

MINES STATEMENT.

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1937.
NEW ZEALAND.

MINES STATEMENT.

BY THE HON. P. C. WEBB, MINISTER OF MINES.

MR. SPEAKER,—

I have the honour to present to Parliament the annual statement on the mining industry of the Dominion for the year ended 31st December, 1936.

MINERAL PRODUCTION.

The following statement shows the quantity and value of the production of metalliferous mines, stone-quarries under the Stone-quarries Act, and of coal-mines during 1936 and 1935:—

Mineral.	1936.		1935.	
	Quantity.	Value.	Quantity.	Value.
Gold and silver*	597,548 oz.	£ 1,272,587	603,244 oz.	£ 1,300,046
Platinum	29 „	187	14 „	79
Pig-iron	..	..	4,902 tons	23,775
Stone	..	342,861	..	289,274
Pumice	3,242 tons	8,881	3,300 tons	8,769
Coal	2,140,217 „	2,140,217	2,115,184 „	2,115,184
Tungsten-ore	28 $\frac{2}{30}$ „	3,448	39 $\frac{7}{20}$ „	4,719
Quicksilver	..	..	563 lb.	132
Totals	..	£3,768,181	..	£3,741,978

* The gold-silver bullion is generally exported unseparated.

The value of minerals, including kauri-gum, exported and of the coal used in the Dominion, which is shown in Table No. 1 accompanying this Statement, amounted to £3,691,419, as compared with £3,694,480 during 1935. The total value of such minerals exported to the end of 1936 amounted to £195,959,756.

GOLD AND SILVER MINING.

During the year 597,548 oz. of bullion, valued at £1,272,587 was produced, a decrease in quantity of 5,696 oz., and in value of £27,459, as compared with the previous year.

The gold content of the bullion is estimated at 164,575 oz., valued at £1,233,178.

The estimated gold-production for the past seven years has been as follows :—

Year.		Oz.	Year.		Oz.
1930	..	120,931	1934	..	160,248
1931	..	129,861	1935	..	165,277
1932	..	166,354	1936	..	164,575
1933	..	161,755			

It will be noted that for the year under review there has been a slight drop in gold-production. This is disappointing, but has been brought about by the circumstances mentioned below.

Quartz-mining showed an appreciable decrease mainly on account of the fact that the outputs of the Blackwater and Big River Mines dropped by 2,192 oz. and 1,953 oz. respectively.

On the other hand, the output of the Martha Mine increased from 52,541 oz. to 53,108 oz., while from the Waihi Grand Junction Mine the recovery of gold amounted to 7,620 oz., compared with 5,897 oz. for the previous year.

Alluvial mining, however, was responsible for a greater drop in production than quartz-mining, the figures for 1936 being 33,618 oz., as compared with 37,134 oz. for the previous year, a reduction of 3,516 oz. The reduced returns of the King Solomon Mine account for almost half of this reduction, while the balance is due to the large drop in the number of subsidized miners engaged on this class of work. No less than 1,407 subsidized prospectors were transferred to other avocations.

Dredging activities produced 37,269 oz., an increase of 5,207 oz. over the previous year. This increase is recorded in spite of the fact that the principal producer in this class of mining, the Rimu Dredge, lost 834 hours digging-time due to an unfortunate accident. If this dredge had worked its usual time the output of gold would probably have been at least 2,000 oz. more.

Twenty-one dredges were operated in New Zealand in 1936, as compared with only seven in 1933. Three more large dredges would have operated in the year under review had it not been for extraordinary delays due to factors outside the control of the companies concerned. The launching of two large dredges on the Clutha River was held up for a very long period due to the extraordinary low state of the river, while a third large dredge at Barrytown on the West Coast was held up for lack of electric power. These three dredges, however, are now in active production, and the dredge of the Clutha Gold Dredging Co., Ltd., is yielding very satisfactory returns, a recent week's work producing 433 oz.

A further four large dredges are now under construction on the West Coast, and a fifth is to be erected near Cromwell, in Otago.

With regard to dredging developments on the West Coast, I made reference in my Statement last year to the prompt action taken by the Government to secure adequate supplies of hydro-electric power for the West Coast, not only in the interests of the gold-mining industry, but also to serve other forms of industrial development.

Almost immediately after the Government took office the Minister of Public Works and myself visited the West Coast and conferred on the power question with the interested parties. We were most impressed with the possibilities of the gold-dredging industry, and we were also quite satisfied that if ample electric power were not made available to the district at the earliest possible date both mining and other industrial developments would be seriously retarded. The difficulties which were feared actually occurred at the beginning of the present year. As mentioned above, the Barrytown dredge was unable to get into full production for a considerable period due to the shortage of power, and also the development of the new State Coal-mine at the Nine-mile, near Greymouth, has been retarded for the same reason.

The Government's action in arranging for the construction of a transmission-line from the Lake Coleridge Hydro-electric-power Station to the West Coast has been abundantly justified.

Certain delays in the construction of the transmission-line have, unfortunately, occurred due to non-delivery of transmission-line poles, but industry will not be embarrassed as a result thereof, as the Minister of Public Works has arranged for the installation of a Diesel plant at Dobson which will be capable of taking the whole of the load immediately in prospect. This plant, upon the completion of the transmission-line, will fulfil the function of a standby unit.

The only legislation passed in 1936 which directly concerned the gold-mining industry was section 54 of the Statutes Amendment Act, 1936. Under this section the maximum area of dredging claims allowable under section 88 of the Mining Act, 1926, as amended by section 5 of the Mining Amendment Act, 1935, was increased to 2,000 acres.

I had intended to bring down during last session a comprehensive Bill involving a number of amendments to the Mining Act, but the large amount of other more important legislation which had to be dealt with by Parliament prevented this step being taken. Suggestions for amendments, however, were obtained from all interested parties. These suggestions have since been reviewed by a conference of mining interests, and as a result a Bill is at present in the hands of the Law Draftsman.

The following statement shows the quantity and value of bullion-production, the dividends paid by registered companies, and the number of productive claims and gold-dredges during 1936 and 1935 :—

Class of Gold-mining.	Production of Bullion.				Dividends paid by Registered Companies.		Number of Productive Claims and Dredges.	
	1936.		1935.		1936.	1935.	1936.	1935.
	Oz.	£	Oz.	£	£	£		
Quartz	526,661	732,869	534,048	778,517	151,336	89,081	77	72
Alluvial	33,618	244,640	37,134	269,106	16,436	7,279	2,928	4,411
Dredging	37,269	295,078	32,062	252,423	62,335	34,920	21	17
Totals	597,548	1,272,587	603,244	1,300,046	230,107	131,280	3,026	4,500

GOLDFIELDS REVENUE AND GOLD DUTY.

The amount of goldfields revenue received and credited to the accounts of local bodies during the year ended 31st March, 1937, was £22,942 15s., an increase of £1,230 4s. 5d. compared with the previous year. During the same period the total of the three duties on exported gold amounted to £119,324 18s., of which £7,814 2s. 4d. was credited to the accounts of local bodies under section 12 of the Gold Duty Act, 1908. The special export duty of 12s. 6d. per ounce amounted to £108,793 6s. 2d., which sum was paid into the Consolidated Fund.

MINING PRIVILEGES.

Interest is still being maintained in the mining industry, although the number of licenses granted has decreased. During the year ended 31st March, 1937, 938 licenses for mining privileges were granted under the provisions of the Mining Act, 1926, as compared with 1,927 for the previous year. Out of this number, 169 were licenses for claims authorizing the holders to mine for gold. For the same period 345 mining privileges, including 16 licenses for claims, were struck off the registers under the provisions of section 188 of the Act.

PETROLEUM OIL.

The only boring for petroleum oil carried out in 1936 consisted of five shallow holes put down by Maoriland Oilfields, Ltd., at Kotuku, from which a total of 1,188 gallons of oil was collected.

157,891 Imperial gallons of crude petroleum oil was obtained by Moturoa Oilfields, Ltd., at Moturoa from Nos. 1, 2, and 4 Wells.

The Dominion's total production of crude petroleum oil to 31st December, 1936, is estimated at 2,631,337 gallons.

In the last Mines Statement I mentioned that legislation dealing with prospecting for and winning of petroleum was under review, and I expressed a hope that before long I would be able to bring down a new Bill, which I felt sure would be welcomed by all persons genuinely interested in the development of the industry.

I am pleased now to announce that a comprehensive Bill has been prepared and will be submitted to Parliament in a very short time.

I am also very gratified to announce that if the Bill is passed there is little doubt but that major oil interests will make an immediate and vigorous effort to find petroleum in payable quantities. The products of petroleum have such far-reaching significance in our modern civilization that there is scarcely any development which would mean more to the Dominion than the successful search for oil.

COAL-MINING.

There were 195 coal-mines operating in the Dominion in 1936. Ninety-four of these mines are situated on freehold property, and produced 964,149 tons, or 45 per cent., of the total output. The remaining 101 mines are situated on Crown lands, and produced 1,176,068 tons, or 55 per cent., of the total output of 2,140,217 tons.

The annual production of coal since 1930 has been as follows:—

	Tons.		Tons.
1930	2,542,092	1934	2,060,315
1931	2,157,756	1935	2,115,184
1932	1,842,022	1936	2,140,217
1933	1,821,258		

The increase in output for 1936 is 1.18 per cent. above the figure for 1935, and since 1933 a recovery of over 17 per cent. has taken place.

The quantity of coal imported into New Zealand in 1936 was 111,078 tons. This figure represents an increase of 13,680 tons over the figure for 1935, or an increase of 14 per cent. I regret the disparity between this increase and the increase of a little over 1 per cent. recorded for the same period in the output from New Zealand mines.

It appears to me that a disproportionate share of the increase in the coal requirements of the country brought about by increased prosperity has been enjoyed by the importer as compared with the local producer.

The increased costs of producing New Zealand coal brought about as a result of increased wages and better conditions introduced by the present Government have no doubt been partly responsible for the situation. I sincerely hope that gas companies, which are the principal consumers of imported coal, will still do their utmost to help local industry.

On the other hand, I am gratified to be able to point to a substantial increase in the output of the West Coast bituminous and sub-bituminous mines, the figure for 1936 being 796,763 tons, compared with 752,361 tons for 1935.

The output of the several classes of coal mined in each inspection district is summarized as follows:—

Class of Coal.	Output of Coal during 1936.				Total Output to the End of 1936.
	Northern District (North Island).	West Coast District (South Island).	Southern District (South Island).	Total.	
Bituminous and sub-bituminous	Tons. 62,094	Tons. 796,763	Tons. ..	Tons. 858,857	Tons. 49,836,586
Brown	733,743	46,500	369,828	1,150,071	30,992,459
Lignite .. ..	..	1,307	129,982	131,289	5,148,498
Totals for 1936 ..	795,837	844,570	499,810	2,140,217	85,977,543
Totals for 1935 ..	837,620	803,653	473,911	2,115,184	83,837,326

WASTAGE OF COAL.

In last year's Statement I commented at some length on the unnecessary wastage of coal which has taken place over a long period of time in this country. I drew special attention to the slack-coal problem, particularly in the Waikato District, where for a number of years 100,000 tons of slack has been annually dumped to waste.

I also stated that I had approached the Waikato coal-owners with a view to obtaining their co-operation in regard to the control of screen openings. I am very happy to report that the position in the Waikato District has now completely changed, and it is unlikely that any slack whatever will be wasted during the current year. The operations of Waikato Carbonization, Ltd., the improved market for slack-coal, and the policy of controlling screen openings have brought about this most desirable result, and I wish to place on record my deep appreciation of the co-operation which I have received from the coal-mining companies.

In the Southland District a moderate amount of slack is still being wasted; the position, of course, is not nearly so serious as that which prevailed in the Waikato District, but nevertheless I hope to eliminate the major portion, if not the whole, of this waste by enlisting the assistance of the coal-mining companies, particularly in regard to screening. I have not yet had the same co-operation in this respect as I have received in the Waikato District, but I hope that before long voluntary arrangements will be arrived at which will achieve the desired result. Failing the termination of the waste by voluntary methods, I will be forced to consider the question of legislation to enable me to deal effectively with the problem.

NEW AVENUES OF COAL-UTILIZATION.

My Department continues to keep in intimate touch with the latest developments abroad in hydrogenation and other processes for the extraction of oil from coal.

An officer of the Industries and Commerce Department accompanied the Hon. the Minister of Finance during his recent visit to Great Britain, and gave special attention to all recent developments in coal-utilization.

I mentioned last year that a qualitative and quantitative survey of our coal resources was a most necessary preliminary work before proper consideration could be given to any major scheme. I am pleased to say that this survey has now been commenced, and is referred to elsewhere in this Statement.

COAL-MINING LEGISLATION.

During the year the Coal-mines Amendment Act, 1936, was passed. This was a short measure of six sections only, which dealt with some urgent improvements to ensure increased safety in the working of coal-mines.

The Act also authorizes the establishment and maintenance of rescue-stations, and makes provision for the necessary finance for these institutions.

A further Coal-mines Amendment Bill will shortly be submitted to Parliament. It includes a number of further provisions designed to improve the administration of the Coal-mines Act, and has been framed as a result of suggestions and recommendations received from the coal-mine owners, the miners' organizations, and the Department's own staff.

RESCUE-STATIONS.

Following upon the passing of the necessary legislation, the Government approved of steps being taken to establish the first rescue-station in the Greymouth District. A site has been chosen in the Township of Dobson, which is strategically situated to serve promptly the major number of the mines in the Greymouth area. Plans and specifications for the necessary building have been completed, and tenders will be called immediately a satisfactory title is obtained to the land on which the structure is to be erected.

An order has gone forward to Great Britain for all the necessary equipment, and a special rescue motor-truck has been designed. Five sets of Proto apparatus

and one set of reviving apparatus have been obtained for the Liverpool State-mine, and regular classes in the use of the apparatus and other phases of mine rescue-work have been conducted by a specially qualified mine official.

I am pleased to record that the miners have displayed keen and praiseworthy interest in the training, and already two qualified groups of men are available in case of emergency.

SOCIAL AMENITIES IN MINING TOWNSHIPS.

In my Statement last year I expressed emphatic views on the necessity for the provision of better social amenities in mining townships. I made it clear that I desired to achieve results in this direction by co-operation: firstly, by fostering a good public spirit amongst the miners and their families; secondly, by appealing to employers for financial and other assistance; and, thirdly, by making grants from a small fund which was made available to my Department.

I am pleased to state that as a result of the adoption of this policy a large number of improvements have been carried out in different mining townships throughout the Dominion.

In practically every case in which I have felt disposed to assist I have been splendidly supported by the coal-mine owners.

I desire to see the provision of these amenities vigorously pursued within the limits of such financial provision as may be available.

I have also always been enthusiastic in regard to the provision and maintenance of libraries in mining towns, and during the past year I have made small grants for the assistance and improvement of ten libraries in mining centres.

CARBONIZING AND BRIQUETTING.

The low-temperature coal-carbonizing and briquetting plant of Waikato Carbonization, Ltd., at Rotowaro, operated for eight months during 1936.

The following figures show the production during that period:—

Raw coal carbonized	..	..	..	30,520 tons.
Carbonized coal produced	..	..	..	14,988 tons.
Average percentage of carbonized coal to raw coal				49 per cent.
Carbonettes manufactured	..	..	..	17,072 tons.
Oil treated	..	..	..	221,325 gals.
Pitch produced	..	..	..	512 tons.
Light oil produced	..	..	..	68,438 gals.
Heavy oils	..	..	..	49,240 gals.

The briquetting plant of Briquettes Ltd. at Onehunga produced 1,734 tons of briquettes during the ten months it was in operation in 1936.

For the twelve months ended 31st December, 1936, Smokeless Fuel and Briquettes (Canterbury), Ltd., produced 2,300 tons of briquettes at its works at Sockburn.

LABORATORY INVESTIGATIONS.

The Dominion Laboratory has, as in past years, carried out the testing and analysis of mineral-samples and mine gases. An investigation was also carried out on stone dusts suitable for use in mines.

Prospectors' samples from all parts of the Dominion have been examined for gold and silver and occasionally for other metals (in one notable case, platinum, in the North Island).

The physical and chemical survey of the coal resources of the Dominion which has been under discussion for some time has been commenced, and officers appointed to work under a committee comprising representatives of the Dominion Laboratory, Geological Survey, and Mines Department.

The purpose of the survey is to obtain complete information on the coal reserves of the Dominion, to correlate coal-seams of various localities, and

to estimate the suitability of the coals for industrial use, oil-production, gas-making, &c. Preliminary geological work has already been carried out on the Blackburn area, and arrangements are in hand for the provision of laboratory accommodation for chemical analyses and investigations.

PERSONS EMPLOYED IN OR ABOUT MINES AND STONE-QUARRIES.

The following table shows the number of persons employed in each inspection district during 1936 and 1935 :—

Classification.	Inspection District.			Totals.		
	Northern (North Island).	West Coast (of South Island).	Southern (rest of South Island).	1936.	1935.	Increase or Decrease.
Gold, silver, and tungsten ore	1,068	2,652	1,463	5,183	6,741	Dec. 1,558
Coal	1,469	1,850	938	4,257	4,231	Inc. 26
Stone-quarries under the Stone-quarries Act	1,504	127	350	1,981	2,002	Dec. 21
Oil	3	3	..	6	4	Inc. 2
Cinnabar .. .. .	..	..	..	..	5	Dec. 5
Totals	4,044	4,632	2,751	11,427	12,983	Dec. 1,556

MINING AND QUARRY ACCIDENTS.

In metalliferous mines, at which 5,183 men were ordinarily employed, seven persons were killed and five persons seriously injured.

At stone-quarries under the Stone-quarries Act, employing 1,981 men, there were four fatal accidents and two serious accidents.

In coal-mines, where 4,257 persons were ordinarily employed, four persons were killed and twenty-six persons seriously injured.

CO-OPERATIVE MINING, STATE COAL RESERVE.

Twenty co-operative parties working portions of the State Coal Reserve near Greymouth produced, during the year 1936, 101,619 tons, the number of men employed being 172. During the previous year twenty parties produced 91,384 tons, there being an increase this year of 10,235 tons.

The institution of the co-operative mining ventures on the State Coal Reserve has been a most successful experiment, and has been of great value to the State.

Up to the end of 1936 these parties have produced a grand total of 1,124,178 tons of coal, and have in the same period paid royalties to the State amounting to £52,064. A number of small isolated blocks of coal have been worked which could not have been profitably mined by a major organization, and if the co-operative system had not been developed much of this coal would probably have been left unmined for all time.

STATE COAL-MINES.

The outputs from both the Liverpool Colliery and the James Colliery showed substantial increases for the year.

The profit for the year ended 31st March, 1937, after providing for interest and depreciation, amounted to £14,558, an increase of £4,376 on the result for the previous year. A sum of £9,178 was transferred to the sinking fund, leaving a net surplus for the year of £5,380.

During the year the Department continued its policy of keeping in closer touch with its customers, and the advertising campaign, conducted in several centres, has been continued. The results have proved satisfactory, and increased business has been obtained. As an indication of this, notwithstanding the greatly increased

time worked during 1935–36 at the State Collieries, the Liverpool Colliery worked 9 per cent. greater time during 1936–37 than during the previous year, while at the James Colliery the increase was 15 per cent.

As from the 1st July, 1936, the wages of the employees of the State Collieries, in common with other coal-mine employees, were restored to the rates ruling in the year 1931 before the reductions in the rates of wages were made.

Again, as a result of the introduction of the forty-hour week, the daily rates of pay (not hewing-rates) were increased by 10 per cent. as from 12th September, 1936.

A further increase of in some cases 5 per cent. on the daily rates (not hewing-rates) and in other cases of 1s. per shift was granted as from the 27th March, 1937, but this increase is, of course, not reflected in the accounts for 1936–37.

To meet the cost of the restoration of wages the selling-prices of State coal were increased in August, 1936, and owing to an increase in shipping-freights, the selling-prices of sea-borne coal had to be further increased as from the 1st February, 1937, to meet these additional costs.

OUTPUT AND SALES.

Liverpool Colliery.—The gross output for the year was 132,966 tons, as compared with 121,531 tons for the previous year, an increase of 11,435 tons.

James Colliery.—The gross output for the year was 40,690 tons, as compared with 34,502 tons for the previous year, an increase of 6,188 tons.

A comparative statement for the two years is shown hereunder :—

Mine.	Output, in Tons, 1936–37.		Output, in Tons, 1935–36.	
	Gross.	Net.	Gross.	Net.
Liverpool	132,966	126,810	121,531	115,260
James	40,690	39,044	34,502	33,170

NOTE.—The difference between the gross and the net output is the allowance for mine consumption and waste. In addition to the above, 1,644 tons of coal was purchased for resale, of which 1,311 tons was purchased from co-operative parties on the West Coast.

The disposal, inclusive of stock on hand at the beginning of the year, was as follows: Supplied to—Depots, 51,142 tons; railways, 31,462 tons; other Government Departments, 6,449 tons; shipping, 8,876 tons; gasworks, 63,200 tons; other consumers, 6,754 tons: total, 167,884 tons.

The total sales of State coal from the Liverpool Mine for the year amounted to 128,290 tons, value £149,416* as compared with 116,215 tons, value £127,839,* for the previous year—an increase of 12,075 tons, with an increase in value of £21,577.

The average price realized by the mine on the total sales for the year was £1 3s. 3·5d.,* an increase of 1 3·5d. on the previous year's average.

The total sales of State coal from the James Mine for the year amounted to 39,594 tons, value £46,817,* as compared with 31,763 tons, value £38,766,* for the previous year—an increase of 7,831 tons, with an increase in value of £8,051.

The average price realized by the mine on the total sales for the year was £1 3s. 7·7d.* per ton, a decrease of 9·2d. on the previous year's average.

The decrease in the price realized was due to a larger proportion of slack being sold during the year ended 31st March, 1937. During the year ended 31st March, 1936, the slack on the dump was increased by 1,016 tons, whereas during the year ended 31st March, 1937, the slack on the dump was reduced by 323 tons.

The sales of coal, &c., through the medium of the depots totalled 118,587 tons, value £179,843,* as against 105,601 tons, value £158,648,* for the previous year.

* These values include sales made c.i.f. and f.o.b. as well as f.o.r.

ITEMS FROM ANNUAL ACCOUNTS AND BALANCE-SHEET.

The following details extracted from the audited accounts will enable honourable members to appraise the financial position of the Department's trading venture :—

	£
The payments for interest totalled	3,201
The cost of sea carriage of coal amounted to	43,512
The cost of railway haulage amounted to	33,349
The total wages paid for coal-winning were	93,828
The cost of management and office salaries (Head Office and mines) totalled	3,573
The gross capital expenditure on the whole undertaking to the 31st March, 1937, was	704,314
The total depreciation written off to 31st March, 1937 (equal to 76·7 per cent. of the gross capital expenditure) amounted to	540,189
The amount written off for depreciation for the year was	9,684
The present book value of permanent or fixed assets is	164,124
The loan capital as at 31st March, 1937, stood at	78,423
The net profits of the State Coal-mines Account from inception to 31st March, 1937, after charging the special depreciation of Colliery Development Accounts and after crediting interest on Sinking Fund investments, were	206,940
The net profit for the year ended 31st March, 1937, was	14,558
The Sinking Fund as at 31st March, 1937, was in credit	9,181
The amount taken out of the Sinking Fund during the year and applied in reduction of loan capital was	8,820
General Reserve as at 31st March, 1937, stood at	192,378
The amount at credit of Profit and Loss as at 31st March, 1937, was	5,380
Realization of investments of the State Coal-mines Account at 31st March, 1937, to meet expenditure in opening up and developing the new mine amounted to	20,000
The cash in hand and in the Public Account as at 31st March, 1937, was (last year £12,311)	27,602

I would draw particular attention to the total wages paid for coal-winning during the year amounting to the sum of £93,828. These wages were distributed amongst 367 men and twenty-seven youths, and represent an average income per employee of £239. In the financial year 1934–35, immediately prior to the commencement of the present Government's term of office, the total wages paid amounted to £63,353. This sum was distributed amongst 373 men and twenty-six youths, and represented an average income of £159. The increase in the individual worker's earnings has therefore been over 50 per cent. within two years.

DEVELOPMENT OF NEW MINE: NINE-MILE CREEK AREA.

Work in connection with the opening-up and development of the new mine, which is rendered necessary on account of the approaching exhaustion of the James Mine, proceeded during the year.

It was considered that the best means of opening up the coal seams was by an extension of the present rope road from the James Colliery.

This involves the driving of four tunnels in stone, together with one return airway in stone, and the construction of a viaduct $6\frac{1}{4}$ chains in length.

A surface road of approximately 1 mile in length, connecting the main tunnel leading to the coal with the main Greymouth–Westport traffic road, has been constructed to enable the transport of men and material.

Most of the surveys have been completed.

A commencement has been made to drive the tunnel from Cannel Creek to Nine-mile Creek and the main tunnel leading to the coal. Recently, two contracts have been let to co-operative parties to drive portions of these tunnels. At present the work is hampered through a shortage of electrical power to drive the compressors, but it is expected that this difficulty will be overcome shortly. Compressors, rock-drills, and electric plant were ordered, the main portion of which has been received and is being erected.

HOUSING.

Thirty-five loans have been granted to miners and others, under the Department's housing-scheme, to enable the workmen to erect and own their own houses. The loans, which range from £250 to £300, are repayable, together with interest, by fortnightly instalments over a term of twenty years. No new loans were granted during the year under review. I am pleased to state that a sum of £4,000 is being provided on the current year's estimates of the State Coal-mines Account to enable further loans to be made.

GEOLOGICAL SURVEY.

During the 1936-37 field season geological mapping was carried out in three districts: Dannevirke, Reefton, and Wakaia. In the Dannevirke Subdivision inflammable gas has long been known, and unsuccessful bores for oil have been drilled. The present work will help to elucidate the structure and sequence of the thick and extensive younger rocks of the area. Other mineral resources in this geologically little known district are the abundant deposits of limestone and bentonite. The officers of the Geological Survey were the first to recognize the presence of the latter, a swelling clay, which has many uses in modern industry.

The Reefton vein-system is being mapped in greater detail than was done twenty years ago, at the time of the former systematic survey. This restudy of an important goldfield is undertaken in the hope that the application of modern theories of lode-formation aided by geophysical and other methods of prospecting may lead to the discovery of other payable veins and of the faulted portions of veins already worked. The geologist in charge of the Reefton work spent much time in interpreting the geophysical data obtained, in advising on surface prospecting controlled by the Labour Department, and in examining the cores and sludge from a bore being drilled in search of the Progress Lode.

The gold-bearing river and terrace gravels, the sluicing and dredging of which have maintained the miners of the Waikaia and Waikaka for more than seventy years, are nearly exhausted. The older deep leads have been worked to some extent; but the rather complex faulting makes difficult not only their actual exploitation, but also the finding of unworked areas. The survey of the district was undertaken to endeavour to explain the structure.

In addition to the systematic exploration of the subdivisions named, an officer was engaged throughout the season on mapping the coal-bearing area of the upper Blackburn, in the Westport district. Large reserves of coal are popularly believed to exist in this area, but the work undertaken shows the amount of coal available to be disappointingly small. Some preliminary work was carried out in the Greymouth Coalfield.

This work is the beginning of a much more detailed estimation of the coal resources of New Zealand than has been attempted up to the present.

Another officer spent several months in the Hastings-Napier District in collecting and collating data on the abundant underground water resources. This work is in connection with a land-utilization scheme for this region. Other geologists reported on mineral deposits in the Glenorchy and Bendigo Districts in Otago, at Kotuku in North Westland, at Ohura in Taranaki, and elsewhere.

SCHOOLS OF MINES.

Six scholarships are offered annually by the Department for competition by students attending the various Schools of Mines within the Dominion. Four candidates sat for the annual Scholarship Examinations held in November, 1936, and of these candidates, one from the Otago School was successful in gaining a scholarship, which is tenable for four years at the University of Otago.

The expenditure on Schools of Mines for the year ended 31st March, 1937, was £4,035, as compared with £3,536 for the previous year.

QUALIFICATIONS OF DREDGEMASTERS.

Under the Mining Act it is mandatory that the master of a dredge working on a deep or swift-flowing stream shall be the holder of a Class "A" Dredgemaster's Certificate.

For general information it may be stated that at 30th June, 1937, the streams or rivers mentioned below have been classed by the Mines Department as deep or swift-flowing streams within the meaning of the Mining Act and its amendments, and the masters of dredges working on these streams must hold Class "A" Certificates. Some of the streams enumerated may not come within the literal meaning of the term "deep or swift-flowing" in dry weather, but in times of flood are heavy torrents, hence the necessity to class them as streams of the character named:—

Marlborough and West Coast Districts: Wakamarina, Wangapeka, Aorere, Lower Matakītaki (that portion of the river between its junctions with the Glenroy River and the Buller River), Inangahua, Buller, Ahaura, Totara, Nelson Creek, Grey, Teremakau, Lower Greenstone (that portion of the river from the junction of the Blackwater with the Greenstone to the junction of the Greenstone with the Teremakau), Hokitika, Mikonui, Arahura.

Southern District: Pomahaka, Clutha, Kawarau, Shotover, Manuherikia (lower end only—commencing from the entrance to the Gorge 6 chains upstream from the suspension road traffic bridge near Ophir in the Tiger Hill Survey District), Dart, Waiau, Mataura, Waikaia (lower end only, being that portion below the junction of Winding Creek).

MINERS' PENSIONS.

The Pensions Act, 1926, as amended, provides for payment of pensions to miners seriously and permanently incapacitated by miner's phthisis or totally incapacitated by other occupational disease or heart-disease contracted while mining in New Zealand. The rate of pension for a miner is 25s. a week, with 10s. a week added for his wife, if he is married, and a maximum of 10s. a week for each dependent child under fifteen, subject to a limit of £4 5s. a week for the family.

The widow of a miner who dies while in receipt of a pension is entitled to receive 17s. 6d. a week while she remains a widow.

Amendments to the Act during the past year included the widening of the basis of eligibility to cover cases of heart-disease and occupational diseases other than miner's phthisis, and the extension of the right to pension to any widow of a miner dying while himself in receipt of a pension, irrespective of the cause of death and irrespective of the financial circumstances of the widow.

The scheme, which originated in the Miner's Phthisis Act, 1915, is administered by the Pensions Department, and the following summary of operations for the year ended 31st March, 1937, has been supplied by the Commissioner of Pensions:—

Payments from 1st November, 1915, to 31st March,	£
1936	820,205
Payments, 1936-37	83,253
	<hr/>
	£903,458
	<hr/> <hr/>
Number of new grants for year 1936-37—	
Miners	199
Widows	76
	<hr/>
	275
Annual value of new grants	£23,478
Number of pensions in force at 31st March, 1937—	
Miners	861
Widows	179
	<hr/>
	1,040
Annual value of pensions in force at 31st March, 1937 ..	£87,839
Average pension per annum	£84 9s. 2d.
Number of pensions granted to 31st March, 1937 ..	2,666
Dissection of pensions in force at 31st March, 1937—	
Unmarried miners	245
Married miners	616
Miners' widows	179
	<hr/>
	1,040
	<hr/> <hr/>

COAL-MINERS' RELIEF FUND.

The Coal-miners' Sick and Accident Funds having been abolished as from the 1st April, 1926, and incorporated in the Coal-miners' Relief Fund, all accident relief payments are now made from the latter fund, which is administered by the Public Trustee.

The rate of interest allowed on the fund was decreased from 4 per cent. to 3½ per cent. as from the 1st April, 1933.

The interest earned for the twelve months ended 31st March, 1937, was £911 0s. 9d., as against £872 9s. 3d. for the previous year, while for the same periods the receipts from the ½d. per ton contributions were £4,373 8s. 2d. and £4,150 18s. 7d. respectively.

The total expenditure for the year ended 31st March, 1937, amounted to £4,307 19s. 3d., as against £3,880 19s. 1d. for the previous year.

The amount standing to the credit of the fund at the 31st March, 1937, was £26,601 18s. 8d., as against £25,625 9s. at the 31st March, 1936.

STATE AID TO MINING.

(a) MINES DEPARTMENT.

As in previous years, considerable use was made of the Government prospecting drills. They were hired by thirteen parties, and a total of 23,416 ft. was drilled.

The sum of £20,000 was voted for expenditure for assistance towards prospecting. The balance of unexpended authorities at the 31st March, 1936, and those issued during the year, less cancellations, amounted to £18,976 8s. 11d. Of this amount, £4,914 16s. was expended by way of actual subsidies during the year, leaving a balance of £14,061 12s. 11d. authorized but not spent at the 31st March, 1937. The number of men given employment through the subsidies granted by the Mines Department was 135.

I am pleased to state the amount voted was considerably in excess of previous years, and enabled the Department to arrange with the Labour Department to prospect areas in the Reefton and South Westland Districts. This prospecting is now being carried out by parties of men under skilled direction. The cost is being shared by the two Departments, and the sum of £4,000, in addition to the amount of £18,976 8s. 11d. authorized by way of subsidies, was set aside out of the Department's vote, of which £1,485 2s. 6d. came to charge during the year. The number of prospectors in these parties is thirty-five.

Provision totalling £3,969, including £2,969 in the Public Works Fund, was made for expenditure by way of direct grants and subsidies for roads and tracks. The balance of the unexpected authorities at the 31st March, 1936, and those issued during the year, amounted to £3,673 18s. 11d. Of this amount, the sum of £3,132 11s. was expended.

The expenditure on Schools of Mines amounted to £4,035.

(b) LABOUR DEPARTMENT.

During the year assistance to gold-prospectors and the gold-mining industry generally has been continued by the Labour Department from the Employment Promotion Fund. The total expenditure for the year ended 31st March, 1937, was £178,929, which includes all payments made in respect of subsidies, wages, supervisors, purchase of equipment, &c. This amount also includes £5,673 paid to mining companies and syndicates by way of subsidy.

Applications for subsidies made by companies and syndicates are thoroughly investigated by the Mines Department, and reports and recommendations are submitted to the Labour Department to assist in the consideration of such applications. Ordinarily, assistance to companies and syndicates is arranged by way of subsidy on the wages of registered and eligible unemployed men, actually in receipt of relief assistance, taken from the unemployment register by the company or syndicate concerned; but in certain special cases this condition can be varied to allow the payment of a subsidy on the wages of men already employed, or a subsidy on a footage basis in respect of driving, tunnelling, &c.

Towards the end of the year, the Labour Department, in collaboration with the Mines Department, made available the sum of £8,000, contributed equally by the two Departments, for the purpose of forming special prospecting parties to investigate the possibilities of areas in South Westland and for the investigation and development of the Reefton Goldfields. During December the first two parties were organized and commenced operations in South Westland.

An average of 1,873 men, excluding subsidized men employed by companies and syndicates, has received assistance during the year.

The amount of gold won during the twelve months ended 31st March, 1937, by subsidized prospectors, excluding that obtained by subsidized companies and syndicates, was approximately 7,600 oz., making the total production from the inception of the gold-prospecting scheme to the 31st March, 1937, over 35,000 oz.

Ten mining engineers and other technical officers, including two geologists in charge of the South Westland special prospecting parties, are employed in addition to sixty-five supervisors, and expert advice and assistance are always available to the men.

STAFF.

The only change amongst the senior members of the staff of my Department is the recent retirement of Mr. J. F. Downey, M.I.M.M., Inspector of Mines. Mr. Downey served the Department faithfully and well for a period of over twenty years and during his long service he earned the respect of the industry.

Finally, I desire to place on record my sincere thanks to the officers of the Department for their loyal co-operation and ready assistance at all times.

TABLES TO ACCOMPANY MINES STATEMENT.

No. 1.

TABLE SHOWING THE QUANTITY AND VALUE OF GOLD AND OTHER MINERALS AND ALLIED SUBSTANCES EXPORTED DURING THE YEARS ENDED THE 31ST DECEMBER, 1936 AND 1935, AND THE TOTAL VALUE SINCE THE 1ST JANUARY, 1853. THE COAL-OUTPUT IS ALSO INCLUDED.

Name of Metal or Mineral.	For Year ended the 31st December, 1936.		For Year ended the 31st December, 1935.		Total from the 1st January, 1853, to the 31st December, 1936.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Precious metals—	Oz.	£	Oz.	£	Oz.	£
Gold*	166,210	1,385,003	168,756	1,423,026	24,881,151	101,259,526
Silver	476,939	55,574	388,978	61,277	30,112,566	3,457,471
Total gold and silver ..	643,149	1,440,577	557,734	1,484,303	54,993,717	104,716,997
Mineral produce, including kauri-gum—	Tons.	£	Tons.	£	Tons.	£
Copper-ore .. .. .	..	..	..	..	1,504	19,390
Chrome-ore .. .. .	..	..	..	..	5,869	38,002
Antimony-ore .. .. .	..	..	..	..	3,785 ⁹ / ₂₀	55,081
Manganese-ore .. .. .	..	..	..	..	19,386 ¹¹ / ₂₀	62,011
Hæmatite-ore .. .. .	..	..	..	..	77	469
Tungsten-ore	40 ¹ / ₂₀	5,563	52	7,083	2,607 ⁹ / ₂₀	330,113
Sulphur (crude) .. .. .	..	..	..	..	4,927	13,241
Mixed minerals	3,242†	8,881	3,300†	8,769	103,461 ³ / ₂₀	411,557
Coal (New Zealand) exported	44,872	55,217	46,146	62,910	6,641,193	7,434,752
Coke exported	6	20	5	28	17,774	28,275
Coal, output of mines in Dominion (less exports)	2,095,345	2,085,000	2,069,038	2,052,274	79,336,350	59,454,830
Oil-shale .. .. .	..	..	..	..	14,444	7,236
Kauri-gum	3,237	96,161	2,872	79,113	434,655	23,362,163
Pig iron .. .. .	..	..	..	..	1,614	6,615
Quicksilver	lb.	..	lb.	..	87,993	19,024
Total value of minerals ..	..	2,250,842	..	2,210,177	..	91,242,759
Value of gold and silver, as above	..	1,440,577	..	1,484,303	..	104,716,997
Total value of minerals, including gold and silver	..	3,691,419	..	3,694,480	..	195,959,756

* In respect of gold, ounces of the fineness of 20 carats and upwards.

† Pumice-sand and stone.

NOTE.—The gold and silver recorded in this table are the products of the mines of the Dominion and do not include jewellers' sweepings or old jewellery.

No. 2.

TABLE SHOWING THE QUANTITY AND VALUE OF GOLD EXPORTED FROM NEW ZEALAND FOR THE YEARS ENDED THE 31ST DECEMBER, 1936 AND 1935, AND THE TOTAL QUANTITY AND VALUE FROM 1857 TO THE 31ST DECEMBER, 1936.

