alfred (No. 2)	Otago ..	„ coal ..	..	1	..	1	Woods, P. ..	Slight.
19. „ 27	Brunner ..	Westport ..	„ „ ..	..	1	..	1	Heslin, T.	
20. Nov. 5	Banbury ..	„ ..	„ stone ..	..	1	..	1	Watson, T.	
21. „ 11	Kaitangata ..	Otago ..	„ coal ..	..	1	..	1	Dufferon, P.	
22. „ 21	Brunner ..	Westport ..	„ „ ..	..	1	..	1	Glover, D.	
				1	21	3	19		

RETURN of the QUANTITY of COAL IMPORTED into and EXPORTED from NEW ZEALAND during the Year ended 31st March, 1885.

Countries whence imported.	Imports. Quantity.	Imports. Value.	Countries to which exported.	Export. Quantity.	Export. Value.
	Tons.	£		Tons.	£
United Kingdom	3,763	5,797	United Kingdom	2	2
Queensland	239	341	New South Wales	5	5
New South Wales	144,442	170,830	Victoria	5,311	3,865
			South Sea Islands	604*	723
			Mauritius	250*	250
			China	182	182
Totals	148,444	176,968	Totals	6,354	5,027

* Not the produce of the colony, excepting 14 tons, value £18, exported to the Islands.

H. S. McKELLAR,
For Secretary.

Department of Trade and Customs,
Wellington, 23rd June, 1885.

By Authority: GEORGE DIDSBURY, Government Printer, Wellington.—1885.