District and County or Borough.	Year ended 31st December, 1936.		Year ended 31st December, 1935.		Total Quantity and Value from January, 1857, to 31st December, 1936.	
	Quantity.	Value.	Quantity.	Value.		
AUCKLAND—	Oz.	£	Oz.	£	Oz.	£
County of Ohinemuri ..	8,837	64,051	9,940	74,011		
County of Coromandel ..	443	3,240	512	3,922		
County of Thames ..	1,375	10,335	645	4,876		
Borough of Waihi ..	60,824	526,083	58,544	515,112		
Borough of Thames ..	671	4,909	622	4,751		
	72,150	608,618	70,263	602,672	8,092,731	32,963,885
WELLINGTON ..	..	..	..	..	188	706
MARLBOROUGH—						
County of Marlborough ..	493	4,083	678	5,587		
County of Sounds ..	..	..	81	623		
	493	4,083	759	6,210	117,812	481,840
NELSON—						
County of Collingwood ..	148	1,201	554	4,525		
County of Murchison ..	6,731	55,734	5,056	42,484		
County of Waimea ..	711	5,929	842	7,029		
	7,590	62,864	6,452	54,038	1,772,627	7,138,808
WEST COAST—						
County of Grey ..	13,393	110,937	9,642	80,180		
County of Buller ..	1,819	14,894	2,500	20,568		
County of Inangahua ..	22,915	185,781	26,922	221,562		
County of Westland ..	24,195	202,814	29,336	248,126		
	62,322	514,426	68,400	570,436	6,963,209	28,682,737
CANTERBURY—						
County of Ashburton ..	..	..	1	8		
	..	..	1	8	165	669
OTAGO—						
County of Taieri ..	125	1,018	17	142		
County of Tuapeka ..	2,101	17,389	2,148	17,930		
County of Vincent ..	2,510	20,652	3,326	27,393		
County of Maniototo ..	2,149	17,636	2,697	22,302		
County of Waitaki ..	675	5,668	547	4,501		
County of Lake ..	3,654	30,381	2,812	23,476		
County of Wallace ..	2,594	21,370	1,338	11,084		
County of Southland ..	7,664	62,748	8,227	68,060		
County of Waihemo ..	1,791	15,048	1,618	13,575		
County of Bruce ..	107	875	25	203		
County of Clutha ..	..	..	8	62		
County of Waikouaiti ..	5	40	20	163		
	23,375	192,825	22,783	188,891	7,921,070	31,935,542
Unknown ..	280	2,187	98	771	13,349	55,339
Totals ..	166,210	1,385,003	168,756	1,423,026	24,881,151	101,259,526

NOTE.—The gold recorded in this table is the product of the mines of the Dominion and does not include jewellers' sweepings or old jewellery.

No. 3.

TABLE SHOWING QUANTITY OF GOLD EXPORTED ANNUALLY FROM NEW ZEALAND FROM 1857 TO 1936.

Year.	Quantity. Oz.	Year.	Quantity. Oz.	Year.	Quantity. Oz.	Year.	Quantity. Oz.
1857	10,437	1877	371,685	1897	251,645	1917	218,624
1858	13,534	1878	310,486	1898	280,175	1918	11,987
1859	7,336	1879	287,464	1899	389,558	1919	320,210
1860	4,538	1880	305,248	1900	373,616	1920	212,973
1861	194,031	1881	270,561	1901	455,561	1921	149,595
1862	410,862	1882	251,204	1902	508,045	1922	131,848
1863	628,450	1883	248,374	1903	533,314	1923	169,512
1864	480,171	1884	229,946	1904	520,320	1924	133,631
1865	574,574	1885	237,371	1905	520,486	1925	114,696
1866	735,376	1886	227,079	1906	563,843	1926	125,777
1867	686,905	1887	203,869	1907	508,210	1927	130,171
1868	637,474	1888	201,219	1908	506,423	1928	118,722
1869	614,281	1889	203,211	1909	506,371	1929	116,848
1870	544,880	1890	193,193	1910	478,288	1930	133,749
1871	730,029	1891	251,996	1911	455,226	1931	139,974
1872	445,370	1892	238,079	1912	343,163	1932	167,784
1873	505,337	1893	226,811	1913	376,161	1933	164,998
1874	376,388	1894	221,615	1914	227,954	1934	157,375
1875	355,322	1895	293,491	1915	422,825	1935	168,756
1876	322,016	1896	263,694	1916	292,620	1936	166,210

No. 4.

TABLE SHOWING THE OUTPUT OF COAL FROM THE VARIOUS COALFIELDS, AND THE COMPARATIVE INCREASE AND DECREASE, FOR THE YEARS 1936 AND 1935, TOGETHER WITH THE TOTAL APPROXIMATE QUANTITY OF COAL PRODUCED SINCE THE MINES WERE OPENED.

Name of Coalfield.	Output.		Increase.	Decrease.	Approximate Total Output up to 31st December, 1936.
	1936.	1935.			
	Tons.	Tons.	Tons.	Tons.	Tons.
North Auckland	62,094	72,866	..	10,772	5,812,974
Waikato (including Taranaki)	733,743	764,754	..	31,011	15,483,839
Nelson	27,483	25,221	2,262	..	633,055
Buller	349,268	313,129	36,139	..	24,610,533
Reefton	45,999	49,916	..	3,917	965,366
Grey	421,820	415,387	6,433	..	16,773,686
Canterbury	20,490	21,904	..	1,414	1,076,963
Otago	198,910	195,427	3,483	..	13,382,518
Southland	280,410	256,580	23,830	..	7,238,699
Totals	2,140,217*	2,115,184	..	..	85,977,543

* Increase, 25,033 tons.

No. 5.

TABLE SHOWING THE OUTPUT OF DIFFERENT CLASSES OF COAL.

Class of Coal.	Output.		Increase.	Decrease.	Approximate Total Output to the 31st December, 1936.
	1936.	1935.			
	Tons.	Tons.	Tons.	Tons.	Tons.
Bituminous and sub-bituminous	858,857	825,227	33,630	..	49,836,586
Brown	1,150,071	1,170,805	..	20,734	30,992,459
Lignite	131,289	119,152	12,137	..	5,148,498
Totals	2,140,217	2,115,184	..	..	85,977,543

No. 6.

TABLE SHOWING THE INCREASE OR DECREASE IN THE ANNUAL PRODUCTION OF COAL AND OIL-SHALE IN THE DOMINION, AND THE QUANTITY OF COAL IMPORTED SINCE 1878.

Year.	Coal and Shale raised in the Dominion.		Coal imported.		
	Tons.	Yearly Increase or Decrease.	Tons.	Increase over Preceding Year.	Decrease below Preceding Year.
Prior to 1878 ..	709,931	..	..	..	..
1878 ..	162,218	..	174,148	..	..
1879 ..	231,218	Inc. 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	.. 59,069	148,444	24,904	..
1885 ..	511,063	.. 30,232	130,202	..	18,242
1886 ..	534,353	.. 23,290	119,873	..	10,329
1887 ..	558,620	.. 24,267	107,230	..	12,643
1888 ..	613,895	.. 55,275	101,341	..	5,889
1889 ..	586,445	Dec. 27,450	128,063	26,722	..
1890 ..	637,397	Inc. 50,952	110,939	..	17,124
1891 ..	668,794	.. 31,397	125,318	14,379	..
1892 ..	673,315	.. 4,521	125,453	135	..
1893 ..	691,548	.. 18,233	117,444	..	8,009
1894 ..	719,546	.. 27,998	112,961	..	4,483
1895 ..	726,654	.. 7,108	108,198	..	4,763
1896 ..	792,851	.. 66,197	101,756	..	6,442
1897 ..	840,713	.. 47,862	110,907	9,151	..
1898 ..	907,033	.. 66,320	115,427	4,520	..
1899 ..	975,234	.. 68,201	99,655	..	15,772
1900 ..	1,093,990	.. 118,756	124,033	24,378	..
1901 ..	1,239,686	.. 145,696	149,764	25,731	..
1902 ..	1,365,040	.. 125,354	127,853	..	21,911
1903 ..	1,420,229	.. 55,189	163,923	36,070	..
1904 ..	1,537,838	.. 117,609	147,196	..	16,727
1905 ..	1,585,756	.. 47,918	169,046	21,850	..
1906 ..	1,729,536	.. 143,780	207,567	38,521	..
1907 ..	1,831,009	.. 101,473	220,749	13,182	..
1908 ..	1,860,975	.. 29,966	287,808	67,059	..
1909 ..	1,911,247	.. 50,272	258,185	..	29,623
1910 ..	2,197,362	.. 286,115	232,378	..	25,807
1911 ..	2,066,073	Dec. 131,289	188,068	..	44,310
1912 ..	2,177,615	Inc. 111,542	364,359	176,291	..
1913 ..	1,888,005	Dec. 289,610	468,940	104,581	..
1914 ..	2,275,614	Inc. 387,609	518,070	49,130	..
1915 ..	2,208,624	Dec. 66,990	353,471	..	164,599
1916 ..	2,257,135	Inc. 48,511	293,956	..	59,515
1917 ..	2,068,419	Dec. 188,716	291,597	..	2,359
1918 ..	2,034,250	.. 34,169	255,332	..	36,265
1919 ..	1,847,848	.. 186,402	391,434	136,102	..
1920 ..	1,843,705	.. 4,143	476,343	84,909	..
1921 ..	1,809,095	.. 34,610	822,459	346,116	..
1922 ..	1,857,819	Inc. 48,724	501,478	..	320,981
1923 ..	1,969,834	.. 112,015	445,792	..	55,686
1924 ..	2,083,207	.. 113,373	674,483	228,691	..
1925 ..	2,114,995	.. 31,788	572,573	..	101,910
1926 ..	2,239,999	.. 125,004	483,918	..	88,655
1927 ..	2,366,740	.. 126,741	378,090	..	105,828
1928 ..	2,436,753	.. 70,013	247,861	..	130,229
1929 ..	2,535,864	.. 99,111	215,656	..	32,205
1930 ..	2,542,092	.. 6,228	157,943	..	57,713
1931 ..	2,157,756	Dec. 384,336	179,060	21,117	..
1932 ..	1,842,022	.. 315,734	103,531	..	75,529
1933 ..	1,821,258	.. 20,764	99,272	..	4,259
1934 ..	2,060,315	Inc. 239,057	100,715	1,443	..
1935 ..	2,115,184	.. 54,869	97,398	..	3,317
1936 ..	2,140,217	.. 25,033	111,078	13,680	..

No. 7.

TABLE SHOWING THE TOTAL QUANTITY AND VALUE OF COAL IMPORTED INTO AND EXPORTED FROM NEW ZEALAND FROM AND TO EACH COUNTRY DURING THE CALENDAR YEAR 1936.

Imports.

Country whence imported.	Tons.	Value.
Australia	111,078	£ 105,340
Totals	111,078	105,340

Exports : Bunkers.

Country to which exported.	Produce of New Zealand.		Produce of other Countries.	
	Tons.	Value.	Tons.	Value.
		£		
United Kingdom	12,164	23,326	..	..
Australia	14,180	14,359	..	..
Fiji	5,159	4,643	..	..
Nauru Island	5,829	5,245	..	..
Gilbert and Ellice Islands	773	618	..	..
Canada	850	1,403	..	..
Japan	808	727	..	..
New Caledonia	1,200	1,080	..	..
Tuamotu Archipelago	1,443	1,299	..	..
Totals	42,406	52,700	..	..

Exports : Cargo.

Country to which exported.	Produce of New Zealand.		Produce of other Countries.	
	Tons.	Value.	Tons.	Value.
		£		
United Kingdom	101	198	..	..
Fiji	18	87	..	..
Western Samoa	2	5	..	..
Australia	1	2	..	..
Gilbert and Ellice Islands	506	507	..	..
Nauru Island	602	482	..	..
Tutuila	1,236	1,236	..	..
Totals	2,466	2,517	..	..

No. 8.

NUMBER OF PERSONS ORDINARILY EMPLOYED AT OR ABOUT MINES OTHER THAN COAL-MINES
DURING THE YEAR ENDED 31ST DECEMBER, 1936.

County or Borough.	Number of Persons ordinarily employed at				Total.	
	Gold-quartz Mines.	Gold Alluvial Mines.	Gold- dredges.	Mines other than Gold and Coal.	1936.	1935.
NORTHERN INSPECTION DISTRICT.						
County of Piako	3	..	..	..	3	5
" Thames	60	..	..	..	60	104
" Ohinemuri	197	..	..	..	197	228
" Coromandel	87	..	..	..	87	108
" Whangarei .. ..	..	..	..	..	..	5
Borough of Thames	83	..	..	..	83	126
" Waihi	638	..	..	..	638	646
County of Taranaki .. ..	..	..	..	3*	3	4
WEST COAST INSPECTION DISTRICT.						
County of Marlborough	5	142	..	..	147	176
" Waimea .. ..	..	51	..	..	51	93
" Takaka .. ..	..	119	..	..	119	153
" Collingwood .. ..	..	141	..	..	141	190
" Murchison .. ..	..	338	33	..	371	476
" Buller	3	275	..	..	278	564
" Inangahua	262	184	26	..	472	536
" Grey	3	547	98	3*	651	742
" Westland	9	334	82	..	425	556
SOUTHERN INSPECTION DISTRICT.						
County of Taieri .. ..	..	9	..	..	9	17
" Ashburton .. ..	..	4	..	..	4	9
" Tuapeka .. ..	..	203	..	..	203	280
" Vincent	8	396	10	..	414	651
" Maniototo	5	180	..	..	185	258
" Waihemo	15	26	..	9	50	54
" Waitaki .. ..	..	46	..	..	46	57
" Lake	9	231	10	13	263	343
" Wallace .. ..	..	95	..	..	95	141
" Southland .. ..	..	153	20	..	173	202
" Waikouaiti .. ..	..	6	..	..	6	8
" Bruce .. ..	..	7	..	..	7	8
" Clutha .. ..	..	3	..	..	3	1
" Fiord .. ..	..	5	..	..	5	9
Totals	1,387	3,495	279	28	5,189	6,750

* Employed in oil-boring operations.

Summary of Persons ordinarily employed in or about New Zealand Mines during 1936 and 1935.

	1936.	1935.	Increase or Decrease.
Gold, silver, and tungsten mines	5,183	6,741	Dec. 1,558
Other metalliferous mines	6*	9	" 3
Coal-mines	4,257	4,231	Inc. 26
Totals	9,446	10,981	Dec. 1,535

* Employed in oil-boring operations.

APPENDICES TO THE MINES STATEMENT.

APPENDIX A.

REPORTS RELATING TO METALLIFEROUS MINES AND STONE-QUARRIES.

THE INSPECTING ENGINEER OF MINES to the UNDER-SECRETARY OF MINES.

SIR,—

Wellington, 14th June, 1937.

I have the honour to present my report on metalliferous mines and stone-quarries, together with statistical information, for the year ended 31st December, 1936.

In accordance with the usual practice, the tables showing expenditure on roads, bridges, tracks, prospecting operations, &c., are for the period covered by the financial year—viz., from the 1st April, 1936, to the 31st March, 1937.

The reports, &c., are divided into the following sections: I. Minerals produced and exported. II. Persons employed. III. Accidents. IV. Gold-mining—(1) Quartz-mining; (2) Dredge Mining; (3) Alluvial Mining. V. Minerals other than Gold. VI. Stone-quarry Inspection and Statistics. VII. State Aid to Mining—(1) Subsidized Prospecting; (2) Government Prospecting-drills; (3) Subsidized Roads on Goldfields; (4) General Remarks.

Annexures: (A) Summary of Reports by Inspectors of Mines. (B) Summary of Report by Inspector of Quarries. (C) Mining Statistics.

I. MINERALS PRODUCED AND EXPORTED.

The following statement shows the quantity and value of the production from metal-mines and of the value of production from stone-quarries under the Stone-quarries Act during 1936 and 1935 :—

Mineral.	1936.		1935.	
	Quantity.	Value.	Quantity.	Value.
Gold and silver (estimated)	Oz. dwt. 597,548 0	£ 1,272,587	Oz. dwt. 603,244 0	£ 1,300,046
Platinum	29 11	187	14 0	79
Pig-iron	Tons cwt. ..	..	Tons cwt. 4,902 0	23,775
Stone .. .. .	..	342,861	..	289,274
Pumice	3,242 0	8,881	3,300 0	8,769
Tungsten-ore	28 2	3,448	39 7	4,719
Quicksilver	lb. ..	..	lb. 563	132
Totals .. .. .	..	1,627,964	..	1,626,794

The following statement shows the value of New Zealand minerals (other than coal and coke) and allied substances exported during 1936 and 1935, and since 1st January, 1853 :—

	1936.	1935.	Increase or Decrease.	Total from the 1st January, 1853, to the 31st December, 1936.
Gold	£ 1,385,003	£ 1,423,026	Dec. 38,023	£ 101,259,526
Silver	55,574	61,277	„ 5,703	3,457,471
Tungsten-ore	5,563	7,083	„ 1,520	330,113
Kauri-gum	96,161	79,113	Inc. 17,048	23,362,163
Sand, lime, and building-stone	8,881	8,769	„ 112	632,626
Other minerals .. .. .	..	..	..	..
Totals	1,551,182	1,579,268	Dec. 28,086	129,041,899

II. PERSONS EMPLOYED.

The following statement shows the number of persons ordinarily employed in or about the metalliferous mines* of the Dominion during the year:—

Classification.	Inspection District.			Total, 1936.
	Northern.	West Coast.	Southern.	
Gold, silver, and tungsten	1,068	2,652	1,463	5,183
Cinnabar .. .. .	..	..	..	..
Totals for 1936	1,068	2,652	1,463	5,183
Totals for 1935	1,222	3,486	2,038	6,746

* In addition six persons were employed in oil-boring operations.

III. ACCIDENTS.

During 1936 seven fatal and five serious but non-fatal accidents occurred in or about metalliferous mines, at which 5,183 persons were ordinarily employed.

Cause.	Fatal Accidents.		Serious Non-fatal Accidents.	
	Number of Separate Accidents.	Number of Deaths.	Number of Separate Accidents.	Number of Persons Injured.
Falls of ground.. .. .	2	2	2	2
Explosives	1	1	..	..
Miscellaneous, on surface	4	5	3	3
Miscellaneous, underground .. .. .	..	..	..	..
Totals	7	8	5	5

During 1936 eight men were killed and there were five serious non-fatal accidents in or about metalliferous mines at which 5,183 persons were ordinarily employed.

In the Northern District two fatal accidents—both of them on the surface—occurred in 1936. In the West Coast District three of the four fatalities were connected with dredging, and the fourth occurred at a Public Works Department camp where a large water-race is being made. In the Southern District two fatal accidents occurred, both as a result of falls of rock.

An account of the eight fatalities follows:—

While working with a gang of men on a railway crossing at Waikino, W. G. Collins, a battery employee, was killed by the Auckland-Waihi train on 14th January, 1936. Hearing the train whistle he ran along the railway-line to see if a horse he was in charge of was in danger. The horse took fright and bolted, and the deceased, in giving chase apparently forgot he was being overtaken by the train until it was too late to jump clear.

While he was fossicking for scheelite on 4th April, 1936, in an open cut on Mount Judah, Glenorchy, J. J. Clingin was killed by a mass of schist falling on him when he was only a few feet in the open cut.

A double fatality occurred at Marsden, near Greymouth, on 5th June, 1936, when William Woods, dredgemaster, and Aynsley A. Moore, foreman, were drowned by the sudden release of the water at the Nemona Gold-dredging Co.'s temporary dam. They were engaged in strengthening the dam when a white-pine log, 30 ft. in length, supporting the dam, suddenly snapped. They were pinned down by the dam timbers and, being unable to escape, were drowned by the swirling water.

On 8th June, 1936, a horse-driver working on the surface at the Waihi Mine was absent having a poisoned finger dressed. During his absence W. T. Moyes took the horse to bring a truck back from the No. 6 shaft to load it with timber. He was running alongside the horse holding the reins. As the truck gained speed he endeavoured to sprag it, but missed his thrust and fell in front of the truck, being carried some distance before the truck passed over him. His ribs were crushed on both sides, penetrating the lungs.

A miner, G. Russell, was killed on 10th August, 1936, by a fall of gravel in his working-place in the eastern section of the King Solomon Mine.

An electrician, Peter A. Watt, freshly engaged by the Brian Boru Gold-dredging Co., was electrocuted on 23rd August, 1936, in a substation near the dredge. To ascertain what electrical equipment needed renewing he opened the door leading to the transformers. He struck a match, and there was a blinding flash inside the cubicle. The dredge-construction supervisor, who had accompanied Watt to the substation, lifted him outside, and Watt became unconscious. Unfortunately, artificial respiration was not persisted in at the substation, Watt being conveyed to Blackball, a distance of nine miles. Efforts then made to resuscitate him were without avail.

An employee of the Public Works Department, Robert T. Gallon, was killed on 28th September, 1936, by an explosion of gelignite in an 8 ft. by 10 ft. tent near the entrance to the No. 10 tunnel on the Humphrey's Gully water-race. The explosive charges for the tunnel-work were made ready in the tent, where about 10 lb. of gelignite were stored in a drum in which carbide had formerly been stored. The actual cause of the explosion is not known.

IV. GOLD-MINING.

The following statement shows the value of the bullion-production, also the dividends declared, number of persons employed, and the number of gold mines and dredges :—

	Production of Bullion, 1936.* (All Mines.)		Dividends paid, 1936. (By Registered Companies only.)†	Number of Persons ordinarily employed at Productive and Unproductive Mines, 1936.	Number of Productive Quartz- mines, Alluvial Mines, and Dredges, 1936.
	Quantity.	Value.			
	Oz.	£	£		
Quartz-mining ..	526,661	732,869	151,336	1,387	77
Alluvial mining‡	33,618	244,640	16,436	3,495	2,928
Dredge mining ..	37,269	295,078	62,335	279	21
Totals, 1936 ..	597,548	1,272,587	230,107	5,161	3,026
Totals, 1935 ..	603,244	1,300,046	131,280	6,715	4,500

* In addition to the gold produced from the gold-mines, silver was obtained from them, hence the word "bullion" is used in preference to "gold."

† The profits of privately-owned dredges and mines are unobtainable, which renders this statement incomplete.

‡ The bullion-production is from 2,928 alluvial claims, but the dividends are only obtainable from those few that are the property of registered companies.

The total value of the bullion produced in 1936 was less by £27,459 than that produced in 1935. From quartz-mining and alluvial mining the value of the bullion produced was less by £45,648 and £24,466 respectively, but from dredging the increased value of the bullion recovered in 1936, compared with the recovery in 1935, was £42,655.

(I) QUARTZ-MINING.

Inspection District.	Statute Tons of Ore treated.		Value of Bullion.		Dividends paid (by Registered Companies only).	
	1936.	1935.	1936.	1935.	1936.	1935.
			£	£	£	£
Northern ..	213,388	211,425	543,052	556,855	110,087	60,332
West Coast ..	48,091	52,233	182,239	215,960	41,249	28,749
Southern ..	2,146	1,606	7,578	5,702	..	..
Totals ..	263,625	265,264	732,869	778,517	151,336	89,081

The average value per ton of ore treated during 1936 amounted to £2 15s. 7d., as compared with £2 18s. 8d. during 1935.

At the Martha Mine 172,622 long tons of quartz was mined and treated, from which 53,108 oz. of gold, valued at £371,762, and 382,400 oz. of silver, valued at £34,746, were recovered. The dividends paid during the year, £99,181 8s., were double those of the previous year. The total dividends paid to date from the Martha Mine are £6,387,780 16s. 6d.

Except for 28 ft. driven in the No. 11 level and 91 ft. in the No. 9 level, all the development-work done during 1936 in the Martha Mine was above the No. 9 level.

Driving was continued on the north branch of the Martha lode in Nos. 4, 6, 7, and 9 levels and above the No. 1 level. Further development-work was also done on the Royal lode in No. 6 level and on the Bell Reef in No. 2 level.

From the Waihi Grand Junction area, worked by the Martha Gold-mining Co., 27,004 long tons of ore was mined, from which 7,620 oz. of gold, valued at £53,338, and 28,117 oz. of silver, valued at £2,554, were recovered.

Exploratory work on the Royal lode was done in No. 6 level and in an intermediate level below No. 8, and on the George and Empire lodes in intermediate levels below No. 7 level.

In the No. 3 level of the Golden Dawn Mine at Owharoa driving was done, during 1936, on the westwall branch of the No. 1 reef, on the No. 1 reef itself, and on the eastwall branch of the No. 3 reef. In the intermediate level, 70 ft. above the No. 3 level, driving was done on the Nos. 1 and 2 reefs and on the eastwall branch of the No. 3 reef.

9,247 tons of quartz was mined and treated for a return of 4,987 oz. of gold, valued at £42,136, and 9,719 oz. of silver, valued at £601.

From other mines in the district, but chiefly from the Talisman-Dubbo Mine, the Golden Dawn battery treated 2,347 tons of ore from which 2,439 oz. of gold, valued at £21,250, and 10,694 oz. of silver, valued at £1,210, were recovered. During the year £4,000 was paid in dividends by the Golden Dawn Gold-mines, Ltd.

At the Talisman-Dubbo Mine, Karangahake, driving and stoping was continued in the Talisman Nos. 1 and 2 levels, and the Talisman No. 4 level is being cleaned up and retimbered. Stoping was done also in the Dubbo level. From the Talisman-Dubbo Mine 2,272 tons of ore was mined and it was treated at the Golden Dawn battery and yielded 2,344 oz. of gold, valued at £20,576, and 10,296 oz. of silver, valued at £1,171.

From four other small mines in the Karangahake District 240 tons of ore was mined which yielded 95 oz. of gold, valued at £589, and, from the old Talisman battery site, 61 tons were treated from which 67 oz. of gold was recovered, valued at £552.

From driving and sinking at four mines at Tokatea 209 oz. of gold was recovered, valued at £1,125.

In the vicinity of the old Komata Gold-Mining Co.'s No. 2 level driving has recently been done to prove the worth of a 4 ft. reef that was not worked in former years. A battery and a cyanide plant have been installed and 51 tons of ore from a rise at No. 4 level was treated and yielded 137 oz. of gold, valued at £525.

Prospecting continued apace in the Thames District also, and stone was crushed and treated from seven Thames mines. From the Sylvia Mine 349 tons were treated for a return of £1,710; 115 tons from the Dawn of Hope Mine; and 87 tons from the Progress Mine. The return from the Dawn of Hope crushing was £1,841 and from the Progress, £679.

Throughout 1936 production from the Blackwater, Big River, and Alexander Mines was carried on without intermission, and, besides a good deal of prospecting-work done by others, much systematic prospecting was carried out in the Reefton District under the guidance of the Labour, Mines, and Scientific and Industrial Research Departments.

At the Blackwater Mine most of the development-work was in the vicinity of the north shaft. At that shaft, now 2,300 ft. in depth, the steam winding-plant has been replaced by an up-to-date electric winder, and the single-decked cages by double-decked ones, so most of the ore is now raised at that shaft instead of at the south or Blackwater shaft. As a consequence, arrangements had to be made to reverse the ventilating air-current and make the north shaft into the downcast, instead of the upcast shaft. Besides other development-work in the Nos. 10 and 12 levels, from the No. 13 (the lowest level at present) driving has been continued off the north shaft both to the north and south on good payable reef, so there is every indication of payable stone being met from further sinking of the north shaft. During 1936 from the Blackwater Mine 41,990 tons of ore was crushed from which 19,024 oz. of gold, valued at £153,894, was recovered.

At the Alexander Mine the year's development was confined to the No. 5 level and the No. 4 intermediate level. During 1936, 4,114 tons of ore was crushed from which 2,814 oz. of gold, valued at £22,804, was obtained, including 214 oz. from concentrates shipped to Australia for treatment.

From the No. 5 level chamber in the Big River Mine a new crosscut was driven to the east for 331 ft. When 300 ft. in, a lode channel was met and, from 317 ft. to 327 ft. in, the driving was in a 2 ft. wide lode, carrying 13 dwt. of gold to the ton. During the year 450 tons were treated at the Big River Mine for a yield of 371 oz., valued at £2,847.

Work in the Mount Greenland Mine during 1936 was confined to stoping 286 tons of ore from the No. 2 level. 157 oz. of gold was recovered, valued at £1,101.

(2) DREDGE MINING.

The following is a statement showing the capacity and production of bucket gold dredges and dividends declared by dredging companies during 1936. (NOTE.—The dividends declared by privately-owned dredges are not obtainable for publication.)

Name of Dredge.	Locality.	Capacity of Dredge-buckets, in Cubic Feet.	Number of Buckets discharged per Minute.	Nominal Horse-power of Engines.	D = Diesel S = Steam. E = Electrical. H = Hydraulic.	Average Depth of Ground dredged.	Quantity and Value of Bullion obtained during 1936.		Dividends declared.	
							oz.	£	During 1936.	Total to End of 1936.
<i>West Coast.</i>										
Mataki ..	Murchison ..	7	20	120	S	10	1,724	12,577	2,812	7,030
Mataki Junction ..	" ..	6	21	370	DE	20	*2,549	18,656	..	..
Worksop ..	Antonio's ..	4	12	140	D	15	1,920	15,581	4,800	12,800
Mossy Creek ..	Hukarere ..	4	26	225	E	11	2,303	18,875	7,500	11,250
Brian Boru ..	German Gully ..	9	20	250	E	35	43	317	..	1,350
Argo ..	Blackball ..	5	18	210	E	33	3,068	25,424	11,200	11,200
Maori Gully ..	Maori Gully ..	4	20	205	E	17½	1,590	11,646	3,600	6,000
New River ..	Dunganville ..	4	15	140	D	15	213	1,431	..	..
Nemona ..	Marsden ..	4½	28	255	E	18	987	7,969	3,000	3,000
Bundi ..	Cameron's ..	10	18	500	S	32	2,979	21,445	..	..
White's Electric ..	Barrytown ..	4	10	226	E	19	145	1,055	..	..
Stafford ..	Stafford ..	8	12	220	E	18	1,512	10,967	..	3,750
Rimu ..	Rimu ..	12	19	922	E	49	11,516	97,488	20,834	98,716
Five Mile Beach ..	Okarito ..	5	10	..	H	20	838	6,112	..	31,500
Gillespie's Beach ..	Gillespie's Beach	5	13	225	E	28	2,715	22,256	7,583	12,250
<i>Otago and Southland.</i>										
Aitken's ..	Maitland ..	6	10	32	S	14	1,236	9,432	..	..
Bendigo-Goldlight ..	Bendigo ..	7½	9	20	S	55	35	248	..	..
Nevis Crossing ..	Nevis ..	3½	10	12	S	10	369	2,688	..	..
Goldfield's ..	Shotover River ..	8	18	305	E	23	397	2,802	..	..
Rainbow ..	Waimumu ..	2½	12	38	D	7	170	1,107	173	173
Waipapa Beach ..	Otara ..	2½	14	70	D	18	960	7,002	833	833
Totals, 1936 ..	..	..	..	..	..	..	37,269	295,078	62,335	Unknown
Totals, 1935 ..	..	..	..	..	..	..	32,062	252,423	38,670	Unknown

* Includes 22 oz. of silver valued at £2.

During 1936 fifteen dredges were worked in the West Coast District and six in the Southern District.

Of the fifteen West Coast dredges four were new ones. The Mataki Junction dredge commenced to operate in January, the Nemona dredge in June, the New River dredge in August, and White's electric dredge in September, 1936.

The Brian Boru dredge, which ceased working in February, 1935, commenced to operate again in August, 1936, but closed down finally after recovering only 43 oz. of gold from then until the middle of December, 1936. Early in the year the Bendigo-Goldlight dredge was operated for a short period, but has been idle since.

Except during the severe winter experienced in the Nevis Valley, the Nevis Crossing dredge was operated throughout the year.

All other dredges operated continuously during the year.

The West Coast dredges recovered in 1936, 34,080 oz. of gold, valued at £271,797, compared with 29,287 oz. in 1935, valued at £231,996. In 1936 the Southern District dredges recovered 3,167 oz. of gold, valued at £23,279, compared with 2,775 oz., valued at £20,427, in 1935.

In 1936 ten of the dredging companies declared dividends totalling £62,335, an increase of £23,665 over that of the previous year's dividends.

On the Clutha River two powerful electrically-driven dredges were under construction in 1936, one near Clyde and the other near Alexandra. Both were made ready for launching, but the river for a long period was very low. When the rains came it was very high, therefore neither of the dredges could be launched during 1936.

To work the inner-beach leads at Barrytown a 1,500 ton electrically-driven all-steel dredge is being built and will soon be operating.

Material has been ordered also for four other dredges to operate on the West Coast.

(3) ALLUVIAL MINING.

The following is a statement showing the value of production of, and dividends declared by, alluvial gold-mines during 1936 :—

Name of Owner.	Estimated Quantity and Value of Gold produced.		Dividends declared.	
	oz.	£	During 1936.	Total to End of 1936
<i>West Coast.</i>				
Addison Exploration, Ltd.	524	4,500	..	..
Addison's Flat Gold-mining Co., Ltd.	416	3,388	..	2,795
Antonio's Hydraulic Elevating Co., Ltd.	5	39	..	..
Blackwater Creek Sluicing Co., Ltd.	189	1,532	..	..
Deep Lead, Ltd.	268	1,896	..	500
Diamond's Flat Gold-mining Co., Ltd.	119	824	..	..
Glenroy Gold, Ltd.	106	746	..	..
Golden Sands, Ltd.	738	5,968	2,100	5,300
Grove Gold-mining Syndicate	72	538	..	..
Hohonu Gold-sluicing Co., Ltd.	98	720	..	..
Koura Mining Co., Ltd.	6	40	..	..
Kumara Goldfields Syndicate	24	180	..	..
Lawson's Flat Gold-mining Co., Ltd.	479	3,360	..	..
Moonlight Goldfields, Ltd.	730	6,393	..	..
Mount David Sluicing Co., Ltd.	41	301	..	..
Waimea Gold, Ltd.	4	31	..	..
Waitahu Gold-mining Co., Ltd.	803	5,977	..	..
Waratea Sluicing Syndicate	13	101	..	..
All other claims	8,992	62,615	..	..
<i>Otago and Southland.</i>				
Arthur's Point Sluicing Co., Ltd.	318	2,281	..	..
Bell-Hooper Cromwell Gold, Ltd.	27	202	..	..
Ben Ledi Sluicing Co., Ltd.	7	46	..	..
Central Shotover Gold-mining Co., Ltd.	51	358	..	..
Coastal Mining Co., Ltd.	196	1,392	..	..
Fruidburn Sluicing Co., Ltd.	22	161	..	..
Golden Arrow Mining Co., Ltd.	353	2,510	275	1,375
Jones Nevis Sluicing Co., Ltd.	92	684	..	813
Junction Reward Gold-mining Co., Ltd.	133	977	..	167
Kildare Consolidated Gold-mining Co., Ltd.	199	1,403	..	1,000
King Solomon Deep Lead, Ltd.	1,958	14,568	..	19,500
Macraes Gold-mining Co., Ltd.	1,654	11,905	2,750	5,000
Maerewhenua Goldfields Development Co., Ltd.	233	1,858	..	..
Mining House Concessions, Ltd.	41	299	..	..
Moonlight Mining Syndicate	156	1,094	..	3,700
Mountain Terrace Gold-mining Co., Ltd.	69	474	..	..
Nevis Sluicing Claims, Ltd.	161	1,274	..	..
New Zealand Prospecting and Mining, Ltd.	7	55	..	..
New Gabriel's Gully Gold-mining Co., Ltd.	252	2,005	..	..
Nokomai Gold-mining Co., Ltd.	1,045	7,329	..	..
Oxenbridge-Shotover Gold, Ltd.	54	381	..	..
Paddy's Point Gold-mining Co., Ltd.	485	3,509	700	2,101
Round Hill Gold-mining Co., Ltd.	1,831	13,914	9,929	9,929
Sailor's Gully (Waitahuna) Gold-mining Co., Ltd.	409	2,900	630	13,925
Sandhills Gold-mining Co., Ltd.	197	1,403	..	..
Skippers Ltd.	442	3,446	..	..
Skippers Sluicing Co., Ltd.	47	329	..	..
Try Again Sluicing Party	87	630	52	116
Tuapeka Mouth Gold-mining Co., Ltd.	360	2,447	..	600
Upper Arrow Sluicing Co., Ltd.	67	482	..	..
Waimumu Sluicing Co., Ltd.	466	3,367	..	..
Wetherstones Gold-mining Co., Ltd.	2	17	..	..
All other claims	8,570	61,791	..	..
Totals, 1936	33,618	244,640	16,436	Unknown.
Totals, 1935	37,134	269,106	7,279	Unknown.

Prospecting by boring, shaft-sinking, and driving was carried out in many areas in Southland, Otago, and the West Coast districts of the South Island.

Several of the West Coast areas which had been bored proved that they could be worked profitably by dredges.

Six hundred and thirty-two bores were drilled in alluvial ground in the Southern District, their total depths being 34,040 ft. In the West Coast District 1,512 bores, totalling 49,504 ft., were put down during 1936, and in the Northern District thirteen holes, totalling 611 ft.

The inclined shaft at Wetherstones was stopped at a fault when it was 1,737 ft. in from the surface. The plant was then withdrawn from the shaft and later removed from the area.

A good deal of driving was done during the year to the south of the Kawarau River, but on Cromwell Flat the only work done, except boring, was a little "blocking-out" in the Bell-Hooper Mine and some further prospecting in Mr. R. J. Bell's north shaft.

At the King Solomon Mine 1,958 oz. of gold, valued at £14,569, was recovered in 1936. The returns commenced to fall, and towards the end of the year work was confined to the payable ground in the south-west section of the mine and to the "blocking-out" of the remainder of the payable pillars in the east section.

At the Nokomai Claim, where about three years ago a drag-line excavator was tried and abandoned, it has been decided again to alter the method of working the claim. A pair of 12 in. gravel-pumps are to work in series, mounted on a steel pontoon, and will elevate the wash 120 ft. to the boxes at the surface.

V. MINERALS OTHER THAN GOLD.

IRON.

No iron ore was mined at Onakaka during 1936.

ASBESTOS.

Active prospecting has been carried out on the area near Takaka now held by Hume Pipe Co. (Aust.), Ltd.

SULPHUR.

No work of importance was done at any of the sulphur-deposits during 1936.

QUICKSILVER.

The North Auckland quicksilver mines were not worked during 1936.

TUNGSTEN.

From Glenorchy and Macraes the production of scheelite during 1936 was less than the previous year's output. The value of the yield from both fields was £3,448, compared with £4,719 in 1935.

PLATINUM.

Four of the sluicing companies, operating in Southland, in conjunction with the gold recovered, obtained 29½ oz. of platinum, valued at £187.

PETROLEUM.

At Kotuku five shallow boreholes were put down by the Maoriland Oilfields, Ltd., and 1,188 gallons of oil were collected.

No drilling was done during 1936 in Southland or by the Moturoa Oilfields, Ltd., in Taranaki

From the Moturoa Nos. 1 and 4 wells 7,925 gallons and 43,267 gallons respectively were collected under steady flow. At the No. 2 well bailing had to be done at intervals and, from that well, 106,699 gallons were obtained during the year.

VI. STONE-QUARRY INSPECTION AND STATISTICS.

By section 2 of the Stone-quarries Amendment Act, 1920, the application of the Stone-quarries Act, 1910, was extended to include every place, not being a mine, in which persons work in quarrying stone and any part of which has a face more than 15 ft. deep. The Act also applies to any tunnel in the construction of which explosives are used, but it does not apply to any Government operations, or any road or railway cutting, or excavations for buildings.

The following is a table showing the number of quarries under the Stone-quarries Act, also the number of persons ordinarily employed thereat, and the annual output and value of crude stone during 1936 :—

Provincial District.	Name and Address of Government Inspector of Stone-quarries.	Number of Working Quarries under the Act.	Number of Persons ordinarily employed.	Output of Stone.								Value at Quarry.
				Stone or Gravel for Macadamizing or Ballast.	Stone for Harbour-works.	Building or Monumental Stone.	Limestone for Agriculture.	Limestone for Cement or Mortar.	Phosphate for Agriculture.	Miscellaneous.		
Auckland ..	R. H. Schoen, Mines Dept., Huntly	237	1,076	Tons. 559,321	Tons. 5,000	Tons. 14,159	Tons. 92,296	Tons. 165,675	Tons. ..	Tons. 33,700	£ 159,958	
	E. J. Scoble, Mines Dept., Waihi (Hauraki Mining District only)	20	122	78,230	..	1,460	..	..	..	..	21,475
Hawke's Bay	R. H. Schoen, Mines Dept., Huntly	32	97	42,127	..	..	27,006	..	..	..	10,708
Taranaki ..	Ditto	11	56	13,041	..	..	4,148	..	..	..	1,856
Wellington ..	„	34	153	86,362	9,852	4,639	9,326	..	..	13,000	33,979
Nelson ..	G. W. Lowes, Mines Dept., Reefton	21	127	23,722	7,450	..	7,796	38,298	..	33,939	15,887	
Westland ..												
Marlborough	T. McMillan, Mines Dept., Dunedin	38	350	139,067	26,777	2,560	176,483	37,044	..	..	98,998
Canterbury ..												
Otago ..												
Southland ..												
Totals, 1936	..	393	1,981	941,870	49,079	22,818	317,055	241,017	..	80,639	342,861	
Totals, 1935	..	358	2,002	985,446	70,357	26,166	288,559	182,944	..	55,920	289,274	

There were twenty-one fewer men employed than during the previous year, but an increase in the value of the stone produced of £53,587.

QUARRY ACCIDENTS.

The following is a summary of serious accidents during 1936 at quarries under the Stone-quarries Act :—

Cause.	Number of Accidents.		Number of Sufferers.	
	Fatal.	Serious.	Killed.	Seriously injured.
Haulage ..	1	..	1	..
Machinery ..	..	..	..	..
Explosives ..	2	1	2	1
Falls of ground ..	..	1	..	1
Miscellaneous ..	1	..	1	..
Totals ..	4	2	4	2

There were no fatalities at any of the South Island quarries during 1936. An account follows of the four fatal accidents which occurred during the year at North Island quarries :—

On 24th August, Thos. C. Oates, employed at a crushing-plant belonging to the Te Kawa Quarry near Te Awamutu, was run over by a railway truck which was being lowered down the line by another workman. The deceased had stepped backward to get out of the way of the advancing truck, but he stumbled and fell in front of it. He suffered fractures of both legs, as well as other extensive injuries, and he died two hours and a half after the accident.

On 1st September George Lipanovich was fatally injured by a fall of loose clay at Amner's Lime Quarry, Napier. The face was only 11 ft. in height, and Lipanovich, who had been feeding the clay on to an elevator, was driven by the fall on to the buckets of the elevator. He suffered severe body injuries, from which he died the same day.

On 15th December a young man, Alex. W. E. Lyle, was killed instantly at the National Timber Co.'s rhyolite quarry at Ngongotaha. From the nature of his injuries it appeared that a premature explosion had occurred while he was placing the gelignite in the shot-hole.

After having "bulled" a shot-hole 13 ft. deep at the Matatoki Quarry on 21st December, a kerosene-tinful of water was poured down the hole and it was left while the workmen had their midday meal. On resuming work Ivan Lendrich and the quarry-manager, P. R. Hinton, placed safety ropes around their waists and, with a supply of explosives, descended to the bench below which the shot-hole had been drilled. Lendrich was tamping the "Lithyte," which was being handed to him by Hinton, and, when about 12 lb. of it has been placed in the hole, a plug stuck about 4 ft. from the bottom. Lendrich pressed on to it with the wooden tamping-rod when the charge, or a portion of it, exploded, killing Lendrich instantly. At the inquest the evidence given led the Coroner to add to his verdict a rider that the required clearance between the plugs of explosives and the side of the shot-hole should be maintained to the bottom of the shot-hole.

VII. STATE AID TO MINING.

(1) SUBSIDIZED PROSPECTING.

Upon subsidized prospecting operations 135 persons were intermittently employed during the year. The following is a statement showing the results of prospecting operations as reported by the Inspectors of Mines:—

Name of Prospecting Party.	Number of Prospectors.	Locality of Operations.	Amount of Subsidy granted.*	Amount of Subsidy expended.	Distance driven or sunk.	Nature of Claim.	Character of Operations.	Remarks.
			£ s. d.	£ s. d.	Ft.			
<i>Northern Inspection District.</i>								
Jubilee Prospecting Syndicate ..	2	Imperial Claim, Karangahake ..	37 5 6	37 5 6	71	Quartz ..	Driving ..	Operations abandoned.
Leach, D. ..	2	Victoria Claim, Karangahake ..	210 0 0	154 7 0	294	Quartz ..	Driving ..	Work in progress.
Meagher, H. A. ..	2	Star Claim, Karangahake ..	28 7 0	10 17 4	23	Quartz ..	Driving ..	Work in progress.
Victoria Gold-mining Co. ..	2	Victoria Claim, Thames ..	225 0 0	63 17 1	88	Quartz ..	Driving ..	Work in progress.
Caledonian (1934), Ltd. ..	3	Caledonian Claim, Thames ..	225 0 0	72 0 0	72	Quartz ..	Driving ..	Operations temporarily suspended.
School of Mines ..	..	Thames ..	65 10 0	46 0 0	..	Quartz ..	Crushing ..	..
Forsman, L. L. ..	3	Neavesville ..	67 10 0	67 10 0	..	Quartz ..	Blocking out (alluvial) ..	Returns unsatisfactory.
Coromandel Gold-mines, Ltd. ..	4	Nil Desperandum Claim, Coromandel ..	180 0 0	..	..	Quartz ..	Sinking and boring ..	Subsidy not yet taken up.
Richardson, F. ..	2	Paraparaumu ..	34 15 3	34 15 3	..	Manganese ..	Testing deposit ..	..
Golden Dawn Gold-mines, Ltd. ..	..	Owharoa ..	1,000 0 0	..	..	Quartz ..	Driving and cross-cutting ..	Subsidy not yet taken up.
Harbour View Gold-mines, Ltd. ..	2	Tokatea ..	500 0 0	122 3 9	72	Quartz ..	Driving ..	Work uncompleted.
Mercury Mines (N.Z.), Ltd. ..	..	Pahipuhi ..	500 0 0	..	..	Cinnabar ..	Development ..	Subsidy not yet taken up.
Monowai Gold, Copper, and Lead Mines, Ltd. ..	..	Waioio ..	1,100 0 0	..	..	Quartz ..	Driving and cross-cutting ..	Subsidy not yet taken up.
McNeill, J. A. ..	1	Mount Te Aroha ..	65 0 0	32 10 0	..	Quartz ..	Surface-prospecting ..	Work uncompleted.
Sylvia Mines Development, Ltd. ..	..	Thames ..	1,200 0 0	..	..	Quartz ..	Diamond drilling ..	Subsidy not yet taken up.
Commissioner Claim ..	4	Thames ..	2,000 0 0	447 0 2	211	Quartz ..	Driving ..	Work in progress.
<i>West Coast Inspection District.</i>								
Antonio's Hydraulic Elevating Co., Ltd. ..	4	Antonio's, Mawheraiti ..	200 0 0	182 13 0	491	Alluvial ..	Driving tunnel ..	Reached production stage.
Consolidated Goldfields of New Zealand, Ltd. ..	14	Globe Hill Area ..	5,000 0 0	2,044 2 2	793	Quartz ..	Diamond drilling and road-construction ..	Drilling still in progress, No. 1 hole.
Golden Valley Syndicate ..	6	Gow's Creek ..	1,100 0 0	750 0 6	..	Alluvial ..	Driving tail-race tunnel, constructing syphon, and fluming ..	Headworks under construction; almost ready to commence operations.
Hara Gold-prospecting, Ltd. ..	..	Taipo River ..	135 0 0	..	..	Quartz ..	Driving ..	Subsidy not yet taken up.
Tait, E. W. ..	2	Newton Flat ..	150 0 0	150 0 0	..	Alluvial ..	Erection drag-line plant and construction of sluice-boxes ..	Erection of plant still in progress.
Waikakaho Deep Lead, Ltd. ..	..	Waikakaho, Marlborough ..	650 0 0	..	..	Alluvial ..	Shaft sinking and driving or cross-cutting ..	Subsidy not yet taken up.
Drennan, J. B. ..	3	Nelson Creek ..	110 0 0	109 19 3	159	Alluvial ..	Boring ..	Check-boring.
Pool Syndicate ..	..	Baton, Upper Motueka. ..	200 0 0	..	..	Alluvial ..	Sinking ..	Subsidy not yet taken up.
McVicar, D. A. ..	..	Waitahu ..	58 10 0	..	..	..	Prospecting for reefs ..	Subsidy not yet taken up.
<i>Southern Inspection District.</i>								
Bendigo Rise and Shine Gold-mining Co., Ltd. ..	8	Bendigo ..	800 0 0	80 0 0	40	Quartz ..	Driving and winzing ..	Work in progress.
Cairns, J. ..	2	Matakanui ..	20 0 0	9 15 6	17	Quartz ..	Driving and sinking ..	Work in progress.
Davidson, N. ..	..	Gimmerburn Gorge ..	40 0 0	..	..	Deep lead ..	Sinking ..	No work done.
Moore, F. ..	3	Preservation Inlet ..	125 0 0	..	..	Quartz ..	Driving ..	Work in progress.
Weatherstones Gold-mining Co., Ltd. ..	8	Nevis ..	500 0 0	500 0 0	162	Cement ..	Driving ..	Mine abandoned.
Fache, S. C. ..	10	Roxburgh ..	240 0 0	..	..	Dredging ..	Moving dredge ..	Work in progress.
Harwich, N. ..	..	Waikaka ..	350 0 0	..	..	Quartz ..	Sinking ..	Subsidy not yet taken up.
King Solomon Deep Lead, Ltd. ..	48	Waikaka ..	1,000 0 0	..	..	Deep lead ..	Driving ..	Work in progress.
McMullan, J. ..	..	Big Beach, Arthur's Point ..	200 0 0	..	..	Alluvial ..	Sluicing ..	Subsidy not yet accepted.
Reward Gold-mining Party ..	..	Fruitlands ..	150 0 0	..	..	Alluvial ..	Sluicing ..	Operations not yet commenced.
Vinegar Hill Sluicing Co., Ltd. ..	..	St. Bathans ..	500 0 0	..	..	Alluvial ..	Sluicing ..	Subsidy not yet accepted.
	135		4,914 16 0†					

* Includes authorizations in previous years. The total of the subsidies granted, less cancellations, during the year ended 31st March, 1937, amounted to £18,976 8s. 11d. The amounts authorized for prospecting, in conjunction with the Labour Department (Employment Division) in south Westland and in the Reefton District are not included in this total. † In addition, the Mines Department is paying—(a) half of the cost of an investigation of areas in south Westland, the other half being paid by the Labour Department (Employment Division); fifteen prospectors are employed, and £325 5s. 8d. has been expended by the Department during the year. (b) Half of the cost of the prospecting of the Globe and Merrifjess Areas, Reefton District, the other half being paid by the Labour Department (Employment Division); twenty prospectors are engaged on this scheme, and the Department's expenditure during the year amounted to £959 16s. 10d.

(2) GOVERNMENT PROSPECTING DRILLS.

The following table gives details of the drilling done and the results obtained for twelve months ended 31st December, 1936 :—

Drills used : Diamond and Keystone drills. Percussion and Hand-placer drills.

Number of Holes drilled.	Total Depth, in Feet.		Mineral sought.	Character of Country drilled through.	To whom lent.	Cost per	Cost per	Cost per	Remarks.
	Ft.	In.				Foot of Drilling.	Foot of Transport.	Foot of Carbons' Wear.	
4	921	6	Gold	Clay and sand ..	Argyle Mining Co.	s. d. 9 9-33	s. d. 0 3-956	s. d. ..	..
13	660	6	Gold	Gravel ..	Austral Malay Tin, Ltd.	9 7-9	1 1	..	..
8	687	6	Gold	Gravel ..	Austral Malay Tin, Ltd.	14 7-56	0 2-64	..	..
11	585	6	Gold	Gravel ..	Austral Malay Tin, Ltd.	8 6	14 3	..	..
20	1,599	6	Gold	Gravel ..	Clutha River Gold-dredging, Ltd.	..	..	..	In progress.
3	83	6	Gold	Sand and gravel	Consolidated Gold-fields of N.Z., Ltd.	6 6-94	3 4-08	..	..
10	270	6	Gold	Gravel ..	Consolidated Gold-fields of N.Z., Ltd.	8 6-89	2 3-77	..	..
4	181	6	Gold	Gravel ..	Consolidated Gold-fields of N.Z., Ltd.	10 1-99	5 11-59	..	..
3	411	2½	Gold	Andesite and quartz	Coromandel Gold-mines, Ltd.	..	..	..	In progress.
72	1,957	6	Gold	Soil and gravel ..	Labour Department (Employment Division)	3 10	0 2-1	..	..
18	564	6	Gold	Soil and gravel ..	Labour Department (Employment Division)	13 9	0 0-66	..	..
109	1,178	6	Gold	Soil and gravel ..	Labour Department (Employment Division)	..	..	..	In progress.
2	68	4½	Gold	Gravel ..	Labour Department (Employment Division)	..	..	..	..
14	489	6	Gold	Gravel ..	Learmont and party	10 7	3 6	..	..
8	187	6	Gold	Silt and gravel ..	Mataki Gold-dredging, Ltd.	11 4	4 6	..	..
3	159	6	Gold	Gravel ..	Mines Department	10 11-12	2 4-07	..	..
11	964	6	Gold	Gravel ..	N.Z. Prospecting and Mining, Ltd.	8 6*	0 3	..	..
24	1,842	6	Gold	Gravel ..	N.Z. Prospecting and Mining, Ltd.	..	..	..	In progress.
5	946	2½	Gold	Andesite and quartz	Ohinemuri Gold and Silver Mines, Ltd.	17 3-75	0 2-5	3 4	..
258	8,317	6	Gold	Gravel ..	Rimu Gold-dredging Co., Ltd.	..	..	..	In progress.
4	1,348	2½, 3, and 3¾	Coal	Shale and sandstone	State Coal-mines	..	..	..	In progress.
604	23,416								

* Includes cost per foot of holes bored with private drill.

(3) SUBSIDIZED ROADS ON GOLDFIELDS.

The expenditure in the form of subsidies and direct grants upon roads on goldfields amounted to £3,132 11s., as compared with £1,051 18s. 10d. during the previous year.

(4) GENERAL REMARKS.

Finding it necessary to add to their staff of mining engineers, the Labour Department during 1936 engaged the services of additional qualified men, one of them, Mr. R. F. Landreth, taking over the duties of Mr. S. W. S. Strong, whose tragic death near the end of the year I very much regret. He died after a very short illness and within a few weeks of having been appointed to supervise the whole of the field-work of the Labour Department's mining activities. When alluvial and lode mining were at a low ebb Mr. Strong was out in the hills seeking new areas on which to place unemployed men at prospecting, and his unbounded energy and optimism must have renewed hope in many a disappointed miner.

The increasing activity in mining in the West Coast District reflected itself also in the work of the Inspector of Mines for that district. As a consequence it was decided to appoint another Inspector to act with Mr. G. W. Lowes, and Mr. A. W. Turner took up duty at Reefton.

Their help and co-operation throughout the year, as well as that of the Northern and Southern District Inspectors and of Mr. J. E. Downey, who was transferred from Waihi to Wellington in 1935, has been much appreciated.

I have, &c.,

GEORGE DUGGAN,
Inspecting Engineer of Mines.

ANNEXURE A.

SUMMARY OF REPORTS BY INSPECTORS OF MINES.

NORTHERN INSPECTION DISTRICT (E. J. SCOBLE, Inspector of Mines).

QUARTZ-MINING.

Martha Gold-mining Co. (Waihi), Ltd. (W. Morrison, Manager). — The following is a summary of the principal work carried out — No. 15 level: Work suspended, now used for water-storage purposes. No. 14 level: On the Edward lode 6,443 tons were drawn from Trout block, in which a good deal of ore remains. Stopping is in progress, but is almost completed, on Gin block, Martha lode. It will take more than twelve months to truck out the contents of this stope. No. 13 level: Stopping of the ore in Cow block on the Martha lode was completed. This stope contains twelve months' supplies also. No. 12 level: Broken ore is being drawn from the Bath-Fahy block, on the Empire lode. All the available ore has been drawn off Fax block, while stopping is in progress on Webb East block, Martha lode. Royal lode: Stopping is being carried out on Reptile block, and the quartz is being drawn from Lizard stope. No. 11 (75 ft.) sub-level: Shrinkage stopping is in operation on Schnapper block, on the Edward lode. No. 11 level, Martha lode: The south-east crosscut, east of No. 2 shaft, was advanced from 16½ ft. to 44 ft. in low-grade, very hard quartz. No wall was seen, and work was suspended. North section, Empire lode: Stopping east of the rise on A. Harvey block was completed. No. 10 level: Most of the broken ore has been drawn off from Ulster block, on the Ulster lode. Piper arch, Edward lode, was broken down, and 2,409 tons of good-grade ore obtained. All the ore in Shark block was broken out and trucked. No. 10 (44 ft.) sub-level: All ore was broken and trucked from Evesham block, on the north section of the Empire lode. No. 10 (67 ft.) sub-level, Martha lode: Shrinkage stopping was in operation in Builtown and Britannia blocks. No. 9 (35 ft.) sub-level: Ore was won by square sets from Tubman arch, on the Welcome lode. No. 9 level, Martha lode: Stopping was in progress, and 8,704 tons were lying in the stope. Foal north crosscut was driven a total of 91½ ft. from the Martha lode, and, at 82 ft., intersected a north branch of the same lode 2 ft. wide, and worth £1 8s. 6d. per ton. This was driven on westward for 13 ft. and eastward for 105½ ft. Payable values were met with in both directions. No. 9 (23 ft.) sub-level, Welcome lode, centre or middle section: A considerable quantity of payable stone has been proved in this section, and the Iris stopping block, about 95 ft. in length, is now being developed. Ore that has fallen from Crocodile block on the Royal lode is being drawn off No. 1 Pass block in the Grand Junction area, and 1,839 tons have been obtained. No. 9 (73 ft.) sub-level, Martha lode, north section: Driving, east of Pile pass along the north wall, was done for 120 ft., and, from 50 ft. to 120 ft., the quartz was payable for a width of 5 ft. North branch of Martha lode: One hundred and twenty-five feet were driven east of Mule pass on ore of good average value. At 90 ft. east Jamieson winze was sunk to a depth of 60½ ft. From 14 ft. to 38 ft. the ore was of payable grade, but decreased in value with depth. No. 8 level: In Pile and Deer arches, on the Martha lode, a total of 4,255 tons were caved. Edward lode: Stopping was finished at 72 ft. up in Roach north block, and 1,079 tons of ore were drawn leaving 1,083 tons yet to be extracted. No. 8 level: A shrinkage stope is being prepared in Adder east block, Royal lode, which is estimated to contain 1,740 tons at £1 18s. per ton. No. 7 (105 ft., 80 ft., and 60 ft.) sub-levels: The caving area on the Martha lode had a total output of 42,186 tons for the year. No. 7 level: The Whittaker north-west crosscut was advanced from 206 ft. to 571½ ft., measuring from the south part of the north branch of the Martha lode, with unsatisfactory results. At 395 ft. a reef formation was met. This was tested by Diamond Drill "C" about half-way between this crosscut and surface. White quartz was cut, 2 ft. 9 in. wide, of which 16 in. of core were recovered assaying 1s. per ton. North branch of Martha lode, south part: Denby rise, situated 275 ft. west of Payne N.W. crosscut, was risen 74 ft. on reef averaging 12 in. in width, and worth £1 10s. 3d. per ton. Giddens rise, situated 235 ft. west of a point 318 ft. west of No. 2 shaft north-west crosscut, on a 4 in. vein which had values, was risen a total of 59½ ft. The vein reduced to 3 in. wide and values ranged between £3 15s. 8d. and 11s. 4d. per ton. At 50 ft. up a crosscut was driven to the south-east for 61½ ft., and, at the 50 ft. point, it intersected a sulphide vein of very good value, 13½ in. wide. It is evident from its dip that this is not the same reef, as Giddens winze was sunk on for 10 ft. below No. 6 level, where the reef is vertical, but corresponds with the lode driven on in No. 7 level to the south side of Giddens rise, where the values were low. Rising will be done on this lode to locate the bottom of the good values met in the crosscut at 50 ft. up. No. 7 (88 ft.) sub-level: Shrinkage stopping of Osten block on the No. 2 reef was completed. No. 6 level: Giddens south crosscut, situated 100 ft. west of Espir west crosscut (measuring south from the 3 in. leader, that was formerly driven on and thought to be the north branch of the Martha lode), was projected a total of 70½ ft. Good values were met with at 39 ft. and 49 ft. On the north branch of the Martha lode, at 39 ft. in Giddens south crosscut, a drive west was advanced for 161 ft. on good-grade ore. Driving east of Giddens south crosscut was done for a total of 124½ ft. with satisfactory results. This drive was connected to Espir west crosscut on the north side, with 4 ft. of country between the leader and the crosscut. At 11 ft. east, Giddens winze was sunk 10 ft., and a reef of more than 12 in. was exposed (the north wall was not seen) worth £3 11s. 6d. per ton. The stopping of Munro block is in operation. The block extends from 120 ft. east to 140 ft. west of Giddens south crosscut, and, taking a stopping width of 3½ ft., contains 6,193 tons of payable stone. Stopping is in operation in Payne block, which contains 5,163 tons of broken ore. No. 6 (30 ft. sub-level): On the Edward lode stopping was completed in Carp block, which contains 1,631 tons of broken ore. Royal lode: Driving east of the Edward lode junction was done for 129 ft. in payable ore. At 79 ft. east the lode is 7 ft. wide and worth £1 9s. 6d. per ton. At 125 ft. east Asp winze was sunk and connected to the top of Python block in payable ore. No. 5 level, Edward lode: Shrinkage stopping was completed in Eel block, which now contains 3,092 tons of broken ore. The west part of this lode was driven on 54 ft. north of Eel west crosscut to the junction with the Edward lode in payable ore, and from 85 ft. to 128 ft. south of Eel west crosscut in low-grade ore about 2 ft. wide. Former driving, to 85 ft. south, was payable. In McEnteer block stopping was completed. The top stope averaged 11s. per ton over a stopping width of 3½ ft. North branch of Martha lode: Giddens winze was sunk 61 ft. in reef, about 2 ft. wide, of very good value, and connected to a rise from No. 6 level. Munro winze was sunk 63½ ft. in reef, about 2 ft. wide, of good value, and connected to a rise from No. 6 level. Denby winze was sunk 71½ ft., the first 56 ft. in ore of good value, and connected to a rise from Payne block. Cornes rise was put up and connected to a winze from No. 4 level in payable ore. The stopping of Giddens and Cornes south blocks is in progress. No. 4 level, Edward lode: Roach block contains 6,794 tons of broken ore, which is being drawn off. North branch of Martha lode: The drive west of the Gordon north-west crosscut, which was stopped in low-grade ore in 1934 at 506½ ft., has been extended west to 668 ft., good ore being intersected at several points. At 641 ft. a crosscut was put out in a north-westerly direction for 42 ft. At 38 ft. in, quartz 9 in. wide, worth £7 14s. 11d. per ton, was met. At 641 ft. Gardiner south-east crosscut was extended for 22 ft. North branches of Martha lode: Stopping operations were carried out in Cropp, Fallon East, Dutton, and Worth blocks. All the broken ore was drawn from Fallon block. O'Bryenne winze was sunk 10 ft. on reef 12 in. wide, and worth £4 9s. 7d. per ton. No. 3 level: The broken ore was drawn from Wallace

East and Hogson blocks. During the year a total of 23,894 tons was won from north branches of the Martha lode, west of No. 2 shaft, at Nos. 3, 4, 5, 6, and 7 levels. No. 2 level, Edward lode: Shrinkage stoping of Cod block was completed and the broken ore is being drawn off. Eel rise, above top stoppe, was put up 81 ft. and connected to the bottom of Eel pass, which was sunk 109 ft. from the surface. A good current of air now goes up this rise to the surface. Edward lode, east part: At 100 ft. south of No. 2 shaft a crosscut was driven for 66 ft. on good-grade ore. At 55 ft. south the lode is 5 ft. wide, and worth £3 3s. 10d. per ton. A connection was made to Edward south-west crosscut, where the east part was first met. Shrinkage stoping of the new Trout block is in operation. This block is calculated to contain 2,114 tons, which have been added to the ore reserves. On the Bell reef a drive was started, at 129 ft. west of Hooper crosscut, and extended to 454 ft. The reef varied between 1 ft. and $5\frac{1}{2}$ ft. in width and values ranged from 2s. 9d. to £2 7s. 6d. per ton. At 434 ft. a crosscut was put out south for $45\frac{1}{2}$ ft. At 36 ft. the main part of the Bell reef was worth £1 12s. 2d. per ton. A drive, west of the 434 ft. south crosscut, was advanced on the main part of the Bell reef to 111 ft. The lode varied from $1\frac{1}{2}$ ft. to 5 ft. in width, and values ranged from 8s. 10d. to £3 4s. 11d. per ton. Surface above Edward lode: Eel pass was sunk 45 ft. to 109 ft. from a surface cutting, and connected to a rise from the top of Cod block above No. 2 level. The Edward lode pinches out in soft blue country at 190 ft. from surface. Open cut: Rill stoping is in operation in Dix block, on the Martha lode. East of Bell pass crosscut, School drive was advanced to 26 ft. on the same lode, which is here 7 ft. wide and worth 17s. 1d. per ton. The broken ore is now being drawn from Pershing and Oats blocks. Haigson south crosscut was advanced a total of 45 ft. from the Martha footwall gangway. At $39\frac{1}{2}$ ft. the south branch of the Martha lode was intersected, and proved to be $5\frac{1}{2}$ ft. wide, worth £1 10s. 7d. per ton. West of Edward filling pass north crosscut, a drive was advanced to 335 ft. on this lode in payable ore. Ulster lode (Grand Junction No. 7 level): Driving west of the boundary in the Martha area was continued a further 359 ft., making a total of $485\frac{1}{2}$ ft. west of the 875 ft. west crosscut. Values were rather low. At the 305 ft. point a connection was made to Ulster winze at 95 ft. below the Martha Co.'s No. 10 level. All values stated have been estimated on the basis of gold at £4 4s. and silver at 2s. per ounce. During the year the company put down two boreholes, by diamond drill, "A" to a depth of 252 ft. and "B" to $262\frac{1}{2}$ ft., on the old Silverton claim, which is now held by the Martha Co. under prospecting license. A conversion from steam and/or air to electric power was made on the No. 2 shaft winding-engine during the holiday period 1935-36, and this incorporated the installation of a 50-cycle A.C. 400 h.p. motor, together with "Lilly" control overspeed and overwinding gear. The altered conditions had an effect on the hand and foot brakes of the engine, for these became largely ineffective, and the engineer (at Waihi) designed and had constructed at the company's workshops, and installed, a gravity brake, which is held off by the application of air. This is arranged to come into operation on the failure of the electric or air power, and gives complete satisfaction. The steam cylinders previously had a braking effect in themselves, and this was naturally lost when the engine was converted, hence the necessity of the gravity brake. Output: A total of 172,622 long tons of quartz was mined and treated, from which gold and silver to the value of £406,508 was obtained. The gold recovered amounted to 53,108 oz., valued at £371,762, and the silver to 382,399 oz. 15 dwt., valued at £34,746. Dividends were paid during the year to the amount of £99,181 8s. The average number of men employed during the period was 597. The total yield of bullion (gold and silver) since the beginning of operations (including that won by the Waihi Gold-mining Co., Ltd.) is 26,905,893 oz. 18 dwt. 11gr., valued at £18,954,862 13s. 10d.

Waihi Grand Junction Gold-mining Co., Ltd. (W. Morrison, Manager).—The Martha Gold-mining Co. (Waihi), Ltd., continued the working of this mine. No. 10 level: For the purpose of drawing the broken ore from Fahy and Ellis blocks on the Empire lode a short rise was put up to the Martha Co.'s No. 13 level at 450 ft. west of No. 1 shaft south-east crosscut. The ore will be drawn through this pass at No. 10 level and trucked to the Junction shaft. No. 9 level: A total of 5,155 tons was drawn from No. 10 Pass block on the Empire lode. No. 8 level, Royal lode: Stoping was commenced in the No. 4 Pass block. Drawing from Lowrie block was continuous until August, when work was suspended owing to the great difficulty experienced in drawing off the ore due to the flatness of the reef. The sinking of No. 4 winze, situated at 425 ft. west of No. 1 shaft south-east crosscut, was commenced in May and carried to a depth of 90 ft. An intermediate level was then opened out at 61 ft. down the winze (this being the limit in depth of the pay-ore) and driven a total of 67 ft. west and 76 ft. east. Although crosscutting proved the reef to be of considerable width, the pay-ore was confined to a width of 5 ft., extending east and west of the winze for a distance of 83 ft., the calculated average assay value being £1 11s. 5d. per ton. Ore breaking has been commenced in this block. Junction No. 7 level, Empire lode, No. 11 Pass stoping block: The trucking of ore from this block was commenced in June, and by the end of the year 2,218 tons had been obtained. The stoping and drawing-off of ore in Wells south block was completed. An investigation of the Empire lode, above No. 7 level east of the fault, was made by driving an intermediate level east and west of No. 18 Pass at 63 ft. up. A total distance of $72\frac{1}{2}$ ft. was driven west, where the lode was cut off by a fault, and eastward 71 ft. were driven, when work was stopped owing to the values falling. The net result of this work was to open a stoping block 118 ft. in length, in which the breaking of ore is now almost completed. George lode: The intermediate level, at 80 ft. up George rise, was continued westward to 86 ft. At 60 ft. a winze was commenced and sunk 50 ft., a connection being made with this by rising from the main level at 100 ft. west of No. 1 shaft south-east crosscut. In the course of this work it was found that the pay-ore continued downward to within 59 ft. of the main level, and an intermediate level was therefore opened out at this height above No. 7 level. A distance of $99\frac{1}{2}$ ft. west and 43 ft. east was driven. The result of the work has been to open up a stoping block estimated to contain 2,634 tons of a calculated value of £1 5s. 11d. per ton. Junction No. 6 level, Royal lode: Drawing from No. 10 Pass block continued steadily, and a total of 3,550 tons was recovered. Exploratory work on the south part of this lode opened up Cartman and Dye blocks. Ore-breaking in these was completed. Some ore is being recovered from the No. 3 Pass block. Martha Co.'s No. 10 level: A total of 543 tons was recovered from Ulster block on the Ulster lode. Martha Co.'s No. 9 level, Ulster and Royal lodes: During the previous year an intermediate level was driven, on the Ulster lode, at 28 ft. above the level from Martha Co.'s ground into the Junction area, and a connection made to an old stoppe on the Royal lode at 148 ft. east. From old stoppes a total of 282 tons of good milling grade was recovered during the year, and, in addition, 141 tons were obtained from work done on the Ulster lode. Martha Co.'s No. 8 level: The extension of the Royal footwall gangway east of No. 5 shaft new south crosscut was put in hand with the object of opening up and recovering the ore from arches and pillars on portion of the Royal lode both in the Martha and Grand Junction areas. In the Junction ground the lode was followed along the south side for a length of 211 ft., where the face stood at the end of the year. Between Nos. 1 and 7 passes it was estimated there were 3,043 tons of recoverable ore, of which total 559 tons were won during the year. All values quoted have been estimated on a basis of gold at £4 4s. and silver at 2s. per ounce. Two boreholes were put down on the Waihi North prospecting area, held by the Grand Junction Co., by means of a diamond drill. The first hole, "C," was completed at a depth of 552 ft., while the second was down to 485 ft. at the end of the year, with drilling still in progress. Output: The ore won from the mine amounted to 27,004 long tons, which yielded gold and silver to the value of £55,892. The gold amounted to 7,619 oz. 15 dwt., valued at £53,338, and the silver to 28,117 oz. 4 dwt., valued at £2,554. Dividends to the amount of £6,906 5s. 4d. were paid. An average of forty men was employed. The total value of bullion won from the mine since commencing work may be set down as £2,702,525 3s.

Golden Dawn Gold-mines, Ltd., Owharoa (J. H. Bennicy, Manager).—No. 3 level: The crosscut west, off drive north on No. 1 reef, has been extended to 650 ft. The country here has been of a fair class for carrying reefs, being heavily mineralized. A drive north, on a west wall branch of No. 1 reef, has been advanced

to 164 ft. The reef averages 17 in. in width, and is of very fair value. A drive south on the No. 1 reef, south of the shaft, has now been carried in for 260 ft. The stone is satisfactory, but of fairly narrow width. A rise was put up on same for 75 ft. The west wall branch reef, south of Old pass, has been driven on for a total distance of 134 ft. Average width 14 in., and of good value. The reef met in the crosscut west, off the south drive on the west wall branch, has been driven on for 31 ft. north and for 9 ft. south and proved to be of low value. A drive south on the west wall branch reef has been advanced 109 ft. on ore of fair value, averaging 9 in. in width. A distance of 192 ft. was driven in a southerly direction on the east wall branch of No. 3 reef, but it was of poor grade. Bottom Intermediate level (70 ft. above No. 3 level): The west wall branch reef has been driven on in a northerly direction for 275 ft., and southerly for 231 ft. It proved to be of fair worth. A drive north on the No. 2 reef was carried in for 22 ft. On the same reef a drive south was extended for 17 ft. The drive south on the east wall branch of No. 3 reef, south of Dally's old stopes, was advanced to a total of 276 ft., but the stone is of poor grade. A crosscut west, from the south drive on the No. 1 reef, was extended for 130 ft. At 120 ft. in, a formation 12 in. wide and of low grade was encountered. Stopping operations were carried out on both the levels named, and on the following reefs: No. 1, Magazine, west wall branch of No. 1, and east wall branch of No. 3, respectively. The average number of men employed was 117. Output: For the year, 9,247 tons of quartz was mined for a return of 4,987 oz. gold, valued at £42,136 3s. 9d., and 9,719 oz. 1 dwt. of silver, valued at £600 12s. 11d. Dividends to the amount of £4,000 were paid. The company's battery also treated ore for outside suppliers to the total of 2,347 tons, which yielded 2,439 oz. of gold, valued at £21,249 14s. 10d., and 10,694 oz. of silver, worth £1,209 15s. 7d. The total yield from the Golden Dawn mine since the beginning of operations is 75,752 oz. 8 dwt. 15 gr. of bullion, valued at £200,740 7s. 11d.

Talisman-Dubbo Gold-mines, Ltd., Karangahake (W. M. McConachie, Manager).—Work was carried on continuously for the year, an average of thirty-one men being employed. Talisman No. 2 level: The drive south was advanced 466 ft., total 950 ft., from the main crosscut. From 484 ft. to 610 ft. the level was advanced in country rock at about 10 ft. west of the old collapsed workings of the Talisman Consolidated Co., Ltd. At 627 ft. it connected with the end of the old drive and stopes, and from that point has continued south on the lode, which has not previously been worked. It is of fair average value, and ranges from 1 ft. to 4½ ft. in width. A rise at 840 ft. south of the main crosscut was put up 22 ft. on reef and connected to a winze sunk from the No. 1 level. The lode averaged 24 in. in width, value £9 8s. 8d. per ton. Stopes opened up from 720 ft. to 850 ft. south yielded 472 tons of ore. Some difficulty has been experienced with soft and slidy walls and a thick horizontal layer of clay, and in places it has been necessary to erect timber sets in the stopes to prevent caving. No. 1 Talisman level: A winze, at 140 ft. south of the main rise, was sunk a total of 71 ft. on stone, and connected with the rise from No. 2 Talisman level. The average width of the reef over the 71 ft. is 20 in., value £4 11s. per ton. From the main rise to 420 ft. south ore was broken out in three stopes. From the rise to 130 ft. the width of the lode is about 8 in., and the stope is worked out to within 5 ft. below the Dubbo level. As this section of the lode is about 10 ft. west of the section in the Dubbo level, and has been proved to carry good values farther north up to 80 ft. above the level named, it is now apparent a good stopping block will continue to produce ore above same. The stopes above No. 1 level produced 290 tons of good-grade ore, the average width broken being 10 in. Dubbo level: The stopes extending from 200 ft. to 400 ft. north were worked to 205 ft. above the level, and produced 1,137 tons of ore. The lode has an average width of 21 in., and carries good values. From 600 ft. to 680 ft. north the stopes are 80 ft. above the level, and are producing ore of good grade. Talisman No. 4 level: The cleaning-up, timbering, and relaying of the tramway has been started and completed from the portal to 300 ft. For the year the company mined 2,272 tons of ore, which was treated at the Golden Dawn battery for a yield of 2,344 oz. of gold, valued at £20,576 3s. 10d., and 10,296 oz. of silver, worth £1,171 5s. 7d. The total yield of bullion since the commencement of operations is 44,954 oz. 16 dwt. 5 gr., valued at £63,145 10s. 3d.

New Talisman Claim, Karangahake (C. Waines, Owner).—The work done for the first half of the year on this property gave nil results. Driving south on a reef that had been discovered in 1935 was then undertaken. The reef has an average width of 15 in., and 10 ft. of additional work exposed stone of a payable nature. Four and a half tons taken from this point and treated at the Golden Dawn mill yielded 9½ oz. of gold and 180 oz. of silver, but values are low in other places and erratic on the whole. A total of 8 tons 9 cwt. of stone was crushed for a return of 16 oz. 6 dwt. of gold, valued at £101 8s. 11d., and 241 oz. 7 dwt. of silver, valued at £23 8s. 8d. The aggregate output since the beginning of operations is 569 oz. 2 dwt. 7 gr. of bullion, value £543 4s. 3d.

Waiawa Claim, Karangahake (J. B. Morris, Owner).—Five men employed. The result of the storm in February and several other adverse matters affected the output of this mine, and probably not more than six months of a production period should be recorded. A total of 299 tons of ore was treated for a return of 70 oz. 8 dwt. of gold, worth £463 12s., and 58 oz. of silver, valued at £5. The production of bullion since the beginning of operations is 391 oz. 10 dwt. 8 gr., valued at £1,375 2s. 3d.

Star Claim, Karangahake (H. A. Meagher, Owner).—The Rhoderic Dhu reef, 12 in. wide, was driven on for about 40 ft. with largely negative results. Surface prospecting was also undertaken, and this yielded 2 tons of payable stone, which is held for treatment.

Talisman Battery Site, Karangahake (C. Waines).—Cleaning-up operations resulted in some 61 tons of stone being treated for a recovery of 66 oz. 12 dwt. of gold, valued at £551 12s. 1d., and 44 oz. 8 dwt. of silver, worth £4 18s. 9d. The total yield of bullion since the beginning of operations is 1,438 oz. 8 dwt., valued at £2,320 10s. 11d.

Victoria Claim, Karangahake (D. Leach, Owner).—This area previously formed part of the Imperial and McDonald properties. The construction of a main prospecting drive was commenced during the year. It is to be advanced for a total distance of 400 ft., and is expected to pass within the random of some good stone before work is completed. One ton of ore was crushed for a return of 8 oz. 18 dwt. of gold, valued at £25 9s., which is also the total production since the commencement of operations.

Waitekauri Claim, Waitekauri (R. Joughin, Owner).—Two men employed. A ball mill and a small cyaniding unit were erected on this ground for the purpose of treating several thousand tons of sands that were dumped thereon a good many years ago by the Golden Cross Co. It is stated that values are in the vicinity of £1 per ton.

New Maoriland Claim, Waitekauri (E. C. Roberts, Owner).—Two men employed. Nine tons of stone were treated in the Maoriland battery for a return of 30 oz. of gold, valued at £93 2s. 3d. The total production since the commencement of operations is 90 oz. 9 dwt. of gold, valued at £215 18s. 7d.

Ohinemuri Gold and Silver Mines, Ltd., Maratoto.—The drilling programme laid down during 1935 was finalised in April of this year, since when no further work has been done on the property. Six holes were put down altogether, and the total drilling amounted to 1,344 ft.

Golden Crown Gold-mining Co. (No Liability), Komata.—Rising from No. 4 level was carried up to a height of 150 ft. A drive has been started, in the vicinity of the old company's No. 2 level, with the object of proving the worth of a reef 4 ft. wide that was not worked during former years. The erection of a battery, inclusive of a cyanide unit, was completed. It is stated that a parcel of 51 tons of ore from the rise at No. 4 level was crushed in the plant for a return of 136 oz. 19 dwt. of gold, valued at £524 13s. 8d., which is the total yield since the commencement of operations.

Graceville Syndicate, Neavesville.—Operations on the Syndicate's property were chiefly confined to stopping a block on the M.B.A. reef in the Golden Belt and Golden Belt Extended sections. The reef is faulted. It is reported that prospecting-work was carried out on the Remuera and Champion sections with encouraging

results, and that it is intended, if results prove satisfactory, to further develop the former and make an aerial tramway connection with the treatment plant. A crosscut, driven in 1886 to intersect the Eldorado reef, is being reconditioned, and it is expected that the objective (or reef) will be reached early in 1937. This work is being carried out on account of boulders on the surface and the dump outside the level yielding results that are stated to be encouraging. During the year 421 tons of ore was treated for a recovery of 579 oz. 2 dwt. of gold, valued at £2,730 11s. 11d., which is also the total production since the syndicate commenced operations.

Monowai Gold, Copper, and Lead Mines, Ltd., Waiomio.—This company's areas have been under protection during the year pending the provision of further capital for development. It is said that a new company with a working capital of £3,500 is to be incorporated for the purpose of driving 1,400 ft. on the main Monowai reef.

Tairua, Myosotis Gem and Golden Mount Claims, Tairua.—The Wealth of Nations Mining Syndicate, which has taken over these claims, erected a ten-stamp battery during the year. Several old drives were cleaned out, and it is expected that production will commence early next year.

Kernick's Freehold, Tapu.—This property was worked by two tributers. The No. 1 level was extended on reef for approximately 50 ft. to a total of 80 ft. Three rises were put up and about 50 ft. of stoping was done. No. 2 level, put in 25 ft. below No. 1, intersected the reef at 97 ft., at which point it had little value. A rise was put through to No. 1 level, and, at 16 ft. up, a stope was taken north for 37 ft. Seventeen tons of quartz was crushed for a return of 258 oz. 15 dwt. of gold, valued at £1,508 10s. 10d. The total production from the area since the commencement of operations is 607 oz. 2 dwt. of gold, valued at £3,565 18s. 7d.

Puketui Claim, Tairua (J. H. Prescott, Owner).—Operations were confined to the stoping of a small leader, the ore from which is said to be of good value. It is being stacked for treatment.

Gold Seal Claim, Thames (E. Keven Owner).—The working of some small leaders resulted in 7½ tons of ore being treated for a yield of 22 oz. 9 dwt. of gold, valued at £113 7s. 2d. The total recovery since the beginning of operations amounts to 64 oz. 9 dwt. of gold, valued at £306 0s. 7d.

Sylvia Mines Development, Ltd., Thames.—An average of two men was employed during the year, and 349 tons of ore was treated for a return of 193 oz. of gold, valued at £1,710, and 1,013 oz. silver, valued at £200. An effort is now being made to float a new company in order to carry out a boring programme on this property. The total production since the beginning of operations is 1,495 oz. 7 dwt. of bullion, valued at £3,466 18s. 5d.

Dawn of Hope Gold-Mines, N. L., Thames.—Operations were mostly carried out by several parties of tributers, totalling about sixteen men. During the year the latter treated 87 tons of quartz, which yielded 268 oz. 9 dwt. of gold, valued at £1,428 6s. 3d., while the company crushed 28 tons for 80 oz. 15 dwt. of gold, worth £413 4s. 8d. The total amount of bullion produced since the commencement of operations is 1,416 oz. 5 dwt., valued at £7,006 16s. 8d.

Victoria Gold-Mining Co., Thames.—Work was confined to prospecting the Mariner reef. A drive was put out in the direction of the Waiotahi boundary, and at the end of the year had been advanced for approximately 40 ft., with work still in progress. Two men were employed.

New Waiotahi Claim, Thames (J. R. Preece and party, Owners).—Four men employed. A limited amount of development work has been undertaken. For the period 30 tons of stone was crushed for a return of 10 oz. 8 dwt. of gold, valued at £51 17s. 10d., making the total recovery since the beginning of operations 141 oz. of gold, valued at £700 10s. 10d.

Progress Claim, Thames (H. W. Lloyd and party, Owners).—Four men employed. Two winzes were sunk each to a depth of 50 ft. No. 1 winze is on the main reef formation, and it is stated that gold has been seen for its entire depth. No. 2 winze was sunk on a smaller vein, and has shown good values. An intermediate level was opened out, at approximately 20 ft. down this winze, for a distance of 30 ft. Some stoping was done above the brace of No. 2 winze. The level on the main reef was also advanced a further 25 ft. A total of 87½ tons of quartz was treated for a return of 133 oz. 2 dwt. of gold, valued at £679 1s. 8d. The production since the commencement of operations is 334 oz. 13 dwt. of gold, valued at £1,707 1s. 1d.

Caledoniam (1934), Ltd.—The main drive was advanced a further 120 ft. in the direction of the Red Queen and Gtago sections of the company's property. The country penetrated was extremely hard, and progress was slow in consequence. Several small leaders were intersected and prospected, but owing to lack of finance operations on these were not extensive. Three men were employed. Approximately 105 tons of material obtained from old dumps on this ground was treated at the Moanataiari battery, and yielded 3 oz. 15 dwt. of gold, valued at £15 10s. 1d. The total output since the beginning of operations is 18 oz. 3 dwt. of gold, valued at £83 5s. 9d.

Virginia Claim, Thames (W. F. Smith, Owner).—A party of four men is driving a level with the object of getting under a winze where rich ore is said to have been left. About 340 ft. was driven during the year, leaving an estimated distance of 60 ft. to reach the objective.

Dauntless Claim, Thames (A. G. Snelgar, Owner).—For the greater part of the year this area was worked by two tributers, who obtained 7½ tons of stone, which, on treatment at the Thames School of Mines, yielded 64 oz. 17 dwt. of gold, valued at £331 5s. 2d. The total return since the beginning of operations is 68 oz. 6 dwt., valued at £349 2s. 9d.

Hawaki Mines Consolidated, Ltd., Coromandel (H. F. Shepherd, Manager).—The only work done was carried out by tributers (5), who mined approximately 19 tons of quartz, which yielded 27 oz. of gold, valued at £144 18s. 4d. The total production since the commencement of operations is 697 oz. 16 dwt. of gold, valued at £2,524 18s. 1d.

Coromandel Gold-Mines, Ltd., Coromandel (J. Caisley, Manager).—Four men employed. Driving on the main reef at the 150 ft. level was continued south to 240 ft. from the crosscut. The reef was of rather low grade, but showed fair prospects in places. At 120 ft. in the level a crosscut (driven through the reef) disclosed about 42 ft. of formation, 16 ft. of which was of solid quartz; the balance consisted of alternate bands of quartz and country rock. In June a start was made to test the reef at a lower level by boring from the surface with a Government C.N. Sullivan drill. Three unsuccessful attempts were made to reach the reef, and the drilling of a fourth hole is now in progress. Forty tons of ore was treated for a return of 13 oz. of gold, valued at £75 3s. 2d., which is the total production since the commencement of operations.

Rock of Ages Claim, Tokatea (J. F. McNeil, Owner).—Some driving and sinking was done on a reef averaging 1 in. to 3 in. in width. A small parcel of selected stone from same yielded 122 oz. 5 dwt. of gold, valued at £652 4s. 2d. The total production since the beginning of operations is 159 oz. 7 dwt. of gold, value £856 18s. 6d.

Harbour View Gold-mines, Ltd., Tokatea.—The driving of a new level below No. 5, commenced in the previous year, was advanced for 70 ft. to 287 ft. At this stage operations were suspended owing to lack of finance, and same have not since been resumed.

Speedmint Claim, Tokatea (H. G. Shelverton, Owner).—Two men were employed on this area, and work consisted of driving and sinking on the Day Dawn reef. Three and a half tons of quartz was crushed for a yield of 48 oz. 2 dwt. of gold, valued at £257 10s. 9d. The total production since the commencement of operations is 128 oz. 18 dwt. of gold, value £694 12s. 10d.

Gem Claim, Tokatea (A. A. Lynne, Owner).—Driving was carried out on a small reef, averaging about 2½ in. in width, in Nos. 1, 2, and 3 levels. A total of 4½ tons of quartz was crushed during the year for a return of 39 oz. 6 dwt. of gold, valued at £216 18s. 8d., which is the total production since the commencement of operations.

Northcote Claim, Waikoromiko (J. W. Boswell and A. R. Shutes, Owners).—Operations were confined to the Cuirassier reef, on which 115 ft. of driving was carried out. Stopping of this vein above the No. 1 intermediate level resulted in about 1 cwt. of picked stone being obtained, which on treatment yielded 32 oz. 6 dwt. of gold, valued at £180 12s. 4d. The total production since the beginning of operations is 96 oz. 18 dwt. of gold, valued at £537 16s. 4d.

Waikoromiko Sluicing Co., Kennedy's Bay.—Work has been confined chiefly to the completion of the main tail-race. During the process of working up the river old workings were met with, but these have now been passed. The tail-race has reached a position where virgin wash will be met with, and it is expected that production will commence shortly. On an average, eight men were employed. During the year 20 oz. 11 dwt. of gold, valued at £118 2s. 3d., was obtained. This is the total output since the commencement of operations.

Lone Hand Claim, Kennedy's Bay (W. J. Pearce, Owner).—The low level was advanced to 180 ft. from the portal. An intermediate tunnel was driven for 130 ft., and a rise was put up from the first-named level to connect with same. About 5½ tons of quartz was crushed for 16 oz. of gold, valued at £87 18s. 3d. The total production since the commencement of operations is 121 oz. 13 dwt. of gold, value £631 10s. 5d.

Hardy's Mines, Waiorongoma (M. Y. Hardy, Owner).—Practically the only work done on this claim during the year was the opening of the No. 1 winze on the Colonist reef, from which 2 tons of picked stone was saved for future treatment. McLean's level was also retimbered for about 90 ft. to enable sampling to be carried out.

PROSPECTING.

The great bulk of the prospecting work, as during last year, was carried out under the Labour Department's prospecting-schemes at Thames and Coromandel. In the former locality an average of approximately a hundred men was employed, and in the latter about fifty men. The subsidized men at Thames won 719 oz. 15 dwt. of gold, valued at £3,713 11s. 3d., while those at Coromandel produced 336 oz. 14 dwt. of gold, worth £1,843 11s. 8d.

BORING (ALLUVIAL).

Kennedy's Bay, Coromandel.—Thirteen holes were put down on claims held by Messrs. Land and McLeod in this locality, the work being carried out by Austral Malay Tin, Ltd. The holes averaged 47 ft. in depth; 6 in. casing, with a 7¼ in. cutting shoe, was used in drilling.

PRODUCTION FROM OIL-WELLS.

Moturoa Oilfields, Ltd. (K. E. Pedersen, Manager).—No drilling was done by this company during the year, operations consisting mainly of repairs and maintenance in connection with the production of Nos. 1, 2, and 4 wells. Three men were employed. Nos. 1 and 4 wells, flowing under their own gas pressure, produced 7,925 and 43,267 imperial gallons respectively, while from No. 2 well 106,699 imperials gallons was obtained by bailing at intervals. The value of the oil produced was £2,960 9s. 1d.

N.Z. Oil Refineries, Ltd. (W. Fossey, Manager).—Two employees. This company has purchased the total output from the wells operated by Moturoa Oilfields, Ltd., since 19th October, 1931, the greater part being refined by the company and marketed in New Zealand. The residue oil amounts to 26 per cent. of the total. This could be cracked into petrol and kerosene, or stiller further, and its wax content, about 40 per cent., treated, but costs would be too high on account of the limited production. Recoveries from the 936,129 gallons of crude oil purchased consist of the following: Petrol, 204,617 gallons (20 per cent.); distillate, 51,428 gallons (6 per cent.); power kerosene, 178,265 gallons (16 per cent.); heavy kerosene, 81,941 gallons (12 per cent.); diesel oil, 43,075 gallons (14 per cent.); residue oil, 349,479 gallons (26 per cent.) Loss, 27,324 gallons (6 per cent.). The oil from Nos. 2 and 4 wells averages 22 per cent. of petrol and 10 per cent. of wax, and 17 per cent. of petrol and 15 per cent. of wax respectively. The Railway Department has used 42,568 gallons of heavy kerosene and 117,425 gallons of residue oil for fuel. The Prisons Department has purchased 13,039 gallons of power kerosene. There is no sale for the residue oil at the present time and stocks are accumulating in an unwelcome manner as a result.

ACCIDENTS.

Two fatalities occurred at mines in the district during the year. The first of these was on the 14th January, when William Godfrey Collins, aged 65, married, was run over by a train when endeavouring to catch a horse which was in his charge and which had strayed on to the Government railway-line from the Waikino battery yard. The victim of the second accident, which occurred on the 8th June, on the surface at the Martha Mine, was William Thomas Moyes, aged 51, married. It appears as if deceased was trying to sprag the front wheel of a truck which was being drawn along a tramway by a horse, and while doing so he fell across the track. The truck passed over his body, with the result stated. There was one fatal quarry accident. This happened on the 21st December, at the Matatoki Quarry, Thames County, the victim being Ivan Lendich, aged 35, single. The deceased was charging a hole with lithyte when the charge exploded prematurely. He was standing directly over the hole and apparently received the full force of the explosion in the face and body, and was blown over a bench on which he was working. Death must have been instantaneous, the body being brought to rest by a safety rope. A verdict of accidental death was returned in each of the above cases.

WEST COAST INSPECTION DISTRICT (G. W. LOWES and A. W. TURNER, Inspectors of Mines).

QUARTZ-MINING.

Marlborough County.

Smile of Fortune Mine, Wakamarina (Luigi Iada, Manager).—An average of five men was employed, and the ore stoped out from the adit level to the outcrop. A winze was sunk 50 ft. below the level on low-grade ore, and further prospecting of the surface outcrop is being carried out with the object of discovering a payable shoot of ore before driving a lower level, which is necessary before milling can be resumed. The proprietors of this claim erected an efficient ball mill, classifier, hammer rock-breaker, and an air-compressor to operate rock-drills (driven by a 40 h.p. diesel engine), and treated 1,003 tons of ore for a return of 92 oz. 2 dwt. 7 gr. of gold, valued at £642 9s.

Golden Bar Mine, Wakamarina.—This mine under the same ownership and management as the Smile of Fortune has been reopened at the south end with a view to driving on a 5 ft. lode, which the former owners did not exploit. If payable values are proved by the extension of the No. 2 level south, a treatment plant will be erected.

A considerable amount of prospecting has been carried out on the range situated between Cullen's Creek and the Waikakaho Creek. Numerous quartz lodes and leaders are known to exist in the schist country, which was the source of the alluvial gold won in both valleys. Values in the larger deposits so far tested have been below the paying-point, while the rich leaders are not continuous in either length or depth.

Buller County.

Britannia Mine.—W. McLellan, manager, and three men carried on prospecting operations until May. No consistent body of payable ore was discovered. In May the company closed down, and two months later went into liquidation. Forty-three tons of ore was crushed, yielding 31 oz. 10 dwt. 18 gr. of gold, valued at £118 2s. 11d.

Mokihinui District.—Under the direction of the Buller Mining Executive Committee and using Unemployment Board's funds, and later under direct control of the Department of Labour (Employment Division), the pack track from Seddonville to the upper reaches of the Mokihinui River was reconstructed, the original track having been destroyed by the 1929 earthquake. Access to the field having been restored, active prospecting of the Red Queen and Lady Agnes lodes became possible, and work on both claims is proceeding.

The testing of a large lode situated in the Granite Belt at Anderson's Flat is being carried out by the Department of Labour. The deposit, 1,400 ft. above the river-level and 1,700 ft. above sea-level, is 30 ft. wide and carrying up to 2½ dwt. of gold per ton. It has been traced for half a mile on the surface, and has distinct possibilities. Other lode outcrops in this district are receiving attention, but so far the work done has been confined to stripping and sampling.

Karamea District.—A London syndicate carried out some prospecting on an extensive mineralized granite belt situated between the Penian and Scorpion Creeks, in Blocks VI and X, Oparara Survey District. Sampling by one engineer gave values ranging from 3 dwt. to 39 dwt. over a width of 40 ft. Over the same width an engineer, representing the London Syndicate, obtained much lower results, and, on his advice, the option over the property was not exercised. This difference of opinion is accounted for by the nature of the deposit. Either sampling with a core drill or the erection of a pilot plant for bulk testing is necessary to ascertain the true value of the mass. Nearly 1,000 ft. of driving and crosscutting was completed before the holding syndicate and option-holders ceased operations. The option holders financed 415 ft. of driving and 130 ft. of crosscutting before ceasing operations in October.

Inangahua County.

Blackwater Mine.—T. R. Hogg, manager, and one hundred and ninety-seven men employed. During the period under review development footage amounted to 2,489 ft., which is summarized as follows: Driving, 1,294½ ft.; rising, 354 ft.; winzing, 504½ ft.; crosscutting, 311 ft.; fan chamber, 25 ft. No. 10 level Intermediate drive: This was extended for 29 ft. from a winze 90 ft. north from the south shaft, and exposed reef averaging 22 in. wide of a value of 10-20 dwt. No. 12 level north: This was extended 47½ ft. and disclosed a further 38 ft. of reef, which averaged 15-16 dwt. over 22 in. This drive now appears to have reached the northern limit of the main ore shoot. No. 13 level north: This was advanced 548½ ft., of which 526½ ft. was on reef averaging 13-82 dwt. over a width of 22 in. No. 13 level south was extended a distance of 635½ ft., and like the No. 13 north drive gave very good results, disclosing pay reef for 382½ ft. of an average width of 22 in. and assaying 14-56 dwt. Development results are most satisfactory and indicate continuity at depth. Ore reserves at 91,174 tons show slightly lower than for the previous year, development having been curtailed during the period in which the north shaft was under repair. The north shaft was retimbered for a distance of 250 ft. during the opening months of the year and has operated satisfactorily for the remainder of the year. The steam winding plant was superseded by the electric winding equipment, which has functioned well since installation. The aerial ropeway came into commission simultaneously with the starting-up of the electric winder and is entirely satisfactory. Additional plant installed during the year comprised ten head of new stamps, complete with all accessories. A depth of 2,300 ft. has now been reached at the north shaft, and, although the mine is ideally situated for natural ventilation, this method will be discarded in favour of mechanical appliances which will supply a constant volume of air under a regular pressure irrespective of seasonal changes of surface temperatures, which tend to cause undesirable fluctuations in the ventilating current. Arrangements were put in hand to obtain better ventilation by means of a fan situated in the Chamber of the No. 12 south shaft. The battery crushed 41,990 tons, which returned 14,845 oz. 15 dwt. by amalgamation, 2,606 oz. 1 dwt. by cyanidation, and 1,572 oz. 10 dwt. by the treatment of concentrates, making a total of 19,024 oz. 6 dwt., which realized £153,894 0s. 2d. The total yield since the commencement of operations amounts to 538,792 oz. 10 dwt., valued at £2,527,261 8s. 6d. Dividends paid during the year amounted to £37,498 16s.

Alexander Mine.—J. Bolitho, manager, and thirty-four men employed. Operations during the year were confined to the development of No. 5 and No. 4 intermediate levels and production of ore from stopes between Nos. 4 and 5 levels. Development work consisted of the following: No. 4 intermediate south was opened out on stone 50 ft. down the winze sunk from No. 4 level. To the southward driving was continued to 40 ft. on stone varying from 1 ft. to 3 ft. in width, the drive then passing through the strike of the lode. No. 4 intermediate north was advanced to a point 160 ft. north on winze on lode from 3 ft. to 6 ft. in width. Lode 5 ft. in width is still showing in the face. A winze was sunk from the end of this level to 35 ft. and later was intercepted with a rise from No. 5 level. Stone wider than the winze was followed, the eastern wall only showing. No. 5 crosscut was advanced from 998 ft. to 1,041 ft. from the portal. At 1,030 ft. in the reef track was passed through carrying large boulders of stone and reef-track filling. No. 5 north drive: Driving north was carried out on the above reef track to 354 ft. from the main crosscut, 195 ft. being on stone from 3 ft. to 10 ft. in width. A fault-line appeared in the level, cutting off the stone about 2 ft. below the level caps, and continued for the distance driven on lode. A crosscut was put out 14 ft. in an easterly direction and intercepted the downward continuation of this block. The stone was driven on for 78 ft. and proved to be from 2 ft. to 10 ft. in width, and is lying very strongly underfoot. No. 5 level, No. 1 rise: Rising was started 6 ft. north of the main crosscut and put up 71 ft. making a connection with the winze sunk from No. 4 level. The country passed through showed no stone of any value. No. 5 level, No. 2 rise: This rise was put up 46 ft. and a connection made with the winze sunk from the north of No. 4 intermediate level. A continuous ore-body has been proved to exist between No. 5 level and No. 4 intermediate, a distance of 81 ft., the width varying from 3 ft. to 6 ft. No. 6 crosscut: This lode is showing so strongly underfoot that preparations are being made to drive a crosscut 150 ft. vertically below No. 5 level. This work has been started; the approach has been excavated and the opening set put in position. The approximate distance to the lode channel is 1,600 ft. Battery: During the period the mill crushed 4,114 tons of ore for a return of 2,036 oz. 2 dwt. of melted gold, valued at £16,963 11s. 5d. The cyanide plant during the same period treated 2,586 tons of sands for 519 oz. 15 dwt. of bullion, valued at £4,150 12s. 5d. In addition to this return 44 oz. 8 dwt. was won from the cleaning-up of the roaster cyanide boxes, which have now been out of commission for several months. Gold in concentrates shipped for treatment to Australia amounts to 213 oz. 14 dwt. The value realized from these concentrates together with the bullion from the roaster cyanide boxes was £1,690 5s. 3d., making the total yield for the year 2,813 oz. 19 dwt., valued at £22,804 9s. 1d. The total yield of gold since the commencement of operations amounts to 29,077 oz. 15 dwt., valued at £174,371 12s. 2d. Dividends paid during the year amounted to £3,750.

Big River Mine.—H. A. de Lautour, manager, and twenty-four men employed. After completing extensive shaft repairs, development was concentrated on driving a new crosscut from No. 5 level chamber to intersect ore-bodies proved to exist below No. 4 level by the sinking of three winzes below this level on good-grade ore. At 300 ft. east of the shaft a lode channel, that proved to be 25 ft. wide, was met by the crosscut, which terminated at 331 ft. from the shaft. Driving south was carried out for 25 ft. the first 17 ft., being on a leader which carried values, the next 8 ft. being on a lode 2 ft. wide, assaying 13 dwt. per ton. Stopping operations were confined to a block of ore over No. 4 level. 450 tons of quartz was mined and treated for a return recovered as follows: Amalgamation, 260 oz. 6 dwt.; cyanide plant, 76 oz. 14 dwt.; from concentrates 33 oz. 12 dwt., making a total of 370 oz. 12 dwt., which realized £2,847 8s. 11d. The total yield of gold since the reconstruction of the Company amounts to 4,213 oz. 1 dwt., valued at £33,702 4s. 5d.

Homer Mine.—D. Absalom, manager, and two men carried out the driving of a low-level crosscut and construction of a rise for a syndicate which has an option over the mining privileges held by the manager. The crosscut, which is a new level 100 ft. vertically below No. 2, was advanced 126 ft., and according to survey the lode channel should be cut at 190 ft. from the new No. 3 level. The amount of ore between No. 2 level and the outcrop that is available for stoping will be considerably increased by the development of the new level. A rise 75 ft. in height was put up between Nos. 2 and 1 levels on ore averaging 3 ft. in width. No ore was treated during the period under review. The total amount of gold won from this mine up to date is 162 oz. 3 dwt. 9 gr., valued at £791 3s. 6d.

Lankey's Creek (T. C. Watts and Party).—This party of four men, assisted by the Department of Labour, is developing a section of the auriferous cemented gravels which cover a fairly extensive area between the Inangahua River and Murray Creek. An air-compressor and rock-drills are to be installed, and the substitution of this plant for hand labour will materially increase the output of rock and return of gold. During the year 205 tons of ore was mined, and 38 oz. 8 dwt. 3 gr. of gold, valued at £272 8s. 5d., was recovered therefrom.

Globe and Merrijigs Area.—From 1931, when Great Britain went off the gold standard, this area, with the exception of some prospecting on the Cumberland and Golden Lead leases, has lain neglected until October of this year. Following an extensive geological and geophysical surveying campaign, the Mines and Labour Departments collaborated in drawing up a prospecting programme that would entail an initial expenditure of £5,000. The work is now in progress under the joint direction of the Labour, Scientific and Industrial Research, and Mines Departments. Twenty men are engaged on this scheme under the direction of a mining engineer.

Diamond-drilling.—In addition to the foregoing work, the Consolidated Gold-fields of N.Z., Ltd., has constructed a road and laid out sites for three deep boreholes on the Globe area. The latest type of diamond drill was imported by the company, also a drill superintendent with a lengthy experience of deep diamond-drilling in many parts of the world. At the end of the period all plant was in position and drilling had commenced. The Mines Department granted a substantial sum towards the cost of this project and the borehole sites were chosen after careful examination by the company's officials and members of the Mines Department and of the Geological Survey Branch of the Scientific and Industrial Research Department.

Grey County.

Lode mining in this County has been restricted to prospecting in the Ten-mile Creek, Garden Gully, Moonlight Creek, and Langdon's Creek. The reopening of several old drives is in progress; some driving is also being carried out to prove at lower levels exposed outcrops and others that were exposed by trenching.

Westland County.

Bierwirth's Gold Reefs, Ltd.—W. O. Bierwirth, manager, with nine employees, mined 286 tons of ore and recovered by amalgamation 157 oz. 8 dwt. 9 gr. of gold, which realized £1,101 6s. The total quantity of gold won from this mine since the commencement of operations by the present company amounts to 2,075 oz. 19 dwt. 9 gr., valued at £10,571 3s. 8d., making the amount produced from the mine since 1917, when it was operated by the Mount Greenland Gold Quartz Mining Co., Ltd., 4,106 oz. 13 dwt. 14 gr., valued at £18,679 3s. Work in the mine has been confined to stoping the tonnage mentioned from No. 2 level. A new company is being formed with the object of mining on a larger scale.

Lode Prospecting.—Two parties, each consisting of a geologist and seven prospectors, have been organized by the Mines and Labour Departments for prospecting selected areas in South Westland. While South Westland has attracted individual attention and efforts of prospectors from time to time, very little organized work has been carried out, and there are few mineralogical records of this part of the country. In November, 1936, one of the parties commenced an investigation of the country between the Main Alpine Range and the western coastline from the Paringa River south to the Moeraki or Blue River. The second party is scheduled to commence operations early in 1937 in the Waikukupa-Cook Rivers district. During the year reef prospecting was also carried out in the Taipo River Valley, Ross, Wataroa River Valley, and McDonald's Creek areas.

DREDGE MINING.

Mataki Dredge, Murchison County (F. B. Gillyooly, Dredgemaster).—This steam-powered dredge, with 7 cub. ft. buckets, operated throughout the year in the Mataki River; 416,548 cub. yards were dredged for a return of 1,723 oz. 12 dwt. 15 gr. of gold, which realized the sum of £12,577 1s. 3d. During the year dividends were paid amounting to £2,811 13s. 2d., making a total of £7,029 13s. 10d. paid since the commencement of operations; employment was given to an average number of seventeen men. The total quantity of gold won to date amounts to 5,890 oz. 8 dwt. 1 gr., worth £42,728 3s. 2d.

Mataki Junction Dredge, Murchison County (S. G. Lyon, Dredgemaster).—This diesel-electric powered dredge commenced operating early in 1936, and during the year treated 764,100 cub. yards for a return of 2,526 oz. 18 dwt. 9 gr. of gold, and 22 oz. 2 dwt. of silver, which together realized the sum of £18,656 8s. 4d. The average number of men employed during the year was sixteen. The average depth of the ground is 20 ft. The dimensions of the hardwood pontoon are—Length, 104 ft.; beam, 36 ft.; depth, 8 ft.; there are eight water-tight compartments. There are sixty-six manganese-steel 6 cub. ft. buckets moving at twenty-one per minute. Water is supplied by three pumps, direct-coupled to individual motors: Low-pressure pump, 150,000 g.p.m. against 50 ft. head, 55 h.p. motor; No. 1 high-pressure pump, 96,000 g.p.m. against 100 ft. head, 70 h.p. motor; No. 2 high-pressure pump, 27,000 g.p.m. against 100 ft. head, 23 h.p. motor. The screen is of the revolving single-shell type 37 ft. long by 6 ft. in diameter, perforated with $\frac{1}{4}$ to $\frac{3}{8}$ in. diameter holes. Gold-saving is effected by expanded-metal and coir-matting tables, the tails from which are delivered aft by long chutes and deposited above the screen-rejected debris. The power plant consists of a 400 volt 3-phase 50-cycle generator direct-coupled to a 5-cylinder 370 h.p. diesel engine, the plant being on board.

Workshop Dredge, Inangahua County (N. Curnow, Dredgemaster).—This diesel-powered 4 cub. ft. bucket dredge operated throughout the year, an average of fourteen men being employed. 452,220 cub. yards were treated for a return of 1,920 oz. 4 dwt. 3 gr. of alluvial gold, which realized £15,581 3s. 10d. During the year dividends amounting to £4,800 were paid making a total of £12,800 paid since the commencement of operations. The total amount of gold won to date amounts to 5,020 oz. 5 dwt. 17 gr., and the value is £39,276 9s. 10d. The average depth of ground dredged was 15 ft.

Mossy Creek Dredge, Inangahua County (Duncan McRae, Dredgemaster).—This electrically driven, four cub. ft. bucket dredge worked throughout the year, and treated approximately 600,000 cub. yards, which yielded 2,303 oz. 1 dwt. 8 gr. of alluvial gold, valued at £18,874 17s. 4d. During the year dividends amounting to £7,500 were paid, making a total of £11,250 paid since the commencement of operations. The average number of men employed during the year was twelve. Since the inception of dredging, 4,086 oz. 14 dwt. 23 gr. of gold has been won, worth £33,573 0s. 8d. The average depth of ground dredged was 11 ft.

Brian Boru Dredge, Grey County (W. B. Hepburn, Dredgemaster).—This electrically driven dredge was again put into commission during the year, but closed down finally on 11th December, 1936, after operating for three months. Ten men were employed while the dredge was working, and the average depth of the ground was 35 ft. The alluvial gold won during the year amounted to 43 oz. valued at £316 16s. 9d. Since the commencement of operations 2,633 oz. 11 dwt. 16 gr. of gold has been won, valued at £20,655 1s. 4d.

Argo Dredge, Grey County (A. Fischer, Dredgemaster).—The electrically driven, 5 cub. ft. bucket dredge worked throughout the year, and treated 553,700 cubic yards for a yield of 3,068 oz. 2 dwt. of alluvial gold, valued at £25,424 4s. 1d. The company commenced paying dividends during the year, and £11,200 was disbursed in this manner. Since the commencement of operations 3,656 oz. 14 dwt. of gold has been won, valued at £30,274 17s. 6d. An average of fourteen men was employed. The average depth of the ground was 33 ft.

Maori Gully Dredge, Grey County (D. Caithness, Dredgemaster).—This electrically operated 4 cub. ft. bucket dredge worked throughout the year and treated 576,900 cubic yards, which yielded 1,589 oz. 10 dwt. 12 gr. of alluvial gold, estimated to be valued at £11,646 3s. 7d. During the year an average of ten men was employed, and £3,600 was paid in dividends, making a total of £6,000 paid since operations commenced. Since the inception of dredging, 3,029 oz. 6 dwt. 21 gr. of gold, valued at £22,327 12s. 9d., has been won.

New River Dredge, Grey County (J. A. Anderson, Dredgemaster).—The diesel-powered dredge was put into commission in August, and treated 63,800 cubic yards which yielded 212 oz. 16 dwt. of alluvial gold, valued at £1,430 18s. 7d. An average number of eleven men was employed while dredging. The dimensions of the wooden pontoon are—Length, 70 ft., width, 30 ft., depth, 6 ft. 6 in. The dredge is equipped with fifty-six 4 cub. ft. buckets, and power is supplied by a 140 h.p. diesel engine driving the various units through belting and counter shafts. The dredge operates in the New River half a mile below Dunganville. The average depth of the ground was 15 ft.

Nemona Dredge, Grey County (H. J. Buckland, Dredgemaster).—This electrically driven dredge was put into commission at the end of June, and to the end of December treated 292,780 cubic yards, which yielded 986 oz. 18 dwt. 3 gr. of alluvial gold, valued at £7,969 6s. 3d., out of which £3,000 was paid in dividends. The dredge gives employment to twelve men; it operates in Cockeye Creek, a tributary of New River, near Marsden. The wooden pontoon is 85 ft. long by 31 ft. wide by 7½ ft. deep. The buckets are 4½ cub. ft. capacity, and there are fifty-four buckets and six trays in the line, the speed being twenty-eight per minute. The total horse-power of the electric motors driving the various units is 255, and the dredge is connected with the Grey Power Board's reticulation. Gold-saving is effected by Hungarian riffles and mercury on the top tables, and expanded metal and matting on the bottom tables. The depth of the ground is variable, but averages 18 ft.

Bundi Dredge, Grey County (R. Murray, Dredgemaster).—During the year this steam-powered 10 cub. ft. bucket dredge treated 912,460 cubic yards for a yield of 2,978 oz. 16 dwt. 2 gr. of alluvial gold, valued at £21,445. Since the commencement of operations 5,220 oz. 16 dwt. 16 gr. of gold, valued at £38,925, has been won. The average number of men employed is thirty.

White's Electric Dredge, Grey County (D. Sutherland, Dredgemaster).—Commencing operations at the end of September this electrically driven dredge treated 70,800 cubic yards which yielded 145 oz. 4 dwt. of alluvial gold, valued at £1,054 17s. 6d. Eleven men are employed while dredging. The dredge is of steel construction, electrically welded throughout. Pontoon dimensions are—Length, 90 ft., width, 40 ft., depth, 5 ft. 2 in.: there are nine water-tight compartments. The buckets are 4 cub. ft. capacity, and there are fifty-seven on the line; the bucket speed can be altered from 10 to 12, 15, or 18 buckets per minute by changeable sprockets, the lower speeds, however, being employed on account of the difficulty in treating the blacksand. Power from the Grey reticulation is carried on board at 11,000 volts and stepped down to 400 volts by a 250 k.v.a. transformer. The total horse-power of the motors driving the various units is 226, of which 105 h.p. is absorbed in driving one 12 in. and one 15 in. centrifugal pump. The gold-saving tables are nearly 2,000 sq. ft. in area, but it is possible that this area will be increased.

Barrytown Dredge, Grey County.—The construction of this dredge was commenced during the year, and the erection of the machinery was under way at the end of December. The dredge is being constructed of steel, the weight being approximately 1,500 tons; it will be electrically driven, power from the Grey reticulation being carried on board at 11,000 volts and stepped down to 415 volts for the motors. The total connected horse-power of the various units will be 820. The dimensions of the pontoon are—Length, 148 ft. 5 in., beam, 55 ft., bows stepped to 65 ft. midship and aft; depth, 10 ft. 6 in. at centre. The digging ladder is 100 ft. in length, and will dig to 40 ft. below water-level when at an angle of 47½ degrees. The buckets are one-piece 12 cub. ft. capacity, manganese-steel, replaceable lips being dispensed with; there are eighty in the band. The dredge will operate in inner beach leads at Barrytown, and is equipped with many improved mechanical features, in addition to the "Bendelari" jigs, which are an innovation for this district. It is estimated that at least twenty-six men will be employed when operating.

Stafford Dredge, Westland County (D. M. Pettigrew, Dredgemaster).—During the year this electric-powered, 8 cub. ft. bucket dredge treated 500,095 cubic yards, which yielded 1,512 oz. 12 dwt. 7 gr. of alluvial gold, valued at £10,966 9s. 1d. Since the commencement of operations 4,022 oz. 6 dwt. 1 gr. of gold, valued at £32,024 10s. 10d. has been obtained, and £3,750 has been paid as a dividend. During the latter half of the year the dredge worked its way mainly through old tailings, its objective being an area of virgin ground on the western side of the Greymouth-Hokitika Highway. The average number of men employed while dredging was fourteen. The total horse-power of the units on the dredge is 220, power being supplied by Westland Power, Ltd.

Rimu Dredge, Westland County (F. B. Lewis, Dredgemaster).—This electrically operated 12 cub. ft. bucket dredge treated 2,512,809 cubic yards, which yielded 11,516 oz. of alluvial gold, the estimated value of which is £97,488. Since the commencement of operations 187,944 oz. of gold has been won, of £1,019,888 estimated value. The dividends paid during the year amounted to £20,834, making the total paid since the commencement of operations £98,716 2s. 4d. During the year an average of forty-two men was employed in connection with the dredging operations. The dredge excavated a superficial area of 31.5 acres, the average depth being 49 ft.; it operated for 5,707 hours 37 minutes, equal to 78 per cent. of the possible digging-time, and treated gravel at an average rate of 440 cubic yards per digging-hour. Continued dry weather at the beginning of the year, and a shut-down for six weeks owing to the dredge becoming submerged in the pond resulted in a loss of 834 hours 15 minutes, which largely accounts for the falling-off in digging-time, yardage handled, &c., compared with the previous year. The total horse-power of the various motors on board is 922, and power is supplied by Kanieri Electric, Ltd., a subsidiary company. The company employed additional men on its new area in the Grey Valley, where active prospecting operations have resulted in the development of an extensive low-grade dredging-area.

Okarito Five Mile Beach Dredge, Westland County (D. A. Mitchell, Dredgemaster).—Operated by water-power which drives an improved type of pelton wheel on board, this 5 cub. ft. bucket dredge treated 339,083 cubic yards, which yielded 838 oz. 11 dwt. of alluvial gold valued at £6,112. Since 1931, 12,537 oz. 9 dwt. of gold, valued at £80,764 6s. 3d. has been won, and £31,500 paid in dividends. No dividends were paid during the year. An average of ten men was employed. The built-up buckets on the dredge are being replaced by new one-piece cast 5 cub. ft. buckets with manganese-steel lips.

Gillespie's Beach Dredge, Westland County (Geo. Pettigrew, Dredgemaster).—This electrically operated 5 cub. ft. bucket dredge treated 474,199 cubic yards for a yield of 2,715 oz. of alluvial gold, valued at £22,255 9s. 10d. During the year £7,583 6s. 8d. was paid in dividends, making a total of £12,250 2s. 3d. paid since the commencement of operations. Since the inception of the company, 6,072 oz. 17 dwt. of gold, worth £46,681 8s. 7d. has been won. An average of sixteen men was employed. The average digging-depth was increased to 28 ft. during the year. Power is supplied by the company's own hydro-electric plant, the dredge using 225 h.p.

ALLUVIAL MINING.

*Marlborough County.**Cullen's Creek, Mahakipawa.*

Waitangi Mine.—D. L. M. Jobson, manager, and eight men employed. From the bottom of a shaft, 67 ft. deep, the Grove Gold-mining Syndicate carried out some driving east and south of their shaft, and produced 71 oz. 17 dwt. 23 gr. of gold, valued at £537 17s. 8d. The company held a small area at the upper end of the valley adjacent to the old King Solomon shaft, but failure to locate payable wash led to the cessation of operations and the removal of all the company's electrical plant.

Sparkes and Party.—This party of four men sunk a shaft 70 ft. for the purpose of exploiting a block of unworked ground left between the King Solomon and Hibernian shafts. Their shaft bottomed in old workings, and considerable trouble and delay ensued from the amount of water that had to be dealt with owing to the cessation of pumping operations by the Mahakipawa Goldfields, Ltd.

Deep Creek, Wakamarina.

J. B. Torrance and C. Mahon are ground-sluing on the eastern bank of the Wakamarina River. Several parties are winning fair returns from the Mountain Camp and Deep Creek areas. Another ground-sluing claim held by Straker and party will be in operation shortly, and returns from alluvial mining in this area tend to increase with a smaller number of men employed.

One hundred and forty-two men were employed in the Marlborough County, winning 537 oz. 18 dwt. 17 gr. of gold, valued at £3,740 6s. 7d. These figures include the number of men employed and the gold won by the Grove Gold-mining Syndicate.

Collingwood County.

Diamond's Flat Gold-mining Co., Ltd.—This company operates a sluing claim situated on the south bank of the Aorere River at Rockville. Mr. J. A. J. McLaren is manager, and six men are employed. By ground-sluing, approximately 8,250 cubic yards of material was treated for a recovery of 119 oz. 6 dwt. 2 gr. of gold, which realized £824 7s. 6d. The company is negotiating for the valuable water rights and dam held by Mouat and Sons, and if these are acquired increased output and returns will be possible.

One hundred and forty-one men were employed in the Collingwood County, winning 619 oz. 16 dwt. 1 gr. of gold, valued at £4,114 12s. These figures include the number of men employed and the gold won by the Diamond's Flat Gold-mining Co., Ltd.

Takaka County.

Glover's Flat Gold Syndicate.—Manoy Bros. employed three men ground-sluing on the Anatoki River Flats. A long tail-race has been constructed and water laid on. Although prospects are good, the removal of heavy boulders encountered in the wash is a serious obstacle to working the claim at a profit.

One hundred and nineteen men were employed in the Takaka County, winning 294 oz. 9 dwt. 2 gr. of gold, valued at £1,909 0s. 3d. These figures include the men employed by Manoy Bros.

Waimca County.

Wangupeka, Baton, &c.—Alluvial mining in these areas is carried out mostly on a small scale by men receiving the subsidy provided by the Department of Labour. Fifty-one men were employed, winning 116 oz. 1 dwt. 10 gr. of gold, valued at £789 5s.

Murchison County.

Glenroy Gold, Ltd.—This company, employing four men on tribute, sluiced approximately 20,000 cubic yards of wash and overburden for a recovery of 105 oz. 11 dwt. 23 gr. of gold, which realized £746 8s. 10d. The total amount of gold won by the company from this area amounts to 414 oz. 3 dwt. 21 gr., valued at £3,185 16s. 5d.

A considerable number of men continue to win gold from the Maggie and Maud Creeks, the latter area having proved highly remunerative to several parties. A considerable yardage from unworked blocks is still available, but this cannot be profitably handled on a small scale and without an adequate water-supply.

The Mines Department is subsidizing an experiment to work deep and swift-flowing rivers by a drag-line process at Newton Flat. A section of the Buller River has been pegged out by a Nelson syndicate, and Mr. E. W. Tait, the designer of the plant, is in charge of the assembly operations, which are progressing favourably. If this plant is successful it will open up possibilities in other localities where similar conditions prevail. Areas that are too small or are in other ways unsuitable for dredging and impossible to work by any known methods may then be exploited by a similar equipment to that now undergoing a trial.

Three hundred and thirty-eight men were employed in the Murchison County, winning 2,187 oz. 9 dwt. 5 gr. of gold, valued at £15,667 9s. 1d. These figures include the men employed and the gold won by the Glenroy Gold, Ltd., but not the dredges.

Buller County.

Addison's Flat Gold-mining Co., Ltd. (J. M. Powell, Manager).—Operating on the cemented gravels at Addison's, this company employed nine men and recovered 416 oz. 7 dwt. 12 gr. of gold, which realized £3,387 19s. 5d. Since commencing operations this company has won 1,851 oz. 9 dwt. 20 gr. of gold, valued at £14,000 16s. 3d., and has paid £2,795 in dividends.

Waratea Sluicing Syndicate.—This syndicate employed three men for a short period on an extended alluvial claim of 5 acres situated in Block V, Kawatiri Survey District. An inadequate water-supply and difficulty in disposing of tailings limited the output for the time worked. Gold won amounted to 13 oz. 6 dwt. 6 gr., which realized £101 6s.

Giles' Terrace Sluicing Co.—Operations on this claim have been chiefly confined to development-work in connection with their claims and pipe-lines. No gold was won during the period, sluing being confined to removing overburden.

A considerable decrease in the number of men engaged in alluvial mining in this county is recorded for the year. In 1935 five hundred and sixty-one men were employed. In the period under review the number was two hundred and seventy-five, and these men produced 1,256 oz. 16 dwt. 22 gr. of gold, valued at £9,310 12s. 1d. These figures include the number of men employed and the returns of the Addison's Flat Gold-mining Co., Ltd., and the Waratea Sluicing Syndicate.

Inangahua County.

Waitahu Gold-mining Co., Ltd. (P. P. Thomas, Manager).—This company operated steadily during the period and mined 294,000 cubic yards of material, from which 803 oz. 0 dwt. 19 gr. of gold was recovered, realizing £5,977 7s. 4d. Twelve men were in constant employment on three shifts worked daily. The total yield for the company since the commencement of its operations amounts to 2,126 oz. 10 dwt. 21 gr., valued at £15,962 12s. 10d.

Mount David Sluicing Co., Ltd. (G. W. Baird, Manager).—After operating the claim for approximately six months, the Mount David Development Co. failed to make payments due by them to the original company and the receivers entered into possession in August. Collapse of water-race tunnels and low values accounted for the low return of 40 oz. 19 dwt. 6 gr. of gold, valued at £301 8s. 10d., won by the three men employed by the company. Since the commencement of operations this claim has yielded 499 oz. 5 dwt. 4 gr. of gold, valued at £3,195 4s. 2d.

Blackwater Creek Sluicing Co. (A. Moore, Manager).—An electrically driven pumping plant and a $\frac{3}{4}$ cub. yd. steam shovel were used in conjunction with the company's sluicing operations. The shovel operated successfully, the ground being ideal for this type of plant, but its output was restricted by the inefficiency of the pumping unit. After operating for nine months, and employing five men, the company ceased operations, recovering for the period 189 oz. 6 dwt. 13 gr. of gold, which realized £1,532 5s. 2d. The total amount of gold won since the claim commenced operations amounts to 351 oz. 6 dwt. 13 gr., valued at £2,762 1s. 5d.

Antonio's Hydraulic Elevating Co., Ltd. (G. Sutherland, Manager).—Water-race and dam-construction work was completed with a force of eleven men and hydraulic elevating commenced during the year. Approximately 2,600 cubic yards of wash was treated before a serious breakdown in the main race occurred. Mining operations could not be resumed until the destroyed portion of the race was replaced by a considerable length of tunnel. 5 oz. 6 dwt. of gold was recovered, which realized £38 16s. 6d.

One hundred and eighty-four men were employed in the Inangahua County, winning 1,704 oz. 3 dwt. 20 gr. of gold, valued at £12,339 16s. 7d. These figures include the men employed and gold won by the Waitahu Gold-mining Co., Ltd., the Mount David Sluicing Co., Ltd., the Blackwater Creek Sluicing Co., and the Antonio's Hydraulic Elevating Co., Ltd., but not the dredges.

Grey County.

Deep Lead Elevating Claim, Nelson Creek (Thos. Donnellan, Manager).—Using dredge buckets and electric power, this company employed five men and mined 108,500 cubic yards of wash and overburden, which yielded 268 oz. 5 dwt. of gold, worth £1,895 15s. 2d. The total yield of gold from the claim since the commencement of operations amounts to 1,241 oz. 18 dwt. 17 gr., valued at £8,981 2s. 8d. During the year operations were interrupted by a fire, a serious breakdown in the elevating gear, and a flood and damage to the water-race. No dividends were declared during the year. Since the commencement of operations one dividend of £500 has been paid.

Golden Valley Syndicate, Gow's Creek.—This syndicate carried out development-work during the year, which included the completion of 2,650 ft. of tail-race tunnelling, and 110 ft. of shaft-sinking, also the erection of head-frame and necessary machinery for the installation of a water balance. The latter is used for elevating the coarser spoil for treatment; it is actuated by a descending water-tank which discharges into the tail-race tunnel when its function of hauling the gravel-tank with its load of spoil has been completed. Water for both the water-balance elevating and the sluicing is to be obtained from the left-hand branch of Nelson Creek, and Kelly's Creek, the distance from the intake to the claim being about four miles.

Golden Sands Sluicing Claim (J. M. Dennehy, Manager).—This company, operating on a blacksand deposit at Barrytown, treated by hydraulic elevating 71,450 cubic yards, which yielded 737 oz. 19 dwt. of alluvial gold, valued at £5,967 13s. During the year £2,100 was paid in dividends, making a total of £5,300 paid since the commencement of operations. An average of ten men was employed. A total of 2,804 oz. 8 dwt. 13 gr. of gold, valued at £22,014 10s. 9d., has been won by the company.

Moonlight Goldfields Sluicing Claim (R. C. Bell, Manager).—This claim, which is situated at Healey's Gully about two miles and a half directly north-east of Blackball, has been in full operation during the year, and has treated 178,380 cubic yards for a return of 730 oz. 4 dwt. of gold, valued at £6,393 3s. 1d., making a total value of £7,489 10s. 7d. since the commencement of operations. Twelve men are employed. Water is drawn from the Roaring Meg Creek, and is conveyed about one mile and a half to the claim, 30 to 35 heads being utilized.

Welshman's Claim, Addison Exploration, Ltd. (A. J. M. Millier, Manager).—This alluvial claim is ten miles and a half directly south of Greymouth, and is worked by means of two diesel-powered shovels of 1 cub. yd. and $\frac{3}{4}$ cub. yd. capacity respectively, which dump into 8 cub. yd. tip wagons drawn by a steam locomotive. The gravels are washed in a revolving screen 24 ft. long by 4 $\frac{1}{2}$ ft. in diameter driven by a 24 h.p. electric motor, the screened undersize being passed over gold-saving tables. Water is pumped up to the washing plant by a centrifugal pump direct coupled to a 110 h.p. electric motor; power is obtained from the Grey reticulation. The number of men employed is twenty-one. Since the commencement of operations, about the middle of the year, 57,000 cubic yards have been treated for a return of 523 oz. 11 dwt. of gold, valued at approximately £4,500. The average depth of the ground is approximately 15 ft.

Hohonu Sluicing Claim (J. A. Peever, Manager).—Sluicing operations were continued on the eastern area, 115,000 cubic yards yielding 97 oz. 16 dwt. 5 gr. of alluvial gold valued at £720. Four men were engaged on the work. Since the commencement of operations, gold to the value of £17,652 2s. 6d. has been won.

Kumara Goldfields Syndicate (A. E. Langham, Manager).—This syndicate completed its development programme during the year, and in December commenced sluicing operations at Quinn's Creek, Westbrook, and Payne's Gully, on the north side of the Teremakau River. Water is taken from the Greenstone River at a point about eleven miles above the claims, and is conveyed via water-race, tunnels, and syphons to a dam, from which water is fed to both claims by additional water-races and pressure-lines. The six syphons in the water-race have a total length of 2,850 ft. and the pipes for these, together with the pipes for the pressure-lines were manufactured on the property from copper-bearing steel. At Quinn's Creek a triple drum friction winch driven by dual peltons of 25 h.p. has been installed; a winch is also being installed at Payne's Gully. Eight men are employed in sluicing operations. Preliminary sluicing yielded 23 oz. 17 dwt. 4 gr. of gold, valued at £179 16s. 1d.

The total number of men engaged in alluvial mining in the Grey County was five hundred and forty-seven, and the production was 4,429 oz. 8 dwt. 23 gr. of gold valued at £33,645 8s. 4d. These figures are inclusive of the yields from the Deep Lead, Golden Sands, Moonlight Goldfields, Welshman's, Hohonu, and Kumara Goldfields claims, but not the dredges.

Westland County.

Lawson's Flat Sluicing Claim (H. Lowther, Manager).—During the year, 90,000 cubic yards were treated or a yield of 479 oz. 8 dwt. 11 gr. of alluvial gold valued at £3,359 11s. 3d. Since operations commenced, a total of 2,490 oz. 19 dwt. 9 gr. of gold, worth £13,943 4s. 9d., has been won. The average number of men employed during the year was thirteen. The company experienced considerable delay and expense owing to the breakdown of the electrical-pumping equipment, and on recommencing operations found that it could not work the ground profitably. Since 1st December the claim has been worked on tribute by Westland Power, Ltd. No dividends have been paid by the company.

The total number of men engaged in alluvial mining in the Westland County was three hundred and thirty-four, and the production was 2,481 oz. 5 dwt. 22 gr. of gold, valued at £17,632 9s. 7d. These figures are inclusive of the yield from the Lawson's Flat Sluicing Claim, but not the dredges.

MINERALS OTHER THAN GOLD.

Onakaka Iron and Steel Co., Ltd. (In Liquidation).—This company produced no iron ore for the period. Negotiations are now in progress for the reconstruction of the works and installation of modern steel-making plant.

Petroleum.—Drilling was carried out by the Maoriland Oilfields, Ltd., on their Kotuku area, over which they hold mineral prospecting warrants. Five shallow bores were put down, and 1,188 gallons of oil was collected and used for sample, experimental, and test-distillation purposes. An average of one man was employed by the company, apart from the drilling crew.

Asbestos.—Active prospecting by the Hume Pipe Co. (Aust.), Ltd., has been carried out on the area held by the company in Block I, Flora Survey District, Takaka County, with the object of developing the extensive asbestos deposits of the area which they hold under mineral prospecting warrant.

PROSPECTING.

A 10½-per-cent. decrease in boring operations is shown for the period when a comparison is made with those of the previous year. The investigation of several large areas was finalized, and a sufficient payable yardage proved to warrant a capital expenditure of considerable magnitude on the construction of four dredges of large capacity. The construction of these machines will commence in the near future, the localities being Kanieri, Arahura, Ngahere, and Ikamatua. Active boring is still proceeding on some areas where investigation has not been finalized.

Other areas were proved to be either unpayable or the yardage of payable ground too limited in extent to interest the capitalists who financed the boring operations.

The investigation of areas suitable for hydraulic mining has not received much attention. The only notable activity in this branch of mining is extensive water-race construction by the Department of Labour in connection with the Humphrey's Gully scheme.

The Mines and Labour Departments have led the way in lode prospecting, their financial assistance being given to organized parties working in several areas.

FATAL ACCIDENTS.

There were three fatal accidents during the year (one of which was a double drowning fatality), as follows:—

On the 5th June, William Woods, dredgemaster, and Aynsley Adair Moore, dredge-construction foreman, were drowned in the rush of water from a dam on the dredging claim of the Nemona Gold-dredging Co. at Marsden, when the wall under which they were working suddenly burst.

On the 23rd August, Peter Ayson Watt, electrician, met his death by electrocution at the Brian Born Dredge, German Gully. The deceased was making an inspection of the transformer and switch gear when he came in contact with a strong electric current.

On the 28th September, Robert Thompson Gallon, miner, was killed by an explosion of gelignite at the mouth of No. 10 tunnel, Humphrey's Gully water-race works. Gallon was in a tent used by the workmen for "crib" and for preparing charges, when an explosion of nearly 10 lb. of gelignite, which was stored in a carbide drum in the tent, occurred.

NON-FATAL ACCIDENTS.

There were three non-fatal accidents during the year, as follows:—

On the 23rd March, Adam Pirrie, a subsidized miner working under the control of the Grey Mining Executive Committee, cut off the index finger of his right hand whilst replacing some laths in the side of a drive at the Ten-mile Creek. The accident was caused by the small hatchet which Pirrie was using receiving a knock caused by some debris of rock coming away from the side of the drive without warning, thus deflecting his left hand whilst he was in the act of preparing a lath.

On the 18th May, Duncan Campbell, a driller employed by the Rimu Gold Dredging Co., Ltd., on its area near Ikamatua, sustained a badly broken arm. The accident was due to Campbell getting his arm caught in the driving-pulley of the drill. It was subsequently found necessary to amputate the injured limb.

On the 28th June, R. A. Fyfe, a subsidized miner working under the control of the Westland Mining Executive Committee, sustained facial cuts, bruising of the back, and fracture of the right leg, whilst working in an alluvial claim at Callaghans. The accident was due to a piece of ground breaking away from the top of the face and falling into the claim.

GENERAL REMARKS — MINING.

Gold won from alluvial mining (other than dredging) during the year amounted to 13,627 oz. 10 dwt. 2 gr., valued at £99,148 19s. 6d., which represents a decrease of 3,340 oz. 2 dwt. 14 gr., worth £22,427 0s. 2d. when compared with last year's figures. Due chiefly to the amount of other work offering the number of men engaged in this branch of mining decreased by 849.

Dredging returns continue to increase, the total production of gold for the year amounting to 34,080 oz. 6 dwt. 11 gr., valued at £271,796 15s. 11d., which represents an excess over last year's production of 4,793 oz. 0 dwt. 19 gr., valued at £39,800 6s. 10d. The number of men engaged in this class of mining during the year exceeded the number employed in the previous year by forty-four. Four new dredges were put into commission during the period, and the ensuing year will see one commencing production on a large scale, and four new dredges under construction.

Gold won from lode mines during the year amounted to 22,601 oz. 16 dwt. 8 gr., valued at £182,239 8s. 8d. These figures show a decrease on those of the previous year of 3,986 oz. 5 dwt. 20 gr., valued at £33,720 6s. 10d. The number of men employed decreased by twenty-nine.

The decrease in gold won from all branches of mining, when a comparison is made with the previous year's figures, amounts to 2,533 oz. 7 dwt. 15 gr., valued at £16,347 0s. 2d. The total number of men employed decreased by 841.

PROSECUTIONS.

No charges were laid during the period for infringement of the Mining Act and regulations.

ADDITIONS TO MINING PLANT ON WEST COAST.

Recent years have witnessed great changes in the type of machinery used in all branches of mining. Formerly steam-engines were used almost exclusively for power purposes, but electric motors and Diesel engines have largely supplanted steam power. The latest provision of modern mining machinery has been made by the Blackwater Mines, Ltd., which company has installed a powerful electric-winding plant at its north shaft, which operates double-deck cages to hoist ore from a depth of 2,300 ft. The following is a description of the plant:—

The Ward-Leonard Ignner system using a Series Scherbius slip-regulator and power-factor controller was selected, owing chiefly to the long transmission-line and small capacity of the generating-station. This system consists of an A.C.—D.C. motor-generator set incorporating a heavy flywheel and speed-regulator, which is electrically connected to the D.C. winding motor, the particulars of which are: A 220 to 400 h.p. A.C. slipping motor is direct-connected to the 6-ton flywheel 9 ft. in diameter; speed 1,000 r.p.m.; energy, 35,000 horse-power seconds, which is also coupled to the D.C. generator of 250 to 600 kw. capacity. The speed of this set is controlled by a Series Scherbius slip-regulator connected to the A.C. motor. The winder motor (rated 320 to 750 h.p.) is coupled to the drum-shaft by double-helical gearing, and is electrically connected to the above motor-generator set. One simple lever on the driver's platform provides complete control of the winder, from an even crawling speed to full speed in both directions, and a similar lever operates the brakes on both drums (a vast improvement on the many levers of a steam winder). Elaborate automatic safety devices are fitted to each drum, which ensure fool-proof operation of the winder. These "Lilly" controllers switch off the power and apply the brakes in any of the following contingencies: Overwind at both top and bottom of the shaft, overspeed during any part of the wind, excessive acceleration and retardation at

the beginning and end of the wind, excessive speed when winding men. Other devices prevent the sudden application of the brakes when winding at speed, and enforce correct retraction after the operation of the overwind devices.

The winder has just completed twelve months' service, and has shown a saving of some thousands of pounds per annum in operating costs, in addition to providing much more safety to the men using it, more speed to those operating it, and less maintenance for those in charge, with the result that the complete electrification of the mine is now in hand.

BORING.

During 1936 boring operations in this field decreased by approximately 10½ per cent. compared with the previous year.

A schedule showing the activities of each of the various companies and syndicates engaged in this work is set out hereunder:—

N.Z. Prospecting and Mining, Ltd.

(1) *Kahinoo (Mikouui) Ross*.—Situation: On O.P.L.'s Nos. 3200–3202, held by V. J. Robinson; Nos. 3251, 3257–60, held by British Developments, Ltd., and renewals thereof, in Block I, Totara Survey District. Drillers J. Waters, E. Matheson, and W. Coleman operated two Keystone machines, using 6 in. casing and 7½ in., 7½ in. and 7¾ in. cutting-shoes. Operations on this area were commenced in 1935, but were suspended between December, 1935, and July, 1936. Twenty-four holes were drilled in 1936, making a total of thirty-eight holes drilled on this area to the end of December, 1936. Operations were still in progress at the end of the year.

(2) *Kauhaka*.—Situation: Freehold of H. Olderog, in Block III, Kanieri Survey District. O.P.L.'s Nos. 5491, held by C. Caliani, and Nos. 5592–96 were also prospected. Drillers G. McIntosh and J. Cowan, operating two Keystone machines, with 6 in. casing and 7½ in. and 7¾ in. cutting-shoes respectively, drilled twenty-five holes. This area was drilled in 1935 by Alluvial Tin (Aust.), Ltd. N.Z. Prospecting and Mining, Ltd., commenced operations in June, 1936, and such were still in progress at the end of the year.

(3) *North Barytown*.—Situation: On Application No. 48/36 for a special dredging claim of 694 acres 21 poles, by C. G. McKechnie, in Block I, Punakaiki Survey District, and Block I, Waihero Survey District. Driller G. MacPherson, using a Keystone No. 7 machine, with 5 in. casing and with 5 in. and 6½ in. cutting-shoes, put down one hundred and twenty-two holes. Boring was also carried out on adjacent freehold land. Operations were still in progress at the end of the year.

(4) *Mawhera-iti*.—Situation: On O.P.L.'s Nos. 8432 and 8361, Reefton Registry, held by the company and by A. Smith and J. Reiha respectively, Driller S. Vickers used one of A. and T. Burt's No. 6 drills to bore fourteen holes; 6 in. casing with 7½ in. and 7¾ in. cutting-shoes were used. An additional eighteen holes were bored on adjacent freehold land.

(5) *Kanieri*.—Situation: On O.P.L.'s Nos. 5570, 5598, and 5599, and on freehold of John McKenzie, Section 628, Block V, Kanieri Survey District. Driller W. Coleman, using a Keystone No. 3 drill, with 6 in. casing and a 7¾ in. shoe, put down six holes.

(6) *Three Channel Flat*.—Situation: On freehold of S. de Phillipi in Section 1, Block VI, Inangahua Survey District. Using A. and T. Burt's No. 6 machine, with 6 in. casing and a 7¾ in. cutting-shoe, S. Vickers drilled thirteen holes.

(7) *Golden Gate, Moonlight*.—Situation: In Block III, Mawheranui Survey District. The following licenses were held over the area: Amalgamated Claim No. 8248, Special Alluvial Claim No. 8231, and O.P.L.'s Nos. 8494–97, 8538, and 8562 in the name of the Moonlight Goldfields Co., Ltd. Drilling was continued from 1935 operations by British Developments, Ltd. During 1936 the drillers engaged were Messrs. W. Coleman, R. Hunt, S. Vickers, J. Waters, G. Duston, and J. Cowan. The following types of drills were operated: Keystone No. 1, 6 in., 7¾ in., 7¾ in.; Keystone No. 2, 6 in., 7¾ in., 7½ in.; Keystone No. 3, 6 in., 7¾ in., 7¾ in.; Bandwheel McDougall's No. C. 1, 6 in., 7½ in., 7½ in.; Bandwheel McDougall's No. C. 2, 6 in., 7½ in. Eighty-nine holes were drilled during 1936, making a total of one hundred holes for the area.

(8) *Taiupo*.—Situation: On O.P.L.'s Nos. 2419 and 2420, held by W. C. Guy, in Block VIII, Turiwhate Survey District, and Block V, Otira Survey District. Operating a Surge Drum No. 9 machine, with 5 in. casing and a 6½ in. cutting-shoe, Driller A. Stuart bored one hole in December. At the end of the year the second hole was being drilled, and operations were carried on into 1937.

Austral Malay Tin, Ltd.

(1) *Landing Creek*.—Situation: In Blocks XII and XIII, Inangahua Survey District, O.P.L.'s Nos. 8043–46, 8060–65, and 8074, held by N. A. Wallis, and freehold of L. J. Bell, Sections 9 and 10, Block XIII, Inangahua Survey District. Using a Keystone Model 70 drill, with 6 in. casing and 7½ in. and 7¾ in. cutting-shoes, a Keystone, 6 in., 7¾ in., and a Dodge plant, 6 in., 7½ in., Drillers P. Griffen, L. Wilcock, H. S. Hobbs, and D. D. Smart bored twenty-nine holes during 1936, making a total of thirty-one holes on this area.

(2) *Ahaura*.—Situation: On Hahn's freehold and O.P.L.'s, near the junction of the Grey and Ahaura Rivers, in Block IV, Mawheranui Survey District. Drillers D. D. Smart and L. Wilcock, using a Keystone No. 1, 6 in., 7½ in., and a Dodge No. 2, 6 in., 7¾ in., put down fifteen holes on this area.

(3) *Waitahu*.—Situation: O.P.L.'s of Bowron and Cogblan in Blocks X, XI, and XV, Reefton Survey District, and on freehold of H. Lockington, Sections 79, 89, and 90, Block X, Reefton Survey District. Using two machines, a Government No. 1 and one owned by the company, each with 6 in. casing and a 7½ in. shoe, Drillers J. Manson and J. P. O'Brien bored twenty holes. The area was divided into two sub-areas separated by a narrow gorge.

(4) *Petley and Bowater's Area*.—Situation: O.P.L. No. 8298, Petley and Bowater; No. 8101, A. G. Petley; freehold of J. Andrew in Block II, Reefton Survey District. Drillers L. Wilcock, A. Brydon, and D. D. Smart, using two Keystone plants, each with 6 in. casing but with 7½ in. and 7¾ in. cutting-shoes respectively, put down thirty holes.

(5) *Nelson Creek*.—Situation: On O.P.L.'s Nos. 8502 and 8503, held by Dennehy and Comerford, in Block IX, Ahaura Survey District. Driller J. P. O'Brien, using the company's drill, with 6 in. casing and a 7½ in. shoe, bored seventeen holes.

(6) *Burke's Creek*.—Situation: On Claim (Mineral) License No. 8279, held by C. J. Willis, in Block X, Reefton Survey District. Operating a hand rig, with 3½ in. casing and a 4½ in. shoe, Driller J. Manson bored two holes. Hole No. 3 was being sunk at the end of the year.

Burma-Malay Tin Ltd.

(1) *Pine Creek*.—Situation: Freehold of Wm. Perry, in Block IV, Mahinapua Survey District. Driller N. S. Bartlett, operating a machine owned by the Brown Boring Co., Ltd., and using 6 in. casing with a 7½ in. shoe, commenced boring early in December, and by the end of the year had completed eleven holes. Operations were still in progress at the end of the year.

(2) *Fuchsia Creek*.—Situation: On O.P.L.'s Nos. 261–63, held by A. R. Perry, in Block VIII, Waimea Survey District. Driller N. S. Bartlett, operating a machine owned by the Brown Boring Co., Ltd., and using 6 in. casing with a 7½ in. cutting-shoe, put down twenty holes.

(3) *Landing Area*.—Situation: Inangahua River, on O.P.L.'s Nos. 8096–98, held by J. O'Regan, in Block XII, Inangahua Survey District. Operations were commenced late in 1935 and continued in 1936. Messrs. D. Chant and A. Holden, Drill Superintendents, put down nineteen holes with a Westland Alluvial Developments No. 2 drill, using 6 in. casing and a 7½ in. cutting-shoe, making a total of twenty-three holes on the area.

(4) *Sawyer's Creek*.—Situation : O.P.L. No. 2371, held by E. A. Wickes over an area in Sawyer's or Sebastian's Gully, Block X, Waimea Survey District. Operating a McDougall's No. 3 drill, with 6 in. casing and a 7½ in. shoe, Messrs, R. Pengelly and N. S. Bartlett drilled twenty holes during 1935 and one hole in January, 1936.

(5) *Kapitea and Kapitea Creek*.—Situation : O.P.L. No. 2317, held by V. J. Robinson, in Block XI, Waimea Survey District. Drillers R. Pengelly and N. S. Bartlett operated McDougall's No. 1 and No. 3 drills respectively, each using 6 in. casing and 7½ in. shoes. Machine No. 1 put down twenty-three holes, and No. 3 thirty-four holes. Thirty-six holes were drilled in 1935, making a total of ninety-three holes for the area.

Rimu Gold-dredging Co., Ltd.

(1) *Mawhera-iti and Blackwater*.—Situation : These two properties straddle the main Greymouth-Reefton railway and highway at Ikamatua. The Mawhera-iti property commences at the junction of the Grey and the Mawhera-iti Rivers, and follows the valley of the latter upstream for approximately three miles and a quarter, to a point abreast of the railway bridge over the Blackwater River. The Blackwater property commences just upstream of the railway bridge, and follows the Blackwater River valley up to the junction of the Blackwater River and Big River, thence up the latter to a point approximately four miles from the railway bridge. The Mawhera-iti area is in Blocks X and XI, Mawhera-iti Survey District and the Blackwater area in Blocks VII, VIII, and XI, Mawhera-iti Survey District.

During 1936 the drilling campaign, commenced towards the latter end of 1932, was actively prosecuted. At the beginning of the year four alluvial drills were in operation, but this number was progressively increased, until in April eight drills were at work. Drilling was actively continued throughout May, June, and July, after which the number of drills was gradually reduced, until at the close of the year only two were at work. The number of men employed averaged twenty-three throughout the year, but varied from nine to thirty-four, according to the number of drills at work.

In the early part of the year the main operations were centered on the Blackwater property, but as the year progressed the centre of activity was transferred to the Mawhera-iti property. Throughout the year, however, drills were at work on both properties. The following schedule shows the drilling completed during 1936.

Property.	Number of Holes drilled.	Total Depth drilled.	Average Depth of each Hole.
		Ft.	Ft.
Mawhera-iti	383	9,791	25.6
Blackwater	267	8,679	32.5
Totals	650	18,470	28.4

Some drilling was also carried out on the south side of the Grey River opposite the junction of the Mawhera-iti, in the Grey River bed at the confluence of the Orututu, or Rough River, and just above the mouth of Craigeburn Stream. The results of this drilling did not indicate the presence of payable wash.

The result of drilling-operations conducted on the Mawhera-iti and Blackwater properties during the last four years has been the development of a low-grade dredging-area of some 1,700 acres, spread over the two properties, and containing upwards of 60,000,000 cubic yards of dredgeable gravels. To delimit this area, over 800 holes, distributed over ten miles of river valley, have been drilled.

(2) *Rimu Flat*.—Situation : Ahead of the company's dredge operating on Rimu Flat, Westland. Drillers J. Tibbles and W. Linklater, operating a machine, with 6 in. casing and a 7½ in. shoe, bored thirteen holes.

N.Z. Mining Investments, Ltd.

(1) *Deadman's Creek*.—Situation : Blocks VII and X, Mawheranui Survey District. Driller G. L. Hooper put down five holes.

(2) *Paroa Area*.—Situation : Block XVI, Greymouth Survey District. Using a 4 in. plant, with 3½ in. casing and a 4½ in. shoe, G. L. Hooper drilled twenty-three holes.

(3) *Sneddon's Area*.—Situation : Block XVI, Greymouth Survey District. Using a 5 in. plant, with 4 in. casing and a 5½ in. cutting-shoe, G. L. Hooper drilled eleven holes.

The Consolidated Goldfields of N.Z., Ltd.

(1) *Ahaura Area*.—Situation : On Applications Nos. 208/35 and 209/35 for O.P.L.'s, 200 acres in Blocks II, VI, and VII, Ahaura Survey District. Driller R. McMillan, using an Alluvial No. 2 drill, with 6 in. casing and a 7½ in. cutting-shoe, put down four holes.

(2) *Inangahua River*.—Situation : On O.P.L.'s Nos. 8224, 8225, 8235, and 8,268, in Block XIV, Reefton Survey District, and Blocks II and III, Waitahu Survey District. Driller R. McMillan, using an Alluvial No. 2 drill, with 6 in. casing and a 7½ in. shoe, put down ten holes.

(3) *Totara Flat*.—Situation : Freehold of W. T. Begg in Section 155, Block XIV, Mawhera-iti Survey District. Driller R. McMillan, using the company's No. 2 drill, with 6 in. casing and a 7½ in. shoe, put down four holes.

(4) *Maruia (Lester's)*.—Situation : On O.P.L.'s Nos. 8280-82, in Block VIII, Rahu Survey District. Driller R. McMillan, using an Alluvial No. 2 drill, with 6 in. casing and a 7½ in. shoe, drilled three holes.

Mataki Junction Gold-dredging, N.L.

(1) *Fern Flat (Hunter's)*.—Situation : Freehold of W. D. Hunter, 100 acres, Sections 2, 5, 14, and part 96, Block XIII, Matiri Survey District. Driller N. S. Bartlett, using an Alluvial No. 16 drill, with 6 in. casing and a 7½ in. shoe, drilled fourteen holes.

(2) *Fern Flat (O'Brien's)*.—Situation : Freehold of C. O'Brien, part Section 61, Block I, Tutaki Survey District. Driller N. S. Bartlett, using an Alluvial No. 16 drill, with 6 in. casing and a 7½ in. shoe, drilled eight holes.

Bundi Tin Dredging Co., N.L.

(1) *Camerons*.—Situation : On O.P.L.'s held by the company in Blocks III and IV, Waimea Survey District. Driller C. N. Page, using a Keystone pattern percussion drill, with 6 in. casing and a 7½ in. cutting-shoe, drilled six holes.

(2) *Two-mile Creek*.—Situation : Chinaman's Flat. For the purpose of ascertaining the depth of the ground prior to dredging, C. N. Page drilled eight holes.

Matuki Gold-dredging, Ltd.

(1) *Mangles River*.—Situation: Section 3, Block III, and section 2, Block IV, Tutaki Survey District, O.P.L.'s Nos. 3158-61, H. J. D. Stewart. T. B. Gillooly, using an Alluvial No. 1 drill, with 6 in. casing and a 7½ in. shoe, bored eight holes.

(2) *Matakitaki River*.—Situation: Block I, Tutaki Survey District. S.D.C. No. 1823. T. B. Gillooly, using a No. 1 Alluvial drill, with 6 in. casing and 7½ in. shoe, bored one hole. These operations were commenced in 1935, a total of sixty-six holes being bored on the area altogether.

Glengarry Gold-dredging Co., Ltd.

(1) *Glengarry Valley*.—Situation: On O.P.L.'s Nos. 3128, 3134, 3149, and 3154, at Glengarry Valley, Murchison. John A. Spencer, using a Keystone drill, with 6 in. casing and a 7½ in. shoe, bored twenty-five holes. These operations were commenced late in 1935, a total of twenty-six holes being bored on the area altogether.

Gillespie's Beach Gold-dredging Co., Ltd.,

(1) *Gillespie's Beach*.—Situation: On Special Dredging Claim No. 2696, Blocks IX and X, Gillespie's Survey District. J. M. Cadigan drilled fourteen holes. Seven holes were bored in an experiment testing the tailings for gold-content lost from the dredge saving-tables.

Maori Gully (Kokiri) Gold-dredging Co., Ltd.

(1) *Maori Gully*.—Situation: On licenses held by the company in the Arnold Survey District. R. Hunt, using a foundry-made drill, with 4¾ in. casing and a 5½ in. shoe, bored sixteen holes.

Argo Gold-dredging Co., Ltd.

(1) *Blackball Creek*.—Situation: On Special Dredging Claim No. 8655 and an O.P.L., both held by the company in Block II, Mawheranui Survey District. Drillers W. J. Bolitho and A. T. Brooks, operating a machine owned by the Brown Boring Co., Ltd., with 6 in. casing and a 7½ in. shoe, drilled eight holes.

Tom Learmont.

(1) *Lower Ford's Creek*.—Situation: On O.L.P. No. 8579 and on freehold Section 56, Block VI, Mawheranui Survey District, held by Mrs. J. Irvine. Continuing operations from 1935, Driller A. Wootton, using the Government No. 5 Alluvial drill, put down ten holes, making a total of thirteen holes drilled on the area.

(2) *Blackwater Creek*.—Situation: On O.P.L. No. 8541, A. O'Donnell, and No. 8539, J. Hartshorne, Block VI, Mawheranui Survey District. Using a Government No. 1 drill, with 6 in. casing and a 7½ in. shoe, A. Wootton drilled four holes.

Miscellaneous.

(1) *Okari River*.—Situation: On O.P.L.'s Nos. 10209-13, held by R. H. Betts, in Block I, Waitakere Survey District. On behalf of Mineral Investments, Ltd., J. Rogers, using a hand plant, with 4½ in. casing and a 5½ in. shoe, drilled ten holes.

(2) *Ahaura River*.—Situation: Upper Ahaura River, on Special Dredging Claim No. 8553, held by the Upper Ahaura Gold-dredging Co., Ltd. On behalf of Mining Investment Corporation, Ltd., V. Robinson, using a Burt's Keystone drill, with 6 in. casing and 7¼ in. and 7½ in. shoes, drilled twenty-nine holes. Operations were suspended at the beginning of August pending instructions from the directors.

(3) *Teremakau River*.—Situation: On Crown lands held under Special Dredging Claim License No. 2194, 1,060 acres, by the Kumara Syndicate. On behalf of Alluvial Tin (Aust.), Ltd., Drillers H. T. Adams, L. Hunter, and D. P. Wilson, using 6 in. casing, with a 7½ in. shoe, put down fourteen holes. Operations were continued from 1935, making a total of sixty-five holes drilled on the area.

(4) *Anzull's Claim*.—Situation: Block X, Onamalutu Survey District. Following on from operations commenced in 1935, the Marlborough County Council Mining Executive's drillers bored two holes on Whalley's claim and one hole on Anzull's claim. The machine was withdrawn from the area early in February.

(5) *Hauhau Creek*.—Situation: Block XIII, Waimea Survey District, and Block I, Kanieri Survey District. Acting on behalf of Aylmer Gold Options, Ltd., R. Whiley, using a Whiley's drill, with 4½ in. casing and a 5½ in. shoe, drilled sixteen holes.

(6) *Kotuku Area*.—Situation: Brunner Survey District. N. I. W. Brown, using a bandwheel drill, with 6 in. casing and a 7½ in. shoe, drilled three holes.

(7) *Waikakaho River*.—Situation: In the Waikakaho River, Hop-pole Stream locality, Blocks I and II, Cloudy Bay Survey District. On behalf of the Waikakaho Deep Lead Mining Co., Ltd., H. A. de Lautour, using the company's 3 in. plant, with a 4 in. shoe, drilled eight holes; and A. Hayward drilled two holes.

(8) *Loopline Area*.—Situation: Block XVI, Waimea Survey District. On behalf of the Department of Labour (Employment Division), Greymouth, G. Duston, using a McDougall's rig, with 6 in. casing and a 7½ in. shoe, drilled two holes.

(9) *Shellback Area*.—Situation: Shellback Creek, Waiwhero Survey District. On behalf of the Shellback Syndicate, G. E. D. Seale, operating a machine owned by the Brown Boring Co., Ltd., using 6 in. casing, with a 7½ in. shoe, drilled four holes.

(10) *Maggie Creek Area*.—Situation: Block XI, Howard Survey District. On behalf of the Department of Labour (Employment Division), M. P. McQuilkan, using a No. 5 Alluvial drill, with 6 in. casing and a 7½ in. cutting-shoe, drilled two holes. Operations were in progress at the end of the year, and will be continued in 1937.

(11) *Lawyer's Paradise*.—Situation: Block XV, Waimea Survey District. On behalf of the Department of Labour (Employment Division), Geo. Sullivan, operating a McDougall's rig, with 6 in. casing and a 7 in. cutting-shoe, drilled one hole.

(12) *Mammoth Area*.—Situation: Matakitaki Survey District, near Murchison. Operating on behalf of the Mammoth Gold-dredging, Ltd., Messrs. Bewick Moreing and Co. employed B. V. Barton to bore thirty-six holes. Two machines, each with 6 in. casing and 7½ in. shoes, were used.

(13) *Nelson Creek*.—Situation: Block VII, Mawheranui Survey District. S.D.C. No. 8028, A. Donnellan and freehold land. W. H. Warburton, Government Drill Superintendent, using No. 2 Alluvial drill, with 6 in. casing and 7½ in. shoe, bored three holes.

DIAMOND DRILLING.

The Consolidated Goldfields of N.Z., Ltd.

Globe-Progress Area.—Situation: Block II, Waitahu Survey District. The drilling of No. 1 hole on this area was commenced in November, and by the end of the year a depth of 92 ft. had been reached. Three-inch casing is being used, and L. Peterson is the Drill Superintendent.

DRILLING FOR OIL.

Maoriland Oilfields, Ltd.

Kotuku Area.—Situation: In Sections 2747 and 2968, Block II, Brunner Survey District. During the year this company put down five shallow bores.

SUMMARY OF AREAS.

Name of Company.	Number of Areas bored.	Number of Holes bored during 1936.
Gold Boring—		
N.Z. Prospecting and Mining, Ltd.	8	313
Austral Malay Tin, Ltd.	6	114
Burma-Malay Tin, Ltd.	5	108
Rimu Gold-dredging Co., Ltd.	3	663
N.Z. Mining Investments, Ltd.	3	39
The Consolidated Goldfields of N.Z., Ltd.	4	21
The Consolidated Goldfields of N.Z. Ltd., Diamond Drilling	1	1
Mataki Junction Gold-dredging, N.L.	2	22
Bundi Tin-dredging Co., N.L.	2	14
Mataki Gold-dredging, Ltd.	2	9
Glengarry Gold-dredging Co., Ltd.	1	25
Gillespie's Beach Gold-dredging Co., Ltd.	1	14
Maori Gully (Kokiri) Gold-dredging Co., Ltd.	1	16
Argo Gold-dredging Co., Ltd.	1	8
Tom Learmont	2	14
Miscellaneous	13	131
Totals	55	1,512
Oil Boring—		
Maoriland Oilfields, Ltd.	1	5
Grand total	56	1,517

SOUTHERN INSPECTION DISTRICT (T. McMILLAN, Inspector of Mines).

QUARTZ AND ALLUVIAL MINING.

Waitaki County.

Ben Ledi Sluicing Co. (H. Lewis, Manager).—Operations were continued intermittently during the year, the plant being moved and erected close to the Dansey's Pass Road. Values were low, and operations have been suspended. Three men were employed, and the gold won amounted to 6 oz. 13 dwt. 3 gr., valued at £45 19s. 11d.

Maerewhenua Development Co. (J. J. Cook, Manager).—Work was continued during the year on the Duffer's Gully section, and work was resumed in the Golden Gully section. The blocked tail-race tunnel was cleaned out and the intake end repaired and extended into the valley, thus allowing the resumption of sluicing operations. Eight men were employed, and the gold won amounted to 232 oz. 15 dwt. 2 gr., valued at £1,857 16s. 8d.

J. W. Cooper carried on as usual when water was available.

C. E. Adams carried on during part of the year, and then transferred his interests to Mining House Concessions, Ltd.

Mining House Concessions, Ltd. (C. E. Adams, Manager).—Sluicing operations were carried on under the superintendence of C. E. Adams. Three men were employed, and the gold won amounted to 40 oz. 17 dwt. 18 gr., valued at £298 11s.

Digger's Gully, Kurow (Nimmo Bros.).—No work has been done in this area during the year, owing to the decease of one of the partners.

There were forty-six men, including the companies, employed in the Waitaki County during the year, winning 502 oz. 14 dwt. 20 gr. of gold, valued at £3,823 2s. 10d.

Waihemo County.

Golden Point Gold and Scheelite Co.—Operations were resumed in the low-level tunnel in June. Repairs were effected and prospecting-work was carried out in the bottom levels. No ore was crushed.

Macrae's Gold-mining Co. (R. T. Mackenzie, Manager).—Operations were carried on steadily during the year, and two gravel pumping plants were in operation. Twelve men were employed, and the gold won amounted to 1654 oz. 9 dwt. 15 gr., valued at £11,905 3s. 4d., being the return from 158,750 cubic yards treated.

Callery and Bradbrook (Round Hill Mine alongside the Macrae's-Golden Point Road).—Operations were carried on steadily during the year in the usual workmanlike manner, and 900 tons of quartz was treated at the battery, yielding 267 oz. 7 dwt. 18 gr., valued at £1,892 4s. 7d.

Galli's Gold-mining Co. (R. Galli, Manager).—Active development work has been carried out during the year, and the main shaft has been sunk to a depth of 100 ft. The reef was cut at 70 ft. and 100 ft. Improvements have been effected at the treatment plant, where heavier stamps and a National Diesel engine have been installed.

Otago Scheelite and Mining Co.—Mining operations were suspended in February, and the company went into liquidation. Four men were employed, and the gold won amounted to 1 oz. 13 dwt. 20 gr., valued at £12 3s. 2d., being the return from 11 tons of ore treated.

There were twenty-six men employed in the Waihemo County, including the companies, during the year, winning 1,697 oz. 14 dwt. 13 gr. of gold, valued at £12,204 13s. 7d.

Maniototo County.

Golden Progress Quartz-mining Co., Otarehua.—Operations were suspended until June, when prospecting operations were resumed in the east end of the 150 ft. level; 160 ft. were driven east, then 91 ft. south. Reef was located at 61 ft. south, but 10 ft., driven to the east, failed to locate values. The company's finance became exhausted, and operations were suspended in November. The company is now in liquidation. Seven men were employed during the prospecting operations.

The Earl Mining Party, Ophir.—During the year a two-stamp battery has been erected, together with suitable accommodation for the employees. Three men were employed, and 165 tons of ore at grass was treated, for a return of 45 oz. 4 dwt. 10 gr., valued at £287 5s. 5d.

Kildare Consolidated Gold-mining Co. (W. J. Wade, Manager).—During the first half of the year operations were carried on in the old paddock of the Scandinavian Water-race Co., where a large amount of debris and barren overburden had to be elevated 100 ft. Values were not very encouraging, so it was decided to abandon this. After removing all plant and material, operations were commenced in Redmiles Gully, where sluicing operations are now being carried out alongside the deep paddock. Seven men were employed, and the gold won amounted to 198 oz. 19 dwt. 6 gr., valued at £1,403 6s. 1d.

Patearoa Hydraulic Sluicing Co.—Two men were employed during the year, and the gold won amounted to 206 oz. 5 dwt., valued at £1,521 1s. 4d.

The various privately owned alluvial mines in the Cambrian, Vinegar Hill, St. Bathans, Kyeburn, Naseby, and Patearoa districts were working steadily during the year whenever weather conditions were favourable, and the chief producers were—Moses and J. H. D. Brown, Kyeburn Diggings; A. and G. Brown, Naseby; Carr Bros., Patearoa; Neil Nicolson, Cambrian; Roche and George, Naseby.

One hundred and eighty men were employed in the Maniototo County, including the companies, during the year, winning 2,193 oz. 12 dwt. of gold, valued at £15,920 4s. 3d.

Tuapeka County.

New Gabriel's Gully Sluicing Co. (F. F. Boyes, Manager).—Sluicing and elevating operations have been actively carried out during the year in the previously driven cement at the head of Gabriel's Gully. The use of the crusher, installed in 1935, has now been discontinued, as it would have been necessary to introduce a secondary crusher in order to further reduce the cement to sand. The remaining cement conglomerate is very hard. Seven men were employed, and the gold won amounted to 251 oz. 18 dwt. of gold, valued at £2,005.

Weitherstones Gold-mining Co.—Prospecting operations were continued until June and the exploratory dip drive was extended to 1737 ft., where indications of faulting were encountered. A winze was sunk to a depth of 70 ft. at the end of the dip drive, and a drill-hole, 15 ft. below the bottom of this shaft, failed to touch the "contact." The company's finances were exhausted, and the operations were abandoned. Twelve men were employed, and the amount of gold won amounted to 2 oz. 6 dwt. 10 gr., valued at £17.

The elevating and sluicing operations, in the freehold land of Mr. R. S. Thompson, continued steadily during the year. I. O. Walker, manager, and four men employed.

Paddy's Point Gold-mining Co. (R. Webb, Manager).—The plant and equipment was removed from Paddy's Point to freehold land west of the Waitahuna Township between the township and the river. Since the erection of the plant active mining operations have been carried on. Seven men were employed winning 485 oz. of gold, valued at £3,509.

Sailors Gully Sluicing Co. (A. W. Eaton, Manager).—On account of shortage of water very little work was done in the first two and a half months of the year. Since then the water-supply has been abundant, and active sluicing and elevating operations were carried on. About 1 acre of cement to an average depth of 40 ft. and $3\frac{1}{2}$ acres of alluvial material to an average depth of 8 ft. were treated. There were seven men employed, and the amount of gold won was 408 oz. 15 dwt. 9 gr., valued at £2,899 15s. 2d.

Tuapeka Mouth Sluicing Co. (J. Cartwright, Manager).—Active mining operations were carried on during the year, and a new Rees-Roturbo pump was installed in order to give greater efficiency. The tailings are now stacked in the claim. Four men were employed, winning 360 oz. 2 dwt. 11 gr. of gold, valued at £2,447, being the return from 18,100 cubic yards treated.

Fruidburn Sluicing Co.—Work was carried on intermittently during the year. Two men were employed and 9,600 yards were treated, yielding 22 oz. 9 dwt. 20 gr. of gold, valued at £160 15s.

The Fifty-five Gold-mining Co., Tuapeka Mouth, has been inoperative during the year.

The Molyneux Deep Lead Co., Coal Creek, Roxburgh, has been inoperative during the year.

Subsidized and free miners have also carried on operations during the year, the chief producers being A. and R. Brown, Tuapeka Mouth, and R. S. Thompson, Lawrence.

Two hundred and three men were employed (inclusive of the companies) in the Tuapeka County during the year, winning 2,389 oz. 5 dwt. 9 gr. of gold, valued at £17,041 15s. 1d.

Bruce County.

E. G. M. Foord, Adams Flat.—Mr. Foord has installed an electrically driven gravel pumping plant, and is now working the old dredge paddocks and the surrounding areas. There were two men employed during the year.

The Glenmore Syndicate has also installed a small electrically driven gravel pumping plant on the river flats between Glenmore and Mount Stuart. Two men were employed.

Seven men were employed in the Bruce County during the year, the gold won amounting to 108 oz. 6 dwt. 10 gr., valued at £770 5s. 1d.

Taiari County.

Nine men were employed in the Taiari County during the year, the gold won amounting to 9 oz. 1 dwt. 12 gr., valued at £63 0s. 10d.

Clutha County.

Three men were employed in the Clutha County during the year, the gold won amounting to 23 oz. 19 dwt. 17 gr., valued at £162 18s. 6d.

Waikouaiti County.

Six men were employed in the Waikouaiti County during the year, the gold won amounting to 18 oz. 6 dwt. 20 gr., valued at £128 1s.

Southland County.

Nokomai Gold-mining Co. (C. Sew Hoy, Manager).—Mining operations, consisting of sluicing and elevating, were carried on continuously during the year. The directors decided to instal a "Thompson" gravel pumping plant, consisting of two 12 in. gravel pumps with direct-coupled 175 b.h.p. electric motors, starting-gear, transformer, &c., mounted on a steel pontoon. This plant was in course of erection at the end of the year, and will be ready for operation in May, 1937. Twenty-one men were employed and the gold won amounted to 1,045 oz., valued at £7,328 19s. 1d.

King Solomon Deep Leads, Ltd. (R. C. Ruffin, Manager).—Work has been carried on during the year in this deep-lead alluvial mine. In April, however, low-grade ground was encountered, and, on account of falling returns, work ceased in the eastern development section, and blocking-out of the auriferous pillars was commenced. No new payable auriferous areas were located during the year, and the known auriferous areas are being rapidly exhausted. The number of employees was further reduced at the end of the year. Forty-eight men were employed, and the amount of gold won was 1,957 oz. 14 dwt. 23 gr., valued at £14,567 18s. 4d.

A. Mutch, Happy Valley, Waikaia.—Active mining operations have been carried out during the year in the mid-section of the Happy Valley. Five men were employed.

Dome Creek Syndicate, right-hand terrace in Sutton's Run, Dome Creek. Very little work has been done during the year.

Union Mining Syndicate.—The Murchison Bros. have been working this area on tribute. On account of the heavy rainfall during the greater part of the year, flooding has been frequent, and, as a consequence, work has been very intermittent. Two men were employed, and the gold won was 8 oz. 8 dwt. 3 gr., valued at £58 13s. 2d.

Waimumu Sluicing Co.—Pumping, sluicing and elevating operations have been carried on since water became available in March. Good ground was encountered during the first seven months in the left-hand gully, and in a small tributary gully in front of the homestead, occupied by the original freeholder, Mr. Mortimer. A piece of the terrace between these two gullies was also sluiced until the barren overburden became too thick. An electrical Blackstone gravel pump is to be installed in order to speed up mining operations. Seven men were employed, the gold won amounting to 465 oz. 16 dwt. 8 gr., valued at £3,367.

Stewart Gold Co., Waikaku (R. Stewart, General Manager and Engineer, W. G. Stewart, Works Manager).—Work was carried on steadily during the year. The Ruston Diesel pumping-engine was burnt out in September, and an electric motor was then installed. The whole of the plant is now electrically operated, power being obtained from the Southland power scheme, recently acquired by the Government. The main pump, which is operated by an 80 h.p. motor, delivers 1,200 gallons of water per minute through a riveted steel pipe-line 13 in. in diameter and 1,000 ft. in length into a reservoir situated at an elevation of 170 ft. above the stream from which the water-supply is obtained. From the reservoir a second pipe-line, also 13 in. in diameter, and approximately 3,000 ft. in length, conveys the water across an intervening valley and on to the high-level terraces where the workings are located. To reinstate the pressure lost owing to the high elevation of the ground being treated the water, when it reaches the claim, is passed through a boosting-pump operated by a 50 h.p. motor, enabling it to be delivered at the workings under a pressure of 70 lb. per square inch. Prior to the change-over, from Diesel engines to electric motors, a hydraulic elevator was used to lift the material to the gold-saving boxes and tables, but this system of working has now been discarded and a Blackstone gravel pump operated by a 30 h.p. motor installed in its place. The material treated before being delivered to the gravel pump passed through a run of boxes 3 ft. wide and over 60 ft. in length; the gold, which is very fine, being saved on cocoanut matting in the ordinary manner, and the concentrate from the mats being treated with cyanide prior to amalgamation. With the gravel pump in operation, the whole of the water delivered at the claim is now used on the nozzle for breaking down the material and conveying it to the pump, whereas previously the greater portion was required by the boxes, leaving only the lesser for use on the nozzle for breaking down and conveying material to the elevator. Under the new system, although the material is being lifted to a greater height than with the elevator, the rate of treatment has been increased over 100 per cent. Eight men were employed, and the gold won amounted to 552 oz. 10 dwt., valued at £4,288 16s. 7d.

Coastal Mining Co.—Operations were carried on until October on the western or estuary, end, and on the mid-section of the Haldane Beach. This beach has been worked previously at two different periods, and, as a result, the auriferous content was low. The company went into voluntary liquidation. A syndicate has purchased the self-propelled, caterpillar-mounted gravel pumping plant. A claim has been obtained on the Orepuki Beach, and the machine will be dismantled and removed to this new area. Six men were employed, and the gold won amounted to 196 oz. 2 dwt. 18 gr., valued at £1,392 2s. 2d.

There were 153 men employed during the year (inclusive of the companies) in the Southland County and the amount of gold won was 5,098 oz. 12 dwt. 5 gr., valued at £37,580 1s.

Wallace County.

Round Hill Gold-mining Co. (F. Hart, Manager).—Active mining operations have been carried on during the year, and approximately 5 acres of ground, of an average depth of 55 ft., has been worked. There is about 20 ft. of hard pug in the overburden. This has to be blasted and broken up with picks, thus slowing up operations and reducing the output. A new set of gold-saving tables were being erected at the end of the year. When these are completed the tailings will be allowed to fill up the present paddock. During the year the water races have been repaired and put into good order. A new type of monitor has been designed by Mr. Hart, the manager. This is built up of steel plates, and is lighter and stronger than the usual type constructed of castings. It is working successfully. Eighteen men were employed, and the gold won amounted to 1,830 oz. 19 dwt. 11 gr., valued at £13,913 14s. 9d.

Try Again Sluicing Claim (L. Cross, Manager).—Three men employed. This claim is in the old Orepuki Township workings, and sluicing operations have been carried on steadily during the year.

Orepuki Mining Syndicate.—Mining operations have been carried on steadily during the year. Two men have been employed sluicing old driven ground in the old Orepuki Township workings.

Small parties and individuals continue to mine by cradling, boxing, and sluicing methods in the various auriferous sections of this county.

The chief producers in the Wallace County were the Try Again Sluicing Claim; Orepuki Mining Syndicate; Shaw and Braid, Orepuki; A. C. Pahl, Orepuki; A. J. Mullan, Orepuki.

There were ninety-five men employed (inclusive of the companies) during the year, and the gold won amounted to 2,560 oz. 19 dwt. 18 gr., valued at £19,041 3s. 1d.

Fiord County.

There were five men employed in the Fiord County during the year, and the gold won amounted to 14 oz. 1 dwt. 5 gr., valued at £96 15s. 7d.

Lake County.

Glenorchy Scheelite Mining Co. (G. Reid, Manager).—Mining operations, chiefly of a prospecting nature, were carried on with a small number of men, and the battery returns contain several lots purchased from individuals or small parties of scheelite miners. There were four men employed, and 20 tons of scheelite was produced, valued at £2,335. 1 oz. 10 gr., of gold, valued at £6 13s. 4d., was also won.

Rees Valley.—Subsidized and free miners have been employed prospecting for scheelite and for gold reefs during the working-season of the year.

Oxburn or Fruidburn.—M. Petersen is still driving in this area on the right-hand bank of the creek in an endeavour to locate a back lead.

Bucklerburn, Glenorchy.—Subsidized and free miners are employed prospecting in the bed and on the banks of the Bucklerburn for both gold and scheelite.

Thornton and Elliott (R. E. Elliott, Manager).—This mine is situated on the northern slopes of Mount Judah. Five men employed. This locality has been much disturbed and faulted. This makes the mining operations both difficult and costly. As a consequence much dead work has to be undertaken, and a considerable footage of development work has been carried out.

There are several small scheelite-mines operated by small parties of miners in the Glenorchy District on the southern, western, and northern slopes of Mount Judah, Mount Larkins, Mount McIntosh, the Precipice Creek slope of Black Peak, and in the Rees Valley.

The total production of CaWO₄ concentrates, apart from the return from the battery of the Glenorchy Scheelite Co., was 8 tons 2 cwt., valued at £1,113 2s.

Twenty-five-mile Creek.—Mining operations have been carried on intermittently during the year, but the lead has run out, and the plant is to be removed to the Twelve-mile Creek. Work has also been carried on at the Seven-mile and the Twelve-mile by both subsidized and free miners.

Moke and Moonlight Creeks.—Mining operations have been carried on in the terraces of these creeks.

Moonlight Mining Syndicate (S. Thompson, Manager).—The rock tunnel race has not been completed, as a flood carried away the blockage of tailings in Dead Horse Creek, thus enabling the use of the ordinary tail-race. On account of the fall of the ground, however, an elevator had to be installed as the work progressed downstream. The gold won amounted to 155 oz. 19 dwt. 1 gr., valued at £1,094 5s. 4d., and there were three men employed. The syndicate sold out its interest to the Eureka Syndicate, which has also acquired the interests of the Moonlight Extended Gold-mining Co., Ltd., now in liquidation.

Eureka Syndicate (E. Anderson, Manager).—This syndicate intends to complete the water-race commenced by the Moonlight Extended Gold-mining Co. Four men were employed.

Ben Lomond Gold-mining Co.—Only a little prospecting-work has been carried out during the year by J. Seffer. The gold won amounted to 7 dwt. 4 gr., valued at £2 10s. 2d.

Ozenbridge-Shotover Gold, Ltd.—All work done on this area has been carried out by the tributers, Messrs. Weddell and Drysdale. Four men were employed working the bed of the Moke Creek when river conditions were suitable. The gold won amounted to 53 oz. 11 dwt. 5 gr., valued at £381 1s.

The Wheeler Prospecting Party.—Driving and sluicing operations were continued on both banks of the Shotover River near the entrance to the gorge above Arthur's Point.

Arthur's Point Sluicing Co. (F. Soper, Manager).—Active sluicing operations were carried on during the first nine months of the year. Elevating operations were also carried on at the down-river end of the claim. Active mining operations were discontinued during the latter part of the year, and the area is now being worked on tribute by J. McMullan. There were eight men employed, and the amount of gold won was 318 oz. 8 dwt., valued at £2,280 13s. 8d.

The Upper Shotover Gold-mining and Hydraulic Sluicing Co.—This company is now in liquidation.

Sandhills Gold-mining Co. (A. E. Smith, Manager).—Active mining operations have been carried out in the bed of the Shotover River, rendered workable by the construction of the artificial cut and dam. There were four men employed and the gold won amounted to 196 oz. 12 dwt. 13 gr., valued at £1,402 10s. 8d.

Mountain Terrace Sluicing Co., Skippers Creek (R. McDonald, Manager).—Active mining and prospecting operations were carried out during the working-seasons of the year. Results did not come up to expectations. Three men have been employed, and the gold won amounted to 69 oz. 3 dwt. 15 gr., valued at £473 15s. 7d.

Skippers Ltd., Maori Point and Skippers (R. D. Climie, Manager).—Up to the month of August the river was low, and, as a result, water was in short supply and active mining operations were very intermittent, only about two months actual sluicing-time being obtained. Since early August, when the weather broke, the river has maintained a high level, and has not gauged less than 2,000 heads, three times the normal flow, and very often it has reached the 15,000 heads' mark. Although there has been a fair supply of race water, the river conditions have been such that little paddock work has been possible, and only one washup has been made. This produced 62 oz. The past year has shown that the proposal to instal a hydro-electric scheme, to provide some 300 h.p. for pumping and other work in the paddocks, is the only practical method of working this river-bed to advantage, as work must be carried on for the full twenty-four hours a day if any results are to be shown. It is expected that the hydro scheme will be in use before the end of June. The water for this power is being taken from Skippers Creek, and carried, by a mile and a quarter of 24 in. pipe-line, to a power-house site situated about a quarter mile above the suspension bridge on the Shotover River. Last year a concrete arch dam was built to act as an intake to the pipe-line. Skippers Creek was then running about 14 heads, but, during the whole period since August this stream has not run less than 50 heads, and more often 100 heads has been the weekly average. Had such conditions prevailed last year it would have been impossible to have built the dam. The completion of this hydro-electric installation has been hindered by the very wet and unseasonable weather experienced since August, 1936. There were twenty men employed, and the gold won amounted to 441 oz. 10 dwt. 9 gr., valued at £3,446 9s. 5d.

Skippers Sluicing Co., Skippers (E. Sainsbury, Manager).—Sluicing operations were continued during the year whenever weather conditions were suitable. The gold won amounted to 46 oz. 17 dwt. 6 gr., valued at £329 9s. 8d.

Central Shotover G.M. Co., Deep Creek, Shotover River.—The Central Shotover Crevices Syndicate (J. Stevens, Manager), worked the claim on tribute until August. There were eight men employed, and the gold won amounted to 640 oz. 13 dwt. 8 gr., valued at £4,506 13s. 4d. On the completion of the tribute the claim was taken over by the company (G. Vernon, Manager), and five men were employed. Sluicing and elevating, by means of a Stevens high-pressure elevator, was continued in the bed of the Shotover River, but river conditions were unfavourable during the latter part of the year. The gold won by the company amounted to 50 oz. 17 dwt. 12 gr., valued at £357 17s. 1d.

Crystal Mine, head of Sawyers Gully, Skippers (J. Tripp, Manager).—Active mining and development work has been carried on during the working-season of the year. Stopping above the No. 1 or top level is in progress, and a winze has been sunk below the top level in a good ore body for a distance of 28 ft. The four-head battery has been put into commission, and, in order to provide economical driving-power, a dam has been constructed farther up the creek. A pipe-line 1,000 ft. in length has been installed providing a pressure of 150 ft. for the pelton wheel. The output from the mine was 610 tons, yielding, by treatment at the battery, a return of 359 oz. 7 dwt. 20 gr. of gold, valued at £2,641 13s. 6d. There were six men employed in the mine and battery.

Short and Party.—A party of four miners installed a sluicing and elevating plant in the Shotover River below the junction of the Ballarat Creek, using water from the Ballarat Creek.

Ballarat Syndicate (S. Pascoe, Manager).—This mine is situated near the head of the left-hand branch of the Sandhills Creek in a slipped area. Work was carried on during the early part of the year, and an attempt was made to locate the parent ore body by driving at a higher elevation. Two men were employed, and 15 tons of ore was treated, yielding 4 oz. 2 dwt. 6 gr. of gold, valued at £24 2s. 10d.

Tipperary Mine, Macetown.—No work has been done at this mine during the year.

The Garibaldi, Maryborough, Homeward Bound, and Sunrise Mines.—No work has been done at these mines during the year, the Macetown Development Co. having apparently failed to form a working company for the purpose of reopening this reefing-area.

Anderson and Party, Scanlan's Gully, Macetown.—Prospecting operations have been continued during the working-season of the year, but no deep-level development work has been undertaken.

Beale and Son continue to work the remaining portions of the old alluvial workings above the Macetown Township.

Upper Arrow Sluicing Co. (J. H. Lynch, Manager).—Two men were employed during the working-season, and the gold won amounted to 66 oz. 19 dwt. 14 gr., valued at £482 0s. 11d.

Prospecting, by means of shaft-sinking, was continued on the right bank of the Billy Creek, above its junction with the Arrow River, and driving operations proceeded on the left-hand side of the Arrow River, just below the junction, where a huge slip had covered the old river course, but nothing of importance has been located.

Hamilton and Sons, Arrow River, Scoles Bend.—Sluicing and elevating operations have been carried on above the bend by a tribute party known as Douglas and Hamilton. The river is narrow in this section, and working-conditions have been difficult since the weather broke in August. Water is obtained from the Public Works Department's Arrow irrigation pipe-line running alongside. The depth to bottom varies from 6 ft. to 36 ft., and six men have been employed working three shifts daily when river conditions were suitable.

The Golden Arrow Gold-mining Co. (J. Hansen, Manager).—The depth to bed rock varies up to a maximum of 36 ft., and the pressure water for working the claim is obtained from the Public Works Department's irrigation pipe-line running alongside the claim and giving a 24-hour service, essential for successful river working, thus enabling this company to extract the remaining gold content in the Arrow River. Seven men were employed daily in three shifts when river conditions were suitable, and the gold won amounted to 352 oz. 13 dwt. 16 gr., valued at £2,509 12s. 4d.

The Junction Reward Gold-mining Co. (R. Hart, Manager).—Seven men employed working three shifts daily in Bush Creek about half a mile upstream from the Arrow River. Pressure water is obtained from the Public Works Department's pipe-line. The auriferous values have not come up to expectations in this area, and operations were not resumed after the end of 1936. The gold won amounted to 133 oz. 3 dwt. 19 gr., valued at £976 16s. 2d.

Small parties of free and subsidized miners are working in the Arrow District.

Cardrona Valley.—Drilling operations are being carried out at Branch Creek.

Matatapu River.—The operations of Smith and party did not disclose payable alluvials, and operations were discontinued. The plant was rented to E. Sainsbury, and Beale and Menzies had the use of the plant for a further period, but little of importance was located. The subsidized miners were withdrawn and transferred to other areas in February.

Laggate.—Drilling operations were carried out in this area.

There were 231 men employed (inclusive of the companies) in Lake County during the year, and the gold won amounted to 3,468 oz. 5dwt. 2gr., valued at £24,876 4s. 1d.

Vincent County.

Kawarau River.—Free and subsidized miners have been employed on the river terraces from the Victoria Bridge to its junction with the Clutha River. A narrow auriferous deep lead, in an unnamed gully on the Cairnmuir side of the river, was located during the year, and several parties of miners were employed thereon during the winter season.

Frye-Giddens Syndicate.—No work was done during the year.

Bell Hooper Cromwell Gold, Ltd. (G. Carson, Caretaker).—Two men were employed in the No. 2 mine during the early part of the year on maintenance and tribute work. Three men were employed in the No. 1 mine on tribute work during part of the year, and the gold from both mines amounted to 86 oz., valued at £626 0s. 4d. W. Kilgour mined a portion of his freehold area by agreement with the company.

R. J. Bell (Horn's Freehold).—A little intermittent prospecting-work was carried out in the north or 146 ft. shaft, but nothing of importance was located.

Lady Ranfurly Claim.—No work was done by the floating elevating plant erected by Mr. D. Jensen at the upper end of this claim.

Cairnmuir Sluicing Co.—Very little work was done on this area during the year.

A considerable amount of driving has been done by subsidized miners on the Cairnmuir side of the Kawarau River, and also on the Cornish Point side of the river a few chains upstream from the junction of the Kawarau and Clutha Rivers.

Messrs. Degan and Williamson, Upper Nevis, are sluicing an area in Cameron's Gully.

Jones Nevis Sluicing Co. (F. Jones, Manager).—There were eight men employed in the Whitton's Creek area, Upper Nevis, between the left-hand bank of the Nevis River and the foothills. The season's operations have shown that, at some early period, a huge slip has ploughed through the auriferous gravels, right down to the schist bedrock. The gold won amounted to 92 oz. 9dwt. 18 gr., valued at £684 5s.

McLean Bros.—Sluicing and elevating operations have been continued during the working-season between the Upper Nevis Road and the foothill near the upper end of the Old Township workings. Four men were employed.

D. and J. Adie continue to work the high-level terraces above the Old Township workings.

Nevis Sluicing Claims, Ltd. (J. W. Johnston, Manager).—Six men were employed on the high left-hand terrace of Schoolhouse Creek. A plentiful supply of water is being used to work this heavy deposit during the Nevis working-season. The gold won amounted to 161 oz. 9dwt. 15 gr., valued at £1,274 1s.

Sutherland and Party are sluicing shallow ground near the old workings, a mile north of the Nevis Sluicing Co's claim.

Waenga.—The drilling programme was completed during the year. Driving was also carried out, but, as nothing of importance was located, mining operations have practically ceased in this area.

Subsidized miners have been working on the Earnsleugh Flats, Blackman's Gully, Conroy's Gully, Manorburn, Matakauui, and Devonshire areas, and on the banks and terraces of the Manuherikia and Clutha Rivers.

The Reward Gold-mining Co. (W. Carr, Manager).—This is an area between the Alexandra-Roxburgh Main Road, Gorge Creek, and the Molyneux River. Prospecting operations only have been carried on intermittently during the year. One man was employed, and the gold won amounted to 5 oz. 18dwt. 15 gr., valued at £42 12s. 9d.

Matakauui Sluicing Co., Donnelly's Gully, Matakauui.—The plant was removed from the Thompson's Creek end of the old workings to a shallow deposit on the right-hand side of Donnelly's Gully. The gold won amounted to 27 oz. 3dwt. 22 gr., valued at £196 18s. 4d.

Bendigo Rise and Shine Gold-mining Co., Upper Bendigo (L. E. Autridge, Manager).—Mr. Walker was manager during the early part of the year, when he left to take up the management of the Big River Mines. A tribute was then let to a party under the leadership of F. Austin. During this period a block of ore, between the 60 ft. level and the surface, was stoped out on the ore body known as the east and west lode, and a small quantity of ore was mined from the surface ore body, known as the north and south lode. Mr. Autridge took charge during the latter part of the year, and development work on the 60 ft. level was resumed. Eight men were employed and 363 tons of ore treated gave a yield of 295 oz. 16dwt. 5 gr., valued at £2,206.

New Bendigo Gold-mining Co. (L. Bell, Manager).—Operations were carried on during July and August, and the low-level tunnel was extended for a further 150 ft. The reports of Professor A. R. Andrew and Dr. J. Henderson indicate that the reefing-system in this area has been dislocated by a "slide." A break in the country was driven through near the end of the present adit level, and at about 2,100 ft. in from the mouth of the adit.

No work has been carried on during the year on the Carriek Range or at Symes Reef, Fruitlands. Tunnelling operations have been continued in Conroy's Gully, but little of importance has been located.

The Ball Mill installed at Conroy's Gully has been dismantled, and is now installed in the Reefton area, West Coast.

Three hundred and ninety-six men were employed in the Vincent County during the year (including the companies), and the gold won amounted to 1,860 oz. 14dwt. 1 gr., valued at £13,466 5s. 7d.

The chief producers other than the companies were J. Homer, Kawarau Gorge; F. McLean, Nevis; S. McCale, Cromwell; W. Murray, Cromwell.

Canterbury—Ashburton County.

Rakaia.—The gold won from the Rakaia River mouth area amounted to 45 oz. 4dwt., valued at £316 7s. 8d., and four men were employed intermittently.

DREDGE MINING.

Goldfields Dredging Co., Ltd., Big Beach, near Arthur's Point, Lake County (J. S. Ritchie, Dredge-master).—Operations have been continued on the Big Beach. The average dredging depth was 23 ft. for the major portion of the year. The dredge was taken up the gorge in order to test the values remaining. Low values were encountered, and the dredge returned to Big Beach, where dredging operations are being continued. This dredge is electrically driven. Power is obtained from Wye Creek. There were ten men employed, and the gold won amounted to 397 oz. 2dwt., valued at £2,801 15s. 9d.

Nevis Crossing Dredge, Lower Nevis, Vincent County (S. C. Fache, Dredge-master and Owner).—Dredging operations have been continued during the working-season in the Lower Nevis, dredging island blocks and river barrier pillars. The average dredging depth is 7 ft. This dredge is steam-operated. There were ten men employed, and the gold won amounted to 369 oz. 0dwt. 19 gr., valued at £2,688 7s. 6d.

Nevis Diesel Electric Dredging Co., Ltd., Upper Nevis, Vincent County.—No work has been done during the year. Negotiations have taken place with an Auckland Syndicate, which proposed to purchase the dredge and equipment for the purpose of dredging areas upstream from the present claim, but they have not been finalized.

Bendigo Goldlight Dredging Co., Ltd., Bendigo Flat, Vincent County (W. Cummings, Dredge-master).—This dredge operated for a short period only during the early part of the year. Operations then ceased and the dredge was beached. This dredge is operated partly by steam power and partly by Diesel power. There were eleven men employed during the dredging operations, and the gold won amounted to 35 oz. 2 dwt. 17 gr., valued at £248 4s. 3d.

The Molyneux Gold-dredging Co., Ltd., proceeded with the erection of the powerful electrically operated modern dredge on the right-hand bank of the Clutha River, opposite to the town of Clyde. On account of the abnormally low river the launching of the dredge was delayed for several months, and, as a consequence was not completed at the end of the year. There were twenty-five men employed on construction work.

The Clutha River Gold-dredging Co., Ltd., proceeded with the erection of the powerful electrically operated dredge on the bank of the Clutha River above the Alexandra Bridge, in the Vincent County. On account of the abnormally low-river period, which continued until August, the launching of the dredge was delayed for several months. When the river rose in August it continued to be abnormally high for several months, and this further delayed the completion of the dredge, which had to pass under the Alexandra Road Bridge before it could be finally completed. On account of these delays the dredge was not completed at the end of the year. There were twenty-five men employed on construction work.

Both the Molyneux and Clutha dredges will be electrically driven. Power will be obtained from the Otago Central power scheme at the Roaring Meg.

Aitken's Dredge, Maitland, Waikaka Valley, Southland County. (R. L. Smail, Dredge-master).—Average dredging depth 16 ft. and dredging is being carried out in freehold land. This dredge is steam-operated. There were nine men employed, and the gold won amounted to 1,236 oz. 8 dwt. 3 gr., valued at £9,432 8s.

Rainbow Gold-dredging Co., Ltd., Waimumu, Southland County (A. Cook, Dredge-master).—Average dredging depth 7 ft. This dredge is Diesel-operated. There were two men employed, and the gold won amounted to 169 oz. 14 dwt. 3 gr., valued at £1,106 12s. 10d.

Waipapa Beach Gold-dredging Co., Ltd., Waipapa Stream, near Otare, Southland County (N. Matheson, Dredge-master).—Average dredging depth 14 ft. This dredge is Diesel-operated. There were nine men employed, and the gold won amounted to 960 oz. 2 dwt. 9 gr., valued at £7,002 1s.

There was a total of forty men employed on dredging during the year, and the gold won amounted to 3,167 oz. 10 dwt. 3 gr., valued at £23,279 9s. 4d.

MINERALS OTHER THAN GOLD.

Platinum.

During the year 29 oz. 11 dwt. 3 gr. of platinum, valued at £186 11s. 4d., was obtained by the Round Hill Gold-mining Co., the Coastal Mining Co., Ltd., Try Again Sluicing Claim, and the Orepuke Mining Syndicate.

Scheelite.

The Otago Scheelite-mining Co., Ltd., Macrae's, treated 11 tons of ore for a return of 1 ton 2 cwt. concentrates, valued at £143.

Glenorchy Scheelite-mining Co., Ltd., treated its own product and also purchased ore from the small mines for a yield of 20 tons of concentrates, valued at £2,335.

Other producers at Glenorchy and Macrae's obtained 7 tons of concentrates, valued at £970 2s.

The total yield of concentrates from all sources was 28 tons 2 cwt., valued at £3,448 2s.

FATAL ACCIDENTS.

There were two fatal accidents during the year, as follows:—

On the 4th April, John William Jonas Clingin, miner, of Glenorchy, was killed by a fall of rock when he was fossicking for scheelite in an open-cut on the western slope of Mount Judah, Glenorchy. The cause of the accident was the slipping of a mass of schist rock off a hidden clay parting a few feet back from the face of the working-place. He had just proceeded to investigate a showing of scheelite near the floor when the slip took place, completely burying him.

On the 10th August, George Henry Russell, a miner employed by the King Solomon Deep Lead, Ltd., was killed (through being buried) by a fall of gravel in the eastern section of the King Solomon Mine. Deceased was employed in the rise division of this section, on face work. The working-place collapsed and buried Russell, who met his death by suffocation.

NON-FATAL ACCIDENTS.

There were two non-fatal accidents during the year, as follows:—

On the 20th June, Neil James Neilson, a nozzle-man, employed by the Round Hill Gold-mining Co., sustained a fractured pelvis through being hit by a large piece of pug which rolled from near the top of a face.

On the 29th October, W. H. Gibson, Drill Superintendent, employed by the Labour Department (Employment Division), sustained an injury to his right hand. An operation had to be performed and two joints of the first three fingers and one joint of the little finger were removed. Mr. Gibson was working the Government No. 4 Alluvial drill, and had put the engine out of gear to clear the pump-line on the drum when the clutch slipped in and the fingers of his right hand were caught on the friction drive.

GENERAL REMARKS.

Prospecting by means of boring has been carried out in many areas, and possible dredging-areas have been located in the Vincent County. The large mining companies interested and the Employment Division of the Department of Labour are boring the areas thoroughly and systematically.

Quartz mining has not made much progress during the year. The increase in the quantity of gold won by quartz mining amounts to 261 oz. 19 dwt. 6 gr., with an increase in value of £1,875 13s. The number of men employed decreased by seven.

In the alluvial field there was a shortage of water during the early months of the year. This was a hindrance to the ordinary alluvial mining, but was beneficial to the miners working in the beds of the Bucklerburn, Shotover, and Arrow Rivers. The weather broke in August, and there was then a plentiful supply of water for sluicing purposes, but river conditions then became difficult.

The electrically operated gravel pump has materially assisted the production of gold in the Southern District, where no gravity water can be obtained, or where there is a shortage of gravity water. Gravel pumps are now in operation at Macrae's, where two pumping plants are working, Adams Flat, Glenore, and Little Waikaka. Another plant is being installed at Nokomai, and also at Waimumu. The advent of electric power into the Maniototo County would be of material assistance to the alluvial miners.

There has been a decrease in the quantity of alluvial gold won amounting to 175 oz. 17 dwt. 7 gr., with a decrease in value of £2,039 11s. 3d.

The gradual exhaustion of the auriferous sections of the King Solomon Deep Lead Co.'s mine at Waikaia has been partly responsible for the decrease in the alluvial output.

The number of men employed in alluvial mining decreased by 558.

Dredge mining has been carried on steadily during the year, and an increase of 391 oz. 12 dwt. 7 gr., with an increase in value of £2,852 17s. 8d., is recorded.

The number of men employed on dredges decreased by six.

The subsidized mining scheme in the Vincent, Lake, Tuapeka, and Maniototo Counties, and the No. 5 subsidy scheme in other parts of the inspection district, have continued to operate, but with a very considerable reduction in the number of subsidized men. No discoveries of importance have been recorded, but returns of gold in many cases have been obtained; many areas are being tested both for reef and alluvial gold, with a result that definite records are being obtained and unpayable areas gradually eliminated.

Areas considered to contain leads or to be auriferous are being tested thoroughly by drilling, driving, or sinking. The Waenga area has been proved to be unpayable, and operations have been abandoned. The Branch Creek and Luggate areas have been drilled and further work will be carried out on the Luggate area.

Preliminary testing operations have been carried out in the Devonshire Deep Lead area, and as a result further work will be done there.

PROSECUTIONS.

There were no prosecutions during the year.

BORING OPERATIONS.

Southland County.

The Burma Malay Tin, Ltd., using two machines, Brown's Nos. 2 and 3, with 6 in. casing, bored twenty holes to a total depth of 1,870 ft. on the property of the Nokomai Gold-mining Co. at Nokomai. Mr. R. Pengelly was Drill Superintendent.

The Argyll Mining Co. completed boring operations at Waikaia. The Government No. 2 Keystone and Nos. 4 and 6 Alluvial machines were used, with 4½ in. and 6 in. casing. Eleven holes were bored to a total depth of 3,136 ft. Mr. George Bisset was Drill Superintendent.

The Austral Malay Tin, Ltd., using the Government No. 2 Alluvial drill, with 6 in. casing, bored thirteen holes to a total depth of 660 ft. at Edendale. Blocks I and VI, Lothian Hundred. Mr. W. A. Pullar was Drill Superintendent.

Vincent County.

The Labour Department (Employment Division) using the Government No. 4 Alluvial drill, with 6 in. casing, bored seventy-two holes to a total depth of 1,957 ft. on Crown Lands at Luggate, Run 631, Block 6, Tarras Survey District. Mr. W. H. Gibson was Drill Superintendent.

N.Z. Prospecting and Mining, Ltd., using two machines, Keystone No. 6 and Government No. 6 Alluvial, with 4½ in. and 6 in. casing, bored seventeen holes to a total depth of 1,699 ft. on Cromwell Flat, Sections 24 and 28, and Lot 48, Block I, Cromwell Survey District. Drill Superintendents, Messrs. G. Bisset and S. Vickers.

Austral Malay Tin, Ltd., using the Government No. 5 Alluvial drill with 6 in. casing, bored eight holes to a total depth of 687 ft., on Section 16, Block XIV, and Section 36, Block XVI, Tarras Survey District. Mr. D. D. Smart was Drill Superintendent.

The Labour Department (Employment Division) using the Government No. 2 Keystone and No. 4 Alluvial drills, completed the boring operations on Run 238b, Block XVIII, Leaning Rock Survey District, a total of twenty-nine holes being bored to a total depth of 1,183 ft. Mr. W. H. Gibson was Drill Superintendent.

Austral Malay Tin, Ltd., using two machines, No. 1 Keystone and an A. and T. Burt machine, with 5½ in. and 6 in. casing, is conducting boring operations at Lowburn. Mr. D. Brigstocke is the Drill Superintendent.

The Labour Department (Employment Division) using the No. 7 Niven drill, with 4 in. casing, is conducting boring operations at Devonshire on Run 2230, Block VIII, Lauder Survey District. Mr. B. P. Bowden is Drill Superintendent.

Clutha River Gold-dredging Ltd., using three machines, Nos. 15 and 16 and the Government No. 6 Alluvial drill, with 6 in. casing, is conducting boring operations at Earnsclough and Alexandra. Mr. A. Williamson is Drill Superintendent.

Tuapeka County.

Clutha River Gold-dredging, Ltd., using two machines, Nos. 1 and 16, with 5½ in. and 6 in. casing, bored sixteen holes to a total depth of 1,047 ft. at Lake Onslow, Run 644, Long Valley Survey District. Mr. A. Williamson was Drill Superintendent.

Bewick, Moreing, and Co., Ltd., using Stewart's No. 1 machine, with 6 in. casing, bored thirty-five holes to a total depth of 1,956 ft. at Island Block, Block 2, Bengier Survey District. Mr. B. V. Barton was Drill Superintendent.

N.Z. Prospecting and Mining, Ltd., using Burt's Keystone No. 5 machine, with 6 in. casing, bored forty-two holes to a total depth of 3,330 ft. at Ettrick, Blocks I and VI, Bengier Survey District. Mr. G. E. Logie was Drill Superintendent.

The above Company, with Burt's No. 5 machine, with 6 in. casing, bored fifteen holes to a total depth of 780 ft. at Mitchell's Flat, Waipori. Mr. G. E. Logie was Drill Superintendent.

Lake County.

The Labour Department (Employment Division) using the Government No. 4 Alluvial drill with 6 in. casing, is boring at Branch Creek, Cardrona, part Run 340b, Block 2, Cardrona Survey District. Mr. G. A. Baker is now acting as Drill Superintendent in place of Mr. W. H. Gibson, who sustained a serious accident during the year.

Maniototo County.

N.Z. Prospecting and Mining, Ltd., using a Keystone machine, with 5 in. casing, bored fifteen holes to a total depth of 710 ft. at Cambrians, Block I, St. Bathans Survey District. Mr. G. Bisset was Drill Superintendent.

Waitaki County.

N.Z. Prospecting and Mining, Ltd., using Burt's No. 2 Keystone machine, with 5 in. casing, bored six holes to a total depth of 334 ft. in Block VII, Maerewhenua Survey District. Mr. R. McDonnell was Drill Superintendent.

The same company, using Burt's No. 4 drill, with 5 in. casing, bored three holes to a total depth of 137 ft. in part Block VI, Maerewhenua Survey District. Mr. A. Eaton was Drill Superintendent.

ANNEXURE B.

STONE QUARRIES.

SUMMARY OF REPORT BY INSPECTOR OF QUARRIES FOR THE NORTH ISLAND.

(R. H. SCHOEN.)

The following is my report for the year ending 31st December, 1936, covering quarries worked under the Stone Quarries Act, 1910, with statement showing number of men employed, output of various classes of stone, quarries worked, value of stone at quarry, &c.

OUTPUT OF STONE.

Although there was again great activity in roading during 1936, the output of stone for this purpose from quarries under the Stone Quarries Act showed a decrease of 55,830 tons, the figures being 756,681 tons and 700,851 tons for 1935 and 1936 respectively. In all other classes of stone, however, large increases were shown, the total output for the year being 1,079,652 tons, as compared with 1,044,927 tons in 1935, an increase of 34,725 tons.

A particularly large increase is shown by the two quarries producing limestone for cement, the combined output rising from 126,356 tons to 165,675 tons, an increase of 39,319 tons, or 31 per cent. Lime for agriculture, with a total of 132,766 tons, showed an increase of 17,782 tons on the previous year's total. Stone for harbour works, building and construction, and miscellaneous purposes all showed heavy increases. The total value at the quarries of the stone produced during 1936 was £206,501, an increase of £45,107.

QUARRIES WORKED AND MEN EMPLOYED.

Although 314 quarries were worked during 1936 as against 279 during the previous year, the number of men employed decreased by fifteen, from 1,397 in 1935 to 1,382 during 1936. Owing to a larger amount of work on back roads during the year, a larger proportion of experienced quarrymen have been employed in working the smaller quarries. The occupiers of the larger quarries have made increasing use of mechanical means for both overcoming the shortage of experienced quarrymen and lowering the cost of "dead work" in the quarries. Close attention to improvement in crushing plants has also been noticeable.

Quarries generally have been well and safely worked, and in the few cases where defects in safety have been pointed out no difficulty has been made in getting them remedied.

Another large quarry during the year adopted tunnel shooting with great success.

ACCIDENTS.

The following accidents occurred in quarries during 1936 :—

Fatal Accidents.

On 24th August, Thomas Charles Oates was run over by a loaded railway-wagon at the crushers at Te Kawa Quarry, and died later from his injuries.

On 1st September, George Lipanovich, employed at Amner's Lime Quarry, Napier, was tripped by a small fall of clay from a face 9 ft. high, fell against a loading machine, and sustained injuries which later proved fatal.

Serious Non-fatal Accidents.

On 20th February, William Cox, employed at Waipu Gorge Quarry, Maungaturoto, sustained injuries to both eyes and left arm, due to a premature explosion while "bulling" a shot-hole.

PROSECUTIONS UNDER STONE QUARRIES ACT, 1910.

The occupier of a quarry was charged with a breach of section 9 (a) (iv) and section 4, subsection (2). Convicted on both charges, and fined £4, and costs £1 10s. A quarryman was charged with breach of section 4, subsection (1). Convicted, with costs 10s.

The occupier of a quarry was charged with breaches of section 8, subsection (1), and section 4, subsection (2), and his foreman with breach of section 4, subsection (1). Charges dismissed, the material quarried being held by the Court not to be "stone."

ANNEXURE C.

MINING STATISTICS.

Table I.

STATEMENT SHOWING THE QUANTITY OF QUARTZ CRUSHED AND BULLION OBTAINED IN THE NORTHERN INSPECTION DISTRICT FOR THE YEAR ENDED 31ST DECEMBER, 1936.

Locality and Name of Mine.	Average Number of Men employed.	Quartz crushed.		Bullion obtained.		Value.	
				Amalgamation.	Cyanidation.		
WAIHI BOROUGH.							
Waihi—		Tons	cwt. qr. lb.	Oz. dwt. gr.	Oz. dwt. gr.	£	s. d.
Martha	597	172,622	0 0 0	..	435,507 15 0	406,508	0 0
Waihi Grand Junction	40	27,004	0 0 0	..	35,736 19 0	55,892	0 0
Silverton Battery site	1	..	..	11 13 0	..	34	10 1
	638	199,626	0 0 0	11 13 0	471,244 14 0	462,434	10 1
OHINEMURI COUNTY.							
Karangahake—							
Talisman-Dubbo	31	2,272	16 0 0	..	12,640 0 0	21,747	9 5
New Talisman	2	8	9 0 0	..	257 13 0	124	17 7
The Brothers	2	35	10 0 0	..	66 5 0	162	16 1
Talisman Battery site	2	61	0 0 0	111 0 0	..	556	10 10
Waiawa	5	299	0 0 0	..	128 8 0	468	12 0
Victoria	2	1	0 0 0	8 18 0	..	25	9 7
Waikino—							
Golden Zone	1	..	..	0 4 0	..	1	1 2
Waitekauri—							
New Maoriland	2	9	0 0 0	30 0 0	..	93	2 3
Owharoa—							
Golden Dawn	117	9,247	0 0 0	..	14,706 1 0	42,736	16 8
Komata—							
Komata Reefs	18	51	0 0 0	136 19 0	..	524	13 8
Maratoto—							
Golden Spur	2	1	9 0 0	..	81 14 0	23	14 0
Prospectors	2	..	..	13 5 0	..	52	7 7
	186	11,986	4 0 0	300 6 0	27,880 1 0	66,517	10 10
THAMES COUNTY.							
Thames—							
Gold Seal	1	7	10 0 0	22 9 0	..	113	7 2
Neavesville—							
Golden Belt	10	421	0 0 0	579 2 0	..	2,730	11 11
Tapu—							
Kernick's	2	17	0 0 0	258 15 0	..	1,508	10 10
Tararu—							
Sylvia	2	349	0 0 0	1,206 0 0	..	1,910	0 0
Tairua—							
Taniwha	2	0	1 0 0	4 3 0	..	19	12 3
Easter	2	26	4 0 0	..	85 12 0	401	10 9
Western	2	2	15 0 0	..	8 3 0	19	8 4
Whangamata—							
Wentworth Battery site .. .. .	..	..	..	7 13 0	..	23	9 9
Prospectors	28	58	14 0 0	122 18 0	..	753	12 6
	49	882	4 0 0	2,201 0 0	93 15 0	7,480	3 6
THAMES BOROUGH.							
Thames—							
Dawn of Hope	18	115	0 0 0	349 4 0	..	1,841	10 11
Dauntless	2	7	10 0 0	64 17 0	..	331	5 2
Anniversary	2	17	10 0 0	11 7 0	..	55	10 9
Golden Hills	2	15	0 0 0	18 19 0	..	101	4 1
New Onehunga	2	10	0 0 0	8 2 0	..	41	19 3
Caledonian	3	105	0 0 0	3 15 0	..	15	10 1
True Blue	1	2	10 0 0	3 17 0	..	20	4 1
Lap	1	200	0 0 0	22 9 0	..	87	13 2
Progress	4	87	10 0 0	133 2 0	..	679	1 8
New Waiotahi	4	30	0 0 0	10 8 0	..	51	17 10
Success	2	5	0 0 0	6 1 0	..	32	0 3
Relief	7	30	0 0 0	49 15 0	..	233	12 3
Waitangi .. .. .	..	..	..	6 0 0	..	30	9 5
Christmas Eve	2	7	10 0 0	1 8 0	..	7	0 7
Moanataiari Battery Co.	2	17	0 0 0	24 14 0	..	51	0 7
Collections .. .. .	..	..	..	19 13 0	..	106	2 5
Prospectors	17	57	10 0 0	66 8 0	..	348	18 2
	69	707	0 0 0	799 19 0	..	4,035	0 8

Table I—continued.

STATEMENT SHOWING THE QUANTITY OF QUARTZ CRUSHED AND BULLION OBTAINED IN THE NORTHERN INSPECTION DISTRICT FOR THE YEAR ENDED 31ST DECEMBER, 1936—continued.

Locality and Name of Mine.	Average Number of Men employed.	Quartz crushed.	Bullion obtained by		Value.
			Amalgamation.	Cyanidation.	
COROMANDEL COUNTY.					
Coromandel—		Tons cwt. qr. lb.	Oz. dwt. gr.	Oz. dwt. gr.	£ s. d.
Hauraki	5	19 6 0 0	27 0 0	..	144 18 4
Nil Desperandum	4	40 0 0 0	13 0 0	..	75 3 2
Reyland's	1	0 2 0 0	14 14 0	..	81 3 2
Nutcracker	2	63 0 0 0	17 10 0	..	98 19 7
Pukemaukuku	2	2 10 0 0	8 10 0	..	49 1 5
Kennedy's Bay—					
Lone Hand	2	5 10 0 0	16 0 0	..	87 18 3
Waikoromiko—					
Northcote	3	0 1 0 0	32 6 0	..	180 12 4
Golden Belt	2	..	7 9 0	..	40 13 11
Waikoromiko Sluicing Co.	8	..	20 11 0	..	118 2 3
Pukewhau—					
Gladys .. .. .	..	..	0 11 0	..	2 19 9
Kapowai—					
Kapowai	1	10 0 0 0	3 12 0	..	12 9 9
Mahakirau—					
Twa Macs .. .. .	..	2 0 0 0	1 19 0	..	10 2 7
Tokatea—					
New Royal Oak	3	1 0 0 0	26 10 0	..	137 0 10
Rock of Ages	2	1 5 0 0	122 5 0	..	652 4 2
Speedmint	2	3 10 0 0	48 2 0	..	257 10 9
Bertha	2	4 10 0 0	14 0 0	..	74 8 1
Gem	2	4 10 0 0	39 6 0	..	216 18 8
Colville—					
Bot	2	3 10 0 0	7 1 0	..	38 1 1
Tiki—					
Progress—Castle Rock	2	3 0 0 0	10 0 0	..	49 18 10
Manaia—					
Dale's Find .. .. .	..	2 3 0 0	0 18 0	..	5 1 10
Waitekuri—					
Lillis	1	0 10 0 0	6 3 0	..	20 16 9
Boat Harbour—					
Heather Bell	2	..	3 10 0	..	18 19 1
Prospectors	23	20 0 0 0	40 8 0	..	211 2 10
	71	186 7 0 0	481 5 0	..	2,584 7 5

SUMMARY.

Waihi Borough	638	199,626 0 0 0	11 13 0	471,244 14 0	462,434 10 1
Ohinemuri County	186	11,986 4 0 0	300 6 0	27,880 1 0	66,517 10 10
Thames County	49	882 4 0 0	2,201 0 0	93 15 0	7,480 3 6
Thames Borough	69	707 0 0 0	799 19 0	..	4,035 0 8
Coromandel County	71	186 7 0 0	481 5 0	..	2,584 7 5
Totals, 1936	1,013	213,387 15 0 0	3,794 3 0	499,218 10 0	543,051 12 6
Totals, 1935	1,057	211,425 9 1 0	2,682 12 0	503,992 12 0	556,855 10 2

Table I—continued.

STATEMENT SHOWING THE QUANTITY OF QUARTZ CRUSHED AND BULLION OBTAINED IN THE WEST COAST INSPECTION DISTRICT FOR THE YEAR ENDED 31ST DECEMBER, 1936.

Locality and Name of Mine.	Average Number of Men employed.	Quartz crushed.	Bullion obtained by		Value.
			Amalgamation.	Cyanidation and Concentration.	
MARLBOROUGH COUNTY.					
Wakamarina— Smile of Fortune	5	Tons cwt. qr. 1,003 0 0	Oz. dwt.gr. 92 2 7	Oz. dwt. gr. ..	£ s. d. 642 9 0
GREY COUNTY.					
Blackball— Fiddes and Meikle	3	..	73 9 19	..	559 4 2
INANGAHUA COUNTY.					
Waiuta— Blackwater	197	41,990 0 0	14,845 15 0	4,178 11 0	153,894 0 2
Alexander River— Alexander	34	4,114 0 0	2,036 2 0	777 17 0	22,804 9 1
Big River— Big River	24	450 0 0	260 6 0	110 6 0	2,847 8 11
Crushington— Lankey's Creek (Watts and party)	4	205 0 0	38 8 3	..	272 8 5
BULLER COUNTY.					
Stony Creek— Britannia	3	43 0 0	31 10 18	..	118 2 11
ROSS BOROUGH.					
Ross— Mount Greenland	9	286 0 0	157 8 9	..	1,101 6 0
Totals, 1936	279	48,091 0 0	17,535 2 8	5,066 14 0	182,239 8 8
Totals, 1935	309	52,233 0 0	20,765 7 4	5,822 15 0	215,959 15 6

STATEMENT SHOWING THE QUANTITY OF QUARTZ CRUSHED AND BULLION OBTAINED IN THE SOUTHERN INSPECTION DISTRICT FOR THE YEAR ENDED 31ST DECEMBER, 1936.

Locality and Name of Mine.	Average Number of Men Employed.	Quartz crushed.	Bullion obtained by		Value.
			Amalgamation.	Concentration.	
LAKE COUNTY.					
Arrowtown— S. Pascoe	2	Tons cwt. qr. 15 0 0	Oz. dwt. gr. 4 2 6	Oz. dwt. gr. ..	£ s. d. 24 2 10
Skippers— J. R. Tripp	6	610 0 0	359 7 20	..	2,641 13 6
Glenorchy— S. G. N. Northcote	1	1 0 0	0 17 4	..	5 12 5
VINCENT COUNTY					
Bendigo— Bendigo Rise and Shine	8	363 0 0	295 16 5	..	2,206 0 0
Ophir— A. Earl	3	165 0 0	45 4 10	..	287 5 5
MANIOTOTO COUNTY.					
Oturehua— Otago Central Quartz Syndicate	2	16 0 0	15 5 0	..	110 13 1
WAIHEMO COUNTY.					
Macrae's Flat— Otago Scheelite and Mining Co.	4	11 0 0	1 13 20	..	12 3 2
Callery and Bradbrook	4	900 0 0	267 7 18	..	1,892 4 7
L. G. Galli	5	56 0 0	52 7 12	..	373 6 5
E. Guinan	2	9 0 0	4 2 0	..	24 15 7
Totals, 1936	37	2,146 0 0	1,046 3 23	..	7,577 17 0
Totals, 1935	42	1,606 0 0	769 14 17	14 10 0	5,702 4 0

SUMMARY OF INSPECTION DISTRICTS.

Inspection District.	Average Number of Men employed.	Quartz crushed.	Bullion obtained.	Value.
Northern (North Island)	1,013	Statute Tons. 213,388	Oz. dwt. gr. 503,012 13 0	£ s. d. 543,051 12 6
West Coast (South Island)	279	48,091	22,601 16 8	182,239 8 8
Southern (Otago and Southland)	37	2,146	1,046 3 23	7,577 17 0
Totals, 1936	1,329	263,625	526,660 13 7	732,868 18 2
Totals, 1935	1,408	265,264	534,047 10 21	778,517 9 8

In addition 58 persons were employed at unproductive quartz-mining.

Table 2.

STATEMENT OF AFFAIRS OF MINING COMPANIES.

Name of Company.	Date of Registration.	Subscribed Capital.	Amount of Capital actually paid up in Cash.	Value of Scrip given to Shareholders on which no Cash paid.	Number of Shares allotted.	Amount paid per Share.	Arrears of Calls.	Number of Shareholders at present.	Number of Men employed.	Quantity and Value of Gold and Silver produced since Registration.		Total Expenditure since Registration.	Total Amount of Dividends paid.	Amount of Debts owing by Company.
										Oz.	Value.			
Golden Crown Gold-mining Co. (No Liability)	12/10/32	£ 20,000	£ 12,537	£ 4,000	200,000	2/-	Nil	242	19	134	£ 524	£ 16,737	Nil	Nil
Opitonui Developments, Ltd.	16/6/33	5,282	3,222	2,000	5,282	£1	60	62	Nil	Nil	Nil	1,622	Nil	150
Ahumata Gold and Silver Mining Co., Ltd.	16/9/32	4,500	1,900	2,600	4,500	£1	Nil	25	Nil	Nil	Nil	2,723	Nil	675
Minerals Concentrator Co., Ltd.	27/5/31	6,530	3,455	3,075	6,530	£1	Nil	24	Nil	Nil	Nil	2,911	Nil	455
Puru Gold, Ltd.	7/12/35	1,000	500	500	8,000	2/6	Nil	26	2	Nil	Nil	468	Nil	50
Waiau Flats Development, Ltd.	30/1/34	1,756	1,316	440	1,756	£1	Nil	102	Nil	Nil	Nil	1,244	Nil	Nil
Tararu Prospecting Co., Ltd.	25/8/36	1,500	660	500	1,500	Various	Nil	3	Nil	Nil	Nil	56	Nil	19
Guineagold Ltd.	27/8/34	3,500	1,100	2,400	70,000	1/-	Nil	187	Nil	Nil	Nil	Nil	Nil	64
Thames New Shotover Gold-mining Co., Ltd.	23/11/34	20,000	Nil	20,000	20,000	£1	Nil	12	6	Nil	162	3,405	Nil	3,109
Long Trail Gold-mining Co., Ltd.	30/6/32	15,237	4,310	10,850	152,376	2/-	Nil	241	Nil	28	Nil	640	Nil	65
Gold Recovery, Ltd.	24/7/36	1,500	707	200	1,500	10/- and 15/-	267	20	Nil	Nil	Nil	3,049	Nil	276
Pursefiller Gold-mining Co., Ltd.	15/2/33	5,701	3,837	2,270	159,425	1/-	2,442	224	Nil	Nil	Nil	3,386	Nil	40
Tairua Gold-mining Co., Ltd.	18/4/35	3,885	1,023	2,500	3,885	16/-	86	27	Nil	Nil	Nil	688	Nil	40
Rangitoto Mining Co., Ltd.	3/2/36	1,000	1,000	Nil	1,000	£1	Nil	2	Nil	Nil	Nil	1,429	Nil	429
Dawn of Hope Gold-mines. (No Liability.) (In Liquidation)	26/11/32	12,999	2,877	..	51,999	1/9 and 2/-	Nil	114	Nil	193	*1,202	4,393	Nil	Nil
Golconda Holdings, Ltd.	6/6/33	7,000	2,806	3,275	140,000	1/-	Nil	111	Nil	Nil	Nil	Nil	2,100	197
Golconda Mines, Ltd.	12/5/32	11,189	7,992	3,197	223,791	1/-	35	207	Nil	93	456	8,410	Nil	427
Moanatairi Golconda Consolidated, Ltd.	-7-34	7,500	3,000	4,500	150,000	1/-	Nil	91	Nil	Nil	Nil	1,608	Nil	380
Magnet Syndicate, Ltd.	4/8/35	800	400	400	800	£1	Nil	5	Nil	Nil	Nil	400	Nil	Nil
Karaka Syndicate, Ltd.	11/4/35	800	400	400	800	£1	Nil	9	Nil	Nil	Nil	475	Nil	89
Una Hill Consolidated Gold-mines, Ltd.	4/1/36	9,542	2,996	2,000	150,840	1/-	246	276	Nil	Nil	Nil	2,076	Nil	Nil
Harbour View Gold-mines, Ltd.	29/6/34	2,752	1,655	1,250	55,050	1/-	Nil	50	2	Nil	Nil	1,563	Nil	Nil
Waorongamai Gold-mines, Ltd.	8/11/33	7,925	3,480	3,937	63,407	2/6	507	21	1	Nil	Nil	3,480	Nil	826
Victoria Gold-mining Co., Ltd.	15/5/34	6,592	3,592	3,000	80,000	1/6	Nil	119	2	Nil	Nil	3,906	Nil	Nil
Waikoromiko Sluicing Co., Ltd.	22/11/34	16,215	2,215	14,000	162,150	2/-	Nil	315	8	25	151	3,715	Nil	1,492
Chapman's Find Gold-mining Co., Ltd.	11/12/33	4,700	1,500	3,200	4,700	£1	Nil	67	Nil	376	2,158	2,643	Nil	Nil
Coromandel Gold-mines, Ltd.	7/6/34	14,766	6,254	8,500	147,665	2/-	12	244	4	13	74	6,569	Nil	157
Caledonian (1934), Ltd.	23/11/34	2,578	2,128	..	51,575	1/-	Nil	102	3	16	72	2,580	Nil	341
Syvia Mines Development, Ltd.	1/6/34	3,425	1,000	1,000	2,000	£1	Nil	20	6	1,650	3,556	3,937	Nil	Nil
Heather Bell Mining Co., Ltd.	23/3/36	2,000	425	Nil	Nil	£1	Nil	29	3	Nil	Nil	220	Nil	190
Talisman Durbbo Gold-mines, Ltd.	31/10/29	9,588	4,702	4,850	38,353	4/6 and 5/-	Nil	117	42	41,848	59,990	56,083	6,885	334
Golden Dawn Gold-mines, Ltd.	20/11/29	20,000	16,139	3,125	80,000	3/- and 5/-	Nil	307	117	75,696	199,579	206,162	3,970	2,091
Rexmann Mines, Ltd.	4/8/36	7,000	Nil	7,000	280	£25	Nil	18	Nil	Nil	Nil	Nil	Nil	Nil

AUCKLAND DISTRICT.

OTAGO DISTRICT.

Company Name	19/9/34	19,988	15,554	Nil	399,760	Various	233	8	336	2,546	19,209	Nil	385
Bendigo Rise and Shine Gold-mining Co., Ltd.	14/7/33	12,500	8,300	4,200	250,000	1/-	160	4	82	595	11,456	Nil	2,691
Oxenbridge Shotover Gold, Ltd.	12/9/34	1,200	1,037	150	24,000	9d. and 1/-	19	3	81	576	1,608	Nil	422
Upper Arrow Sluicing Co., Ltd.	16/9/33	16,800	7,097	8,800	67,200	Various	56	7	690	5,208	12,296	Nil	58
New Gabriel's Gully Gold-mining Co., Ltd.	17/3/32	62,053	42,053	20,000	248,215	5/-	466	21	3,589	23,501	71,645	Nil	14,400
Nokomai Gold-mining Co., Ltd.	2/10/33	2,875	2,875	Nil	2,875	£1	48	Nil	515	3,642	9,357	Nil	1,458
Coastal Mining Co., Ltd. (In Liquidation)	7/12/33	11,835	10,335	1,500	236,700	1/-	206	7	1,528	6,224	6,150	Nil	94
Waunumu Sluicing Co., Ltd.	21/9/33	24,000	17,000	7,000	480,000	1/-	176	5	1,387	31,387	Nil	Nil	1,187
Sandhills Gold-mining Co., Ltd.	4/6/36	211,250	73,000	5,000	245,000	Various	254	Nil	Nil	Nil	Nil	Nil	Nil
Austral New Zealand Mining, Ltd.	2/12/32	10,000	6,631	2,000	200,000	10d.	240	Nil	199	1,454	3,128	Nil	20
Upper Shotover Gold-mining and Hydro-electric Co., Ltd. (In Liquidation)	6/8/30	18,001	6,993	11,000	680,025	6d. and 1/-	503	1	1,394	7,509	23,526	Nil	10,908
Golden Point Gold and Scheelite Co., Ltd.	3/5/34	3,000	3,000	Nil	4,000	£1	24	3	123	858	3,978	Nil	615
Mountain Terrace Gold-mining Co., Ltd.	28/9/31	1,100	619	Nil	1,100	Various	37	Nil	Nil	Nil	539	Nil	Nil
Macrae's Flat Gold-prospecting Co., Ltd. (In Liquidation)	1/8/33	12,000	6,580	4,975	240,000	Various	268	Nil	10	74	5,436	Nil	1
New Cornish Point Mines, Ltd. (In Liquidation)	6/3/34	2,000	1,500	500	2,000	£1	16	Nil	124	870	1,747	Nil	1,255
Riverside Sluicing Co., Ltd.	3/12/04	1,200	1,200	Nil	12	£100	9	Nil	3,758	14,202	15,908	Nil	1,380
Tallaburn Hydraulic Sluicing Co., Ltd.	2/6/33	39,000	39,000	Nil	780,000	1/-	877	Nil	72	482	43,848	Nil	3,086
Nevis Diesel Electric Dredging Co., Ltd.	27/2/33	4,333	4,333	Nil	17,575	5/-	75	1	Nil	Nil	10,006	Nil	3,460
New Bendigo Gold-mining Co., Ltd.	4/11/32	1,100	1,000	100	11,000	2/-	33	7	1,024	7,119	5,790	Nil	1,375
Golden Arrow Mining Co., Ltd.	23/9/00	6,000	6,000	Nil	6,000	£1	15	Nil	15,494	21,099	24,004	Nil	1,119
Vinegar Hill Hydraulic Sluicing Co., Ltd.	24/8/34	24,575	3,465	20,000	491,500	1/-	98	Nil	Nil	2,731	2,731	Nil	476
Chain of Mines, Ltd.	22/8/33	1,085	785	300	1,085	£1	15	1	12	87	1,607	Nil	505
Ben Lomond Gold-mining Co., Ltd.	10/8/34	892	292	600	3,570	5/-	18	Nil	Nil	Nil	943	Nil	99
Lammerlaw Reefs, Ltd.	30/10/32	60,000	12,500	33,170	60,000	£1	37	20	3,804	28,722	34,037	Nil	3,711
Round Hill Gold-mining Co., Ltd.	4/11/32	1,000	1,000	100	11,000	2/-	33	7	1,024	7,120	5,791	Nil	1,375
Golden Arrow Mining Co., Ltd.	23/9/33	77,792	58,962	18,000	1,555,840	1/-	1,386	20	901	6,814	7,890	Nil	6,097
Skippers Ltd.	10/12/32	46,000	33,000	13,000	920,000	1/-	659	8	422	3,452	4,524	Nil	5,673
Maerewhenua Goldfields Development Co., Ltd.	24/3/33	25,000	25,000	Nil	25,000	1/-	383	4	70	564	23,950	Nil	136
Mining House Concessions, Ltd.	22/3/34	11,640	7,917	3,500	252,800	1/-	184	2	27	197	7,842	Nil	923
Molyneux Deep Lead, Ltd.	3/6/96	8,400	6,200	2,200	8,400	£1	26	7	15,267	66,588	53,643	Nil	46
Sailors' Gully (Waitahuna) Gold-mining Co., Ltd.	14/10/31	5,000	3,400	1,600	5,000	£1	15	12	4,566	32,328	31,464	5,000	843
Macrae's Gold-mining Co., Ltd.	14/11/29	13,000	10,238	2,762	260,000	1/-	514	31	18,929	128,653	116,978	19,500	641
King Solomon Deep Lead, Ltd.	5/5/33	31,000	31,000	Nil	620,000	1/-	614	10	Nil	14,219	45,498	Nil	310
Goldfields Dredging Co., Ltd.	28/3/35	50,000	15,000	Nil	400,000	2/6	7	Nil	Nil	Nil	Nil	Nil	Nil
Island Block Gold Dredging, Ltd.	26/3/34	8,865	4,775	Nil	8,865	15/-	76	5	872	500	8,222	Nil	100
Otago Scheelite and Mining Co., Ltd.	27/3/34	5,500	5,490	Nil	110,000	1/-	78	Nil	527	3,800	9,106	Nil	94
Arthur's Point Sluicing Co., Ltd.	13/3/33	11,000	9,500	2,000	220,000	1/-	220	5	1,407	9,813	16,855	Nil	78
Central Shotover Gold-mining Co., Ltd.	4/8/28	14,010	11,500	2,500	56,040	5/-	206	7	3,331	21,054	30,507	2,078	91
Paddy's Point Gold-mining Co., Ltd.	12/7/34	10,000	8,200	1,800	200,000	1/-	145	9	1,473	10,756	17,096	833	177
Waipapa Beach Gold-dredging Co., Ltd.	30/11/33	16,257	16,257	Nil	325,150	1/-	348	8	821	5,897	21,646	Nil	3,883
Jones Nevis Sluicing Co., Ltd.	28/11/32	900	700	200	900	£1	17	Nil	Nil	Nil	434	Nil	Nil
Branches Flat Prospecting Co., Ltd. (In Liquidation)	9/11/34	2,000	1,500	500	40,000	1/-	52	7	284	2,050	2,609	166	Nil
Junction Reward Gold-mining Co., Ltd.	4/10/26	1,200	600	600	1,200	£1	14	4	516	3,222	2,788	600	122
Tuepeka Mouth Gold-mining Co., Ltd.	11/12/34	2,274	1,274	1,000	45,485	1/-	58	Nil	8	59	1,703	Nil	377
Cairnmuir Sluicing, Ltd.	26/10/28	14,755	10,805	3,950	147,550	2/-	184	1	3,800	22,712	37,836	1,844	4,898
Golden Progress Quartz-mining Co. (In Liquidation)	18/6/28	8,000	4,000	4,000	80,000	2/-	142	8	2,911	15,889	23,546	1,000	765
Kildare Consolidated Gold-mining Co., Ltd.	30/6/36	5,325	4,200	Nil	436,500	Various	100	Nil	Nil	Nil	3,480	Nil	299
Cromwell Hydro-electric Gold-dredging, Ltd.	22/8/33	25,000	19,400	5,600	500,000	1/-	367	Nil	105	747	28,291	Nil	8,157
Bendigo Goldlight Dredging Co., Ltd.													

† Issued as 9d. paid. § Also produced 14 tons 4 cwt. scheelite, valued at £2,103.

‡ Property being worked on tribute.

* £247 from Tributaries' percentages.

Workshop Extended Gold-dredging Co., Ltd. (In Liquidation)	8/9/33	16,000	9,000	7,000	320,000	1/-	Nil	212	14	5,243	39,276	22,347	12,800	3,941
Gold Investigations, Ltd.	5/6/33	1,641	430	1,200	1,641	£1	Nil	57	Nil	Nil	Nil	825	Nil	353
Mineral Investments, Ltd.	29/11/35	300	50	250	300	£1	Nil	2	2	Nil	Nil	140	Nil	Nil
Barrytown Black sands, Ltd.	12/8/35	1,100	Nil	1,100	1,100	£1	Nil	3	Nil	Nil	Nil	500	Nil	Nil
Phoenix Gold-mines, Ltd.	26/9/34	1,200	Nil	1,200	1,200	£1	Nil	12	Nil	Nil	Nil	Nil	Nil	Nil
Murray Creek Gold-mining Co., Ltd.	28/3/35	11,053	28,365	17,500	29,355	£1	Nil	129	Nil	Nil	Nil	Nil	Nil	161
Mount Cann Gold-mining Co., Ltd.	12/7/32	3,003	9	3,000	60,180	1/-	Nil	20	Nil	Nil	Nil	Nil	Nil	Nil
Branch Creek Development, Ltd.	28/5/35	935	935	Nil	935	£1	Nil	18	Nil	17	127	1,205	Nil	145
Kanara Gold-mining Co., Ltd.	13/3/34	1,028	Nil	1,028	1,028	£1	Nil	18	Nil	Nil	Nil	Nil	Nil	400
Dredging Developments, Ltd. (In Liquidation)	19/11/34	1,991	1,549	400	39,830	1/-	12	41	Nil	Nil	Nil	2,029	Nil	492
Golden Sands, Ltd.	2/2/32	7,000	4,000	3,000	140,000	1/-	Nil	141	9	2,804	20,927	8,178	2,100	17
Mahaipawa Goldfields, Ltd. (In Liquidation)	12/10/31	23,914	33,363	15,603	836,089	6d. and 1/-	Nil	1,000	Nil	7,717	47,364	96,426	Nil	2,911
Brian Bonu Gold-dredging Co., Ltd.	29/9/31	27,000	18,000	9,000	540,000	1/-	Nil	384	2	2,673	20,364	42,716	1,350	5,427
Addison's Flat Gold-mining Co., Ltd.	7/2/33	6,503	4,950	1,550	130,000	1/-	Nil	110	9	1,848	14,000	16,610	2,795	35
New Big River Gold-mining Co., Ltd.	19/8/09	2,400	2,400	Nil	24,000	1/-	Nil	75	Nil	93,687	375,742	299,442	112,800	Nil
Big River Gold-mines, Ltd.	29/9/29	30,000	27,145	2,855	600,000	1/-	Nil	594	20	4,340	33,702	47,171	1,635	1,635
Glenroy Gold, Ltd.	19/10/33	12,000	12,000	4,000	320,000	1/-	Nil	223	4	4,442	3,186	18,845	Nil	216
Mahaipawa Reefs, Ltd.	25/1/35	1,135	1,000	570	34,100	1/-	35	51	2	Nil	Nil	1,019	Nil	4
Alluvial Holdings, Ltd.	-/7-34	30,000	5,000	25,000	600,000	1/-	Nil	142	Nil	Nil	Nil	Nil	Nil	2,065
Boatman's Hydraulic, Ltd. (In Liquidation)	12/9/35	2,600	1,500	1,100	2,600	£1	Nil	12	Nil	Nil	Nil	1,500	Nil	2,000
Okarito Five-mile Beach Gold Dredging Co., Ltd.	29/10/28	35,000	30,500	4,500	140,000	5/-	Nil	445	10	12,403	80,047	84,077	31,500	408
Golden Plateau, Ltd.	29/9/33	4,500	4,500	Nil	90,000	1/-	Nil	83	Nil	30	214	1,538	Nil	83
Bierworth's Gold Reefs, Ltd.	31/1/35	4,000	Nil	4,000	4,000	£1	Nil	70	6	514	3,899	6,175	Nil	3,979
Waikahu Gold-mining Co., Ltd.	17/3/32	40,000	34,000	6,000	160,000	5/-	Nil	328	12	2,092	15,712	49,122	Nil	119
Larry's Consolidated Gold-mining Co., Ltd.	30/9/35	2,000	Nil	2,000	2,000	£1	Nil	3	Nil	Nil	Nil	Nil	Nil	Nil
Cumberland Prospecting Co., Ltd.	21/12/34	3,630	1,184	2,500	3,630	15/- and £1	6	39	Nil	Nil	Nil	1,471	Nil	Nil
Hura Gold-prospecting, Ltd.	22/3/35	12,000	Nil	3,000	60,000	1/-	14	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Mammoth Gold-dredging, Ltd.	2/5/35	25,000	5,000	20,000	200,000	2/6	Nil	7	Nil	Nil	Nil	Nil	Nil	Nil
Newton Flat Gold-slucing Co., Ltd.	20/1/36	3,900	1,445	2,000	39,007	1/6	10	97	Nil	Nil	Nil	1,434	Nil	Nil
Lawson's Flat Gold-slucing Co., Ltd.	4/2/33	18,043	15,043	3,000	40,875	1/-	Nil	311	13	1,038	8,106	37,780	Nil	714
Mount David Sluicing Co., Ltd.	2/9/30	50,000	30,000	20,000	200,000	5/-	Nil	267	3	525	3,306	69,271	Nil	19,271
White's Electric Gold-dredging Co. (Barrytown), Ltd.	13/12/34	20,388	13,388	7,000	461,825	Various	2,627	241	13	128	754	29,573	Nil	9,556
Scorpion Gold, Ltd. (In Liquidation)	28/9/34	5,000	4,654	Nil	100,000	1/-	1	102	Nil	16	119	5,438	Nil	423
Britannia Gold Reefs, Ltd.	3/9/32	900	700	200	900	£1	Nil	8	2	568	3,805	3,311	135	Nil
Murray Creek (Consolidated), Ltd.	27/7/35	10,413	3,146	7,267	111,653	Various	Nil	101	1	Nil	Nil	3,215	Nil	55
Teramauk Development Syndicate, Ltd.	16/6/34	5,000	1,562	2,500	5,000	12/6	Nil	24	Nil	Nil	Nil	1,383	Nil	Nil
N.Z. Minerals, Ltd.	30/11/33	2,000	100	1,900	2,000	£1	Nil	3	Nil	Nil	Nil	1,770	Nil	1,992
Westport Gold, Ltd.	29/3/34	10,000	Nil	10,000	10,000	£1	Nil	4	Nil	Nil	Nil	Nil	Nil	Nil
Marna Gold, Ltd.	6/11/34	5,000	Nil	5,000	5,000	£1	Nil	4	Nil	Nil	Nil	Nil	Nil	Nil
Steeple's Gold, Ltd.	15/1/35	1,003	Nil	1,000	1,000	£1	Nil	3	Nil	Nil	Nil	Nil	Nil	Nil
New River Alluvials, Ltd.	6/9/32	3,000	2,300	700	300	£10	Nil	42	Nil	Nil	Nil	2,125	Nil	23
Rimu Gold-dredging Co., Ltd.	20/7/20	166,672	142,863	23,809	166,672	£1	Nil	17	68	181,515	1,019,354	628,489	98,715	Nil
New River Gold-dredging Co., Ltd.	17/11/34	18,889	10,723	5,500	377,600	Various	2,656	261	12	94	656	18,618	Nil	2,756
Hatter's Flat Mining Co., Ltd.	1/9/33	6,000	4,900	1,100	120,000	1/-	Nil	172	Nil	Nil	Nil	4,900	Nil	Nil
Snowy River Sluicing Co., Ltd.	10/12/31	26,116	25,163	Nil	522,325	1/-	953	379	Nil	174	1,217	10,691	Nil	100
Upper Ahaura Gold-dredging Co., Ltd.	29/3/34	14,317	8,483	5,833	478,966	Various	Nil	188	Nil	Nil	Nil	3,313	Nil	118
Brown's Terrace Consolidated, Ltd.	24/10/33	11,208	11,208	Nil	224,157	1/-	Nil	129	Nil	Nil	Nil	10,691	Nil	311
Buller Diversion Gold-mining Co., Ltd.	13/3/28	10,634	6,343	3,125	49,910	Various	1,006	155	Nil	Nil	Nil	3,853	Nil	553
Blackwater Creek Sluicing Co., Ltd.	27/4/35	2,000	Nil	2,000	2,000	£1	Nil	6	4	347	2,762	2,853	Nil	216
Addison Exploration, Ltd.	3/2/33	22,000	18,600	3,400	22,000	£1	Nil	38	24	515	3,101	28,347	Nil	255

* Also produced 623 tons schelite, valued at £99,402.

Table 2—continued.
STATEMENT OF AFFAIRS OF MINING COMPANIES—continued.
FOREIGN COMPANIES.

Name of Company.	Date of Registration of Office in Dominion.	Subscribed Capital.	Amount of Capital actually paid up in Dominion.	Value of Scrip given to Shareholders which is Cash paid.	Number of Shares on Dominion Register.	Amount paid up per Share, Dominion Register.	Arrears of Calls, Dominion Register.	Number of Shareholders on Dominion Register.	Number of men employed in Dominion.	Quantity and Value of Gold and Silver produced since Registration.		Total Expenditure since Registration.	Total Amount of Dividends paid in Dominion.	Amount of Liabilities of Company in New Zealand.
										Quantity.	Value.			
Bundi Tin-dredging Co. (No Liability)	16/7/34	£ 114,716	£ Nil	£ 8,925	Nil	Nil	Nil	Nil	30	Oz. 5,221	£ 38,921	£ 41,385	Nil	£ 2,782
Austral Malay Tin Ltd.	13/11/34	100,000	Nil	Nil	Nil	Nil	Nil	Nil	10	Nil	Nil	27,849	Nil	Nil
Hobson Gold-slitting Co., Ltd. (In Liquidation)	15/7/22	45,000	Nil	19,375	Nil	Nil	Nil	Nil	4	3,778	17,404	40,490	Nil	1,414
Martha Gold-mining Co. (Waiki), Ltd.	24/4/35	247,953	Nil	247,951	322,863	5/-	Nil	1,585	597	*1,074,920	992,395	726,405	41,591	82,828
Waiki Grand Junction Gold Co., Ltd.	22/12/97	41,437	40,494	112,500	247,441	2/-	Nil	910	1	(Mine leased)		2,357,249	174,237	1,951
Waimea Gold, Ltd.	1/5/37	1,125	Nil	Nil	Nil	Nil	Nil	Nil	5	4	31	1,929	Nil	Nil
Blackwater Mines, Ltd.	25/3/07	249,992	Nil	200,000	33,590	£1	Nil	158	194	521,653	2,493,672	1,989,579	57,188	3,098
Consolidated Goldfields of N.Z., Ltd.	22/1/96	50,000	Nil	Nil	15,968	4/-	Nil	126	7	178,353	765,700	1,988,522	21,114	222
Mataki Junction Gold Dredging. (No Liability)	15/6/34	50,000	3,450	10,000	3,500	2/6	Nil	1	16	1,565	10,487	4,535	Nil	514
Molyneux Gold Dredging Co., Ltd.	21/6/34	211,000	Nil	84,000	31,000	2/-	Nil	4	2	Nil	Nil	196,036	Nil	4,871

* NOTE.—Waiki Gold-mining Co., Ltd., transferred their undertaking to Martha Gold-mining Co. (Waiki) on 24/4/35. Since that date production on behalf of the Martha Company has been 935,993 oz. of bullion, valued at £381,729.

APPENDIX B.

REPORTS RELATING TO THE INSPECTION OF COAL-MINES.

THE INSPECTING ENGINEER AND CHIEF INSPECTOR OF COAL-MINES TO THE UNDER-SECRETARY OF MINES.

SIR,—

Wellington, 21st June, 1937.

I have the honour to present my annual report, together with statistical information, in regard to coal-mines of the Dominion for the year ended 31st December, 1936, in accordance with section 42 of the Coal-mines Act, 1925. The report is divided into the following sections:—

- I. Output.
- II. Persons employed.
- III. Accidents.
- IV. Working of the Coal-mines Act—(a) Permitted Explosives; (b) List of Mines at which Permitted Explosives are used; (c) List of Mines required by Law to use Safety-lamps; (d) Dangerous Occurrences; (e) Electricity at Collieries; (f) Prosecutions.
- V. Legislation affecting Coal-mining.

Annexures—

A. Summary of Annual Reports by Inspectors of Mines. B. Colliery Statistics.

SECTION I.—OUTPUT.

The output of the several classes of coal mined in each inspection district is summarized as follows:—

Class of Coal.	Output of Coal during 1936.				Total Output to the End
	Northern District (North Island).	West Coast District (South Island).	Southern District (South Island).	Totals.	
Bituminous and sub-bituminous	Tons. 62,094	Tons. 796,763	Tons. ..	Tons. 858,857	Tons. 49,836,586
Brown	733,743	46,500	369,828	1,150,071	30,992,459
Lignite .. .. .	..	1,307	129,982	131,289	5,148,498
Totals for 1936 ..	795,837	844,570	499,810	2,140,217	85,977,543
Totals for 1935 ..	837,620	803,653	473,911	2,115,184	83,837,326

The following is a table showing the annual production of coal and the quantity of coal imported since 1911:—

Year.	Coal produced.	Coal imported.	Total Quantity of Coal produced and imported.	Year.	Coal produced.	Coal imported.	Total Quantity of Coal produced and imported.
	Tons.	Tons.	Tons.		Tons.	Tons.	Tons.
1911 ..	2,066,073	188,068	2,254,141	1924 ..	2,083,207	674,483	2,757,690
1912 ..	2,177,615	364,359	2,541,974	1925 ..	2,114,995	572,573	2,687,568
1913 ..	1,888,005	468,940	2,356,945	1926 ..	2,239,999	483,918	2,723,917
1914 ..	2,275,614*	518,070	2,793,684*	1927 ..	2,366,740	378,090	2,744,830
1915 ..	2,208,624	353,471	2,562,095	1928 ..	2,436,753	247,861	2,684,614
1916 ..	2,257,135	293,956	2,551,091	1929 ..	2,535,864	215,656	2,751,520
1917 ..	2,068,419	291,597	2,360,016	1930 ..	2,542,092	157,943	2,700,035
1918 ..	2,034,250	255,332	2,289,582	1931 ..	2,157,756	179,060	2,336,816
1919 ..	1,847,848	391,434	2,239,282	1932 ..	1,842,022	103,531	1,945,553
1920 ..	1,843,705	476,343	2,320,048	1933 ..	1,821,258	99,272	1,920,530
1921 ..	1,809,095	822,459	2,631,554	1934 ..	2,060,315	100,715	2,161,030
1922 ..	1,857,819	501,478	2,359,297	1935 ..	2,115,184	97,398	2,212,582
1923 ..	1,969,834	445,792	2,415,626	1936 ..	2,140,217	111,078	2,251,295

* Includes 21 tons shale.

Again the output from New Zealand coal-mines showed an increase over that of the previous year. During 1936, 2,140,217 tons of coal were produced, an increase of 25,033 tons over the 1935 output. There were increased tonnages from the West Coast and Southern District mines, 40,917 tons and 25,899 tons respectively, but the output from the Northern District coal-mines decreased by 41,783 tons below the output for 1935.

The development-work being done by the Hikurangi Coal Co. not having been completed, it was anticipated that the greater part of the Northern District's decrease would be in the Hikurangi area. Instead, the decrease there was only 10,772 tons, but the Waikato output decreased by 26,203 tons.

The number of men employed did not vary much in any of the districts. There were 36 men more in Northern-District mines and six more in West Coast mines during 1936 than in 1935. In the Southern District the number of mine employees decreased by sixteen. In that district the output per man was 532 tons, compared with 497 tons in 1935, but in the Northern District the output was 541 tons per man employed, a decrease of 43 tons per man for the year. In the West Coast District, the average output, 456 tons per man, increased by 20 tons per man.

At some of the Waikato mines the screening for the removal of slack was in some cases over screens with $1\frac{1}{4}$ in. round holes. An agreement was made by the companies not to screen through a larger mesh than 1 in. round. As a consequence the amount of slack coal was less than formerly and, owing to an increased sale for the small coal, much less slack had to be dumped. It has been suggested to the companies operating at Ohai to reduce the mesh for screening slack.

From the Waikato Low Temperature Carbonization Plant the output of "Carbonettes" and other carbonized coal steadily increases, and during the months of May, June, and July of 1936 the demand exceeded the production of the plant. The demand for light oil was also beyond the plant's capacity.

Following the completion of surveys on the State coal reserve, Greymouth, of several possible routes for the conveyance of coal from the area to the north of the James Mine, in which two workable seams of coal had been proven, it was decided that the route, part of which is along the present James Mine main-haulage road, is the most suitable. To enable the transport of plant and machinery from the Westport-Greymouth Main Highway to the new mine entrance a traffic road, about a mile in length, had to be formed and metalled. This traffic road will, later on, be used by the bus service conveying miners to and from the mine. A concrete storehouse and a workshop were built at Rapahoe, but, as power to drive rock-drills was not available, two of the four tunnels along the new haulage road were commenced with hand-steel.

Except in the Ohai District our coal-miners seem reluctant to purchase and wear Protector helmets or, as they are familiarly called, "hard hats." Many colliery-managers keep a supply of the hats for sale to the miners. Some are supplied at cost price, and at other mines they are supplied to underground workmen at a price much below cost. Their use is being steadily advocated by all Inspectors of Coal-mines, and Mr. Hughes, the Southern District Inspector, records that two miners wrote to him stating that their lives had been saved by the hard hats they were wearing. During 1935 over 140,000 hard hats were manufactured in Great Britain for use in coal-mines. Unfortunately, a few of the earlier type of hats became flabby and broken after a few weeks' use, but hats can now be obtained of different makes, and they appear to be of much more durable material and of better design than the older one, so should give greater satisfaction to their wearers. One make, recently introduced in England, incorporates a transparent plate at the front. As a protection against "proud" coal that plate can be dropped before the eyes of the wearer, and, when not required, can be pushed up into a recess in the front of the hat. A sample of that hat is being procured to test its efficiency.

The workman distributing limestone-dust in the Liverpool Colliery workings has been provided with a simple and effective respirator which contains two filter pads, one on each side. After use these pads can quickly be replaced by clean ones.

Early in the year attention was focussed on the need for a better type of stop-block for the tops of inclined planes. Many types of automatically setting stop-blocks were designed, some of simple form and others consisting of many parts. The interest taken by so many connected with the industry, from miners to mine-managers, on the subject has resulted in three or four of the simpler types of automatic stop-blocks being adopted, and now, on most of the jigs, the blocks which had to be reset by hand have been superseded by automatic stop-blocks.

The improvement in design of electric safety-lamps goes on, and when lamps which have been in use for years require replacing our mine-managers avail themselves of the opportunity of supplying the workmen with lamps of better design and greater illuminating power.

At the Kaitangata and Liverpool mines three-cell alkaline cap-lamps are now in use, but the upkeep of that type appears to be rather high, and the two-cell alkaline cap-lamp is considered by many as still the more efficient lamp.

Each Inspector of Coal-mines is provided with a reliable British-made firedamp-detector by which readings down to 0.1 per cent. of methane can be made, and many tests are now made by the Inspectors with this instrument in their inspections of mine-workings.

An apparatus for detecting low percentages of hydrogen sulphide in mine air has also been obtained for the Inspectors' use in West Coast coal-mines. This detector indicates the actual concentration of H_2S in amounts ranging from 0.0025 per cent. to 0.04 per cent. by volume.

Reliable carbon-monoxide detectors are now procurable also, and one of American design, to test varying concentrations of that gas as low as 0.05 per cent., is being procured for use at the State coal-mines.

In the Grey District a central rescue-station is to be equipped with sets of self-contained breathing-apparatus and resuscitators, and coal-miners are to be instructed in their use. As there is no traffic road to the Liverpool Colliery a small subsidiary rescue-station has been equipped at Rewanui and, with the five sets of Proto apparatus provided, twenty miners have already been trained to work underground while wearing the apparatus.

Samsonite No. 3, one of the permitted explosives most generally used in New Zealand coal-mines, was superseded during the year by an explosive of the non-freezing type. It is called Polar Samsonite, and is manufactured at Deer Park, Melbourne, as well as in Scotland. Another of the non-freezing permitted explosives, called Polar Saxonite, is also soon to be manufactured in Australia. The effect of Polar Saxonite is claimed to be about midway between that of Polar Samsonite and A₂ Monobel, which is another permitted explosive used in New Zealand collieries.

Explosives called Sheathed Explosives, in which each cartridge is enveloped (except at the ends) in a cover of sodium carbonate, have been in use in Europe for some years, but none are, as yet, available in this country.

The production from and the number of persons employed at the collieries of the Dominion are shown in the following table:—

Name of Colliery.	Locality.	Class of Coal.	Output for 1936.	Total Output to 31st December, 1936.	Total Number of Persons ordinarily employed.
<i>Northern District.</i>					
			Tons.	Tons.	
New Kamo	Kamo	Sub-bituminous	31,900	48,975	62
Rotowaro	Huntly	Brown	155,785	2,302,942	255
Pukemiro	"	"	117,940	2,489,979	204
Wilton	Glen Massey	"	74,432	472,150	159
Glen Afton	Glen Afton	"	87,562	1,697,582	149
MacDonald	Waikokowai	"	148,220	714,593	249
Renown	"	"	106,466	758,424	159
Egmont	Tatu	"	10,932	38,392	44
<i>West Coast District.</i>					
Puponga	Puponga	Sub-bituminous	14,315	381,728	38
Westport-Stockton	Ngakawau	Bituminous	108,574	3,418,265	236
Charming Creek	"	"	25,133	102,696	44
Millerton	Millerton	"	56,187	8,394,010	86
Denniston	Denniston	"	128,329	10,685,574	302
Cascade	Cascade Creek	"	21,894	151,571	22
Burke's Creek	Reefton	Brown	18,342	270,618	34
Paparoa	Roa	Semi-bituminous	20,995	813,466	49
Blackball	Blackball	Bituminous	21,986	4,069,449	67
Blackball Creek	"	"	17,268	97,686	31
Liverpool (State)	Rewanui	"	125,320	2,823,388	316
James (State)	Rapahoe	Sub-bituminous	35,397	464,007	96
Dobson	Dobson	Bituminous	45,581	765,068	107
Brunner	Wallsend	"	48,672	619,332	110
<i>Southern District.</i>					
Kaitangata (2 collieries)	Kaitangata	Brown	111,080	5,434,828	234
Taratu	Lovell's Flat	Lignite	11,834	792,549	32
Linton (2 collieries)	Ohai	Brown	103,910	1,214,364	155
Wairaki (2 collieries)	"	"	12,978	467,861	28
Mossbank	"	"	54,381	563,355	90
Birchwood	"	"	19,808	185,921	50
Black Lion	"	"	24,524	164,749	25
163 other collieries	All coalfields	Various	380,472	8,367,087	824
Collieries abandoned or suspended, &c.	Various .. .. .	" .. .. .	..	27,206,934	..
Totals .. .. .	.. .. .	.. .. .	2,140,217	85,977,543	4,257

SECTION II.—PERSONS EMPLOYED.

Inspection District.	Average Number of Persons employed during 1936.		
	Above Ground.	Below Ground.	Total.
Southern	269	669	938
West Coast	516	1,334	1,850
Northern	318	1,151	1,469
Totals, 1936	1,103	3,154	4,257
Totals, 1935	1,127	3,104	4,231

The following statement shows the tons of coal raised, persons employed, lives lost by accidents in or about collieries, &c., to 1936 :—

Year.	Output, in Statute Tons.	Persons ordinarily employed.			Tons raised per each Person employed below Ground.	Lives lost by Accidents in or about Collieries.		
		Above Ground.	Below Ground.	Total.		Per Million Tons produced.	Per Thousand Persons employed.	Number of Lives lost.
Prior to 1900	13,444,437	*	*	*	*	*	*	165
1900	1,093,990	617	1,843	2,460	593	3.65	1.62	4
1901	1,239,686	688	2,066	2,754	600	2.42	1.09	3
1902	1,365,040	803	2,082	2,885	655	1.46	0.69	2
1903	1,420,229	717	2,135	2,852	665	2.81	1.40	4
1904	1,537,838	763	2,525	3,288	609	2.60	1.21	4
1905	1,585,756	833	2,436	3,269	651	3.78	1.83	6
1906	1,729,536	1,174	2,518	3,692	687	3.46	1.62	6
1907	1,831,009	1,143	2,767	3,910	662	6.55	3.07	12
1908	1,860,975	992	2,902	3,894	641	2.68	1.28	5
1909	1,911,247	1,159	3,032	4,191	630	3.66	1.67	7
1910	2,197,362	1,136	3,463	4,599	634	7.28	3.48	16
1911	2,066,073	1,365	2,925	4,290	706	6.77	3.26	14
1912	2,177,615	1,130	3,198	4,328	681	4.13	2.08	9
1913	1,888,005	1,053	3,197	4,250	590	3.18	1.41	6
1914	2,275,614	1,176	3,558	4,734	639	21.53	10.35	49†
1915	2,208,624	1,050	3,106	4,156	711	4.07	2.16	9
1916	2,257,135	988	3,000	3,988	752	2.65	1.50	6
1917	2,068,419	1,090	2,893	3,983	715	1.93	1.00	4
1918	2,034,250	1,102	2,892	3,994	703	2.95	1.50	6
1919	1,847,848	1,095	2,849	3,944	648	5.41	2.53	10
1920	1,843,705	1,152	2,926	4,078	630	0.54	0.24	1
1921	1,809,095	1,218	3,149	4,367	574	5.52	2.28	10
1922	1,857,819	1,191	3,365	4,556	552	3.23	1.31	6
1923	1,969,834	1,353	3,647	5,000	540	2.53	1.00	5
1924	2,083,207	1,364	3,505	4,869	594	4.80	2.05	10
1925	2,114,995	1,288	3,489	4,777	606	3.78	1.67	8
1926	2,239,999	1,336	3,823	5,159	586	6.69	2.90	15
1927	2,366,740	1,386	3,988	5,374	593	4.23	1.86	10
1928	2,436,753	1,366	4,010	5,376	608	3.69	1.67	9
1929	2,535,864	1,370	4,127	5,497	614	4.73	2.18	12
1930	2,542,092	1,437	4,430	5,867	574	5.50	2.38	14
1931	2,157,756	1,414	4,331	5,745	498	1.85	0.69	4
1932	1,842,022	1,257	3,379	4,636	545	6.51	2.59	12
1933	1,821,258	1,192	3,194	4,386	570	3.84	1.59	7
1934	2,060,315	1,229	3,249	4,478	634	3.88	1.78	8
1935	2,115,184	1,127	3,104	4,231	681	0.94	0.47	2
1936	2,140,217	1,103	3,154	4,257	678	1.87	0.94	4
Totals	85,977,543	..	..	..	..	..	..	484

* For returns for previous years see page 32, Mines Statement, 1921.

† Year of Ralph's (Huntly) explosion.

SECTION III.—ACCIDENTS.

The following is a summary of accidents in and about coal-mines during 1936, with their causes :—

	Fatal Accidents.		Serious Non-fatal Accidents.	
	Number of Separate Fatal Accidents.	Number of Deaths.	Number of Separate Non-fatal Accidents.	Number of Persons injured, including those injured by Accidents which proved Fatal to their Companions.
Explosions of fire-damp or coal-dust
Falls of ground	..	2	16	16
Explosives	1	1
Haulage	..	1	1	1
Miscellaneous—Underground	8	8
On surface	..	1	..	..
Totals	..	4	26	26

In 1936 the fatal accidents in New Zealand coal-mines were at the rate of 0.94 per thousand persons employed, and at the rate of 1.87 per million tons of coal produced.

For the third year in succession I have pleasure in recording that no fatal accident occurred in Northern District coal-mines. In West Coast coal-mines two fatalities occurred in 1936 and two also in Southern District mines. Two of the four fatalities were caused by falls of coal in working-places. The fatal accidents are referred to in the District Inspectors' reports, but the following are short statements concerning them :—

John McLeod, a miner working in the Linton No. 1 Mine, was fatally injured on 13th January by being struck by a runaway truck. The full truck of coal had been standing on a flat sheet at the

jig-head. McLeod had started to climb the jig to go back to his working-face at the top of the jig, soon after a shot had been fired. A fall of coal, loosened by the shot, occurred as he climbed upwards. The fall pushed the full truck of coal ahead, and as there was no stop-block to prevent it from running down the jig it went over the brow and struck McLeod as he was walking up the incline, fracturing his thigh and ribs, from which injuries he died a few hours later.

On 10th September, 1936, another fatal accident occurred in the Linton No. 1 Mine, when a miner, James Rogers, was struck by a fall of top and side coal. He and his mate were filling a truck in their pillar place when about two tons of coal came away unexpectedly and struck Rogers, his mate jumping to safety in another direction. Rogers died in the Riverton Hospital the following day.

The fatal accident which occurred on 19th October in the Blackball Coal Co.'s screening-plant on the surface was a very simple one. There was no witness to the accident, but it appeared that the screen attendant, James W. Douglas, had tripped and fallen under an electrically operated coal-screen. His neck was broken and his skull fractured.

On 19th November a miner, Reginald Blake, was killed by a fall of coal in his working-place in the Whareatea Extended Section of the Coalbrookdale Mine. As he was trimming the roof with his pick he must have been struck by the falling coal and his skull was fractured through coming into contact with a large lump of coal lying on the heap on which he had been standing. There was no witness to the accident, as Blake was working alone. The place was insufficiently timbered. There was an unsupported distance of 17 ft. from the last timber support to where the fall occurred, but it is contended that, even if the place had been timbered sufficiently to comply with the timbering rules of the mine, the accident could not have been prevented.

Of the twenty-six serious non-fatal accidents which occurred during 1936 in New Zealand coal-mines no less than sixteen were caused directly by falls of stone or coal. Five of the remaining ten accidents were caused by falling timber which had been displaced by falls of coal or stone, or by runaway trucks, and one person, who sustained a fractured rib, had slipped when avoiding a fall of coal.

One of the serious accidents was caused by explosives, a miner striking an unexploded portion of a shot.

Several of the head injuries might have been prevented, or at least much lessened, had the injured persons been wearing Protector helmets.

SECTION IV.—WORKING OF THE COAL-MINES ACT.

(a) PERMITTED EXPLOSIVES.

(Regulations 233 to 237 inclusive.)

The following is a table showing the quantity of permitted explosives used and the number of shots fired at New Zealand coal-mines during 1936 :—

Inspection District.	Quantity of Permitted Explosives used (lb.).		Number of Shots fired.	Number of Misfired Shots.				Approximate Quantity of Coal produced.	
	A2 Monohel.	Samsonite.		By Defective Explosive.	By Defective Detonators.	By Defective Leads.	Other Causes.		Total.
Northern (<i>i.e.</i> , North Island) ..	134,609	5,285	155,141	2	24	8	..	34	Tons. 621,274
West Coast (of South Island) ..	105,611	113,898	261,683	5	95	69	..	169	842,445
Southern (<i>i.e.</i> , Canterbury, Otago and Southland) ..	..	71,446	109,928	..	11	9	..	20	290,867
Totals	240,220	190,629	526,752	7	130	86	..	223	1,754,586

(b) LIST OF MINES AT WHICH PERMITTED EXPLOSIVES ARE USED.

The following is a list of mines as at the 31st December, 1936, at which permitted explosives are used :—

Northern Inspection District.

Pukemiro, Pukemiro—Throughout South Mine.
 Rotowaro, Rotowaro—Throughout No. 1 and No. 3 Mines.
 Glen Afton, Glen Afton—All sections of the mine.
 MacDonald, Waikokowai—Throughout West section.
 Waikato Extended Colliery, Huntly—All sections.
 Renown, Waikokowai—All sections.
 Wilton, Glen Massey—All sections.

West Coast Inspection District.

Wynndale, Murchison.	Kaye's, Ten Mile.
Mount Burnett, Collingwood.	Bellbird, Ten Mile.
Puponga, Puponga.	Brady's, Ten Mile.
Owen, Owen River.	Briandale, Ten Mile.
Cardiff, Seddonville.	Cliffside (Moore's), Nine Mile.
Charming Creek, Ngakawau.	Bellvue, Rapahoe.
Cascade, Burnett's Face.	Cain's, Rapahoe.
Chester's, Seddonville.	Jubilee, Rapahoe.
Coal Creek, Seddonville.	Baddeley's, Dunollie.
Hydro, Seddonville.	Braehead, Dunollie.
Glencrag, Buller Gorge.	Castlepoint, Dunollie.
Westport Coal Co.'s Denniston mines.	Hunter's, Dunollie.
Westport Coal Co.'s Millerton mines.	Moody Creek, Dunollie.
Westport-Stockton, Ngakawau.	New Point Elizabeth, Dunollie.
Archer's, Capleston.	Fiery Cross, Dunollie.
Clele, Merrijigs.	Smith's, Dunollie.
Coghlan's, Capleston.	Duggan's, Rewanui.
Collins, Murray Creek.	Old Runanga, Rewanui.
Morrisvale, Reefton.	Spark's, Rewanui.
Defiance, Reefton.	State Collieries (Liverpool and James).
Burke's Creek, Reefton.	Goldlight, Rewanui.
Waitahu Colliery, Reefton.	Blackball, Blackball.
Bennett's (Times Street), Reefton.	Blackball Creek, Blackball.
Lanky's Creek, Reefton.	Paparoa, Roa.
Schultz Creek, Twelve Mile.	Dobson, Dobson.
Hilltop, Ten Mile.	Wallsend, Brunnerton.

Southern Inspection District.

Kaitangata No. 2, Kaitangata.	Black Diamond, Ohai.
Wairaki, Ohai.	Black Lion, Ohai.
Birchwood, Ohai.	Star, Ohai.
Linton, Ohai.	

(c) LIST OF MINES REQUIRED BY LAW TO USE SAFETY-LAMPS.

The following is a list of the mines as at the 31st December, 1936, required by law to use safety-lamps :—

Northern Inspection District.

Pukemiro, Pukemiro—Throughout South mine section.
 Rotowaro, Rotowaro—Throughout No. 1 and No. 3 Mines.
 Glen Afton, Glen Afton—Main headings.
 Renown, Waikokowai—Main headings and West Section turned off No. 4 North Section.
 New Kamo, Kamo—East Section in neighbourhood of Fault.

West Coast Inspection District.

Dobson, Dobson.	Paparoa, Roa.
Spark's, Rewanui.	Wallsend, Brunnerton.
State Mine (Liverpool No. 2), Rewanui.	Millerton (Old Dip Section), Millerton.
Moody Creek, Dunollie.	Owen, Owen River.
Old Runanga (No. 2 Section), Rewanui.	

Southern Inspection District.

Kaitangata No. 2, Kaitangata.	Black Diamond, Ohai.
Wairaki, Ohai.	Black Lion, Ohai.
Birchwood, Ohai.	Star, Ohai.
Linton, Ohai.	

(d) DANGEROUS OCCURRENCES REPORTED.

(Regulation 82.)

Of the twenty-nine dangerous occurrences reported during 1936 to the District Inspectors, twenty-one were of actual fires or of heating in underground workings. Five were in the panels of the Millerton Mine, but one was caused by a lighted cigarette butt having been thrown on a small heap of decayed mine timber. Seven of the reports of spontaneous heating were of occurrences in the Linton Mine.

There were four reports of accumulations of inflammable gas and two reports of inrushes of water in West Coast coal-mines, and one report of an ignition of fire-damp in a Northern District mine. In a Reefton mine the presence of a small percentage of hydrogen sulphide was detected in the mine-water.

(e) ELECTRICITY AT COLLIERIES.

(Regulation 243.)

The following is a summary of the annual returns, in accordance with Regulation 243 (e), regarding electrical apparatus at collieries:—

Number of collieries at which electrical apparatus is installed	..	..	60
Number of continuous-current installations	..	..	8
Number of alternating-current installations	..	..	54
Number of collieries electrically lighted	..	..	41
Number of collieries using electrical ventilating-machines	..	..	49
Number of collieries using electrical pumping plants	..	..	37
Number of collieries using electrical haulage plants	..	..	46
Number of collieries using electrical screening plants	..	..	29
Number of collieries using electrical coal-cutting machines	..	..	4
Number of collieries using electrical miscellaneous plants	..	..	21
Number of collieries using electrical locomotives	..	..	1
Total horse-power employed from motors on surface	..	..	8,064
Total horse-power employed from motors below ground	..	..	4,126½

(f) PROSECUTIONS.

Twelve informations were laid during 1936 by the District Inspectors of Coal-mines for breaches of the Coal-mines Act and Regulations. Eleven convictions were recorded, and one information (against a mineowner) was dismissed.

Of the eleven successful prosecutions, three were against miners, two against mine-managers, two against underviewers, and one each against a fireman-deputy, a mineowner, a shot-firer, and a secretary of a coal-mining company.

Accounts of the individual prosecutions are given in the reports of the District Inspectors (Annexure A).

SECTION V.—LEGISLATION AFFECTING COAL-MINES.

On the passing of the Coal-mines Amendment Act of 1936 several important amendments became operative.

It provided for an additional search to be made, during working-hours, of the workmen employed underground in safety-lamp mines.

That search is additional to the one that has to be made on the surface at the mine prior to the commencement of work and which is already provided for by section 98 of the principal Act.

When a fireman-deputy considers, in the interests of safety, that he should be accompanied by another person when he is making inspections before the commencement of work in a mine he can now ask for a suitable man to go with him. Should his request be refused by the management of the mine, the matter is to be referred to the District Inspector to decide as to the need of the assistant.

Now every deputy must each day before going off duty enter a report as to the condition of the mine with respect to ventilation, timbering, &c.

Every accessible cavity or "dead-end" where inflammable gas may accumulate within one hundred yards of any working-place must now be examined at least once a day, and every working-place must now be examined by a mine official at least once in every five hours.

Unless other approved means for preventing the escape of rock-dust into the mine air has been provided, no mechanically operated rock-drills, except those of the axial water-feed type, can now be used in New Zealand coal-mines.

Provision has also been made for the establishment of rescue brigade stations in the coal-mining districts and for the imposition of a levy not exceeding 1d. per ton on all marketable coal raised by the mine-owners in a district.

As referred to elsewhere, a small rescue-station has been established at the Liverpool State Colliery, and it is intended soon to have another, and larger, rescue-station operating near Greymouth.

Mr. C. J. Strongman, who in 1929 was reappointed Inspector of Coal-mines for the West Coast District, during 1936 succeeded Mr. I. A. James as Superintendent of State Coal-mines. The vacancy in the Inspection Staff was filled by the appointment of Mr. W. Parsonage to act with Mr. J. Hadcroft as an Inspector of Coal-mines for the West Coast District. Mr. Parsonage has had over twenty years' experience in an official capacity in West Coast mines, including the State coal-mines.

I desire to acknowledge the efficient help and co-operation which I have received from the District Inspectors.

I have, &c.,

GEORGE DUGGAN,

Inspecting Engineer and Chief Inspector of Coal-mines.

ANNEXURE A.

SUMMARY OF REPORTS BY INSPECTORS OF MINES.

NORTHERN INSPECTION DISTRICT (WILLIAM BARCLAY, Inspector of Coal-mines).

IN compliance with the Coal-mines Act, I have the honour to submit the following report:—

OUTPUT OF COAL.

The total output of coal from Northern District mines for the year ending 31st December, 1936, was 795,837 tons, as against 837,620 tons in 1935. Of this return 712,391 tons were raised from the Waikato field (738,594 tons in 1935), 62,094 tons North of Auckland (72,866 tons in 1935), and 21,352 tons from several small coal-mines in the Taranaki District (26,160 tons in 1935).

The average number of men employed below and above ground in production of the yearly output was 1,469, as against 1,433 employed during the year 1935.

The large mines were inspected monthly, and at least two visits were made to the smaller ones during the year. In addition, the Workmen's Inspectors make frequent inspections of the principal mines on behalf of their organizations. These inspections serve a useful purpose in satisfying the miners as to the general safety of their working-places and by drawing attention to defects reported by the workmen, which the managers readily consent to remedy.

No fatal accidents occurred during the year. Three miners sustained serious head injuries due to falls of coal, and these injuries might have been avoided by the use of "hard hats" or "helmets." The number of miners who were injured and disabled for more than three days, as reported for purposes of payment of relief from the Coal-miners' Relief Fund, was 484.

The miners enjoyed regular employment during the year, with the exception of occasional days off due to shortages of railway wagons, failures of machinery, and to other causes over which the management had no control.

Through the intervention of the Minister of Mines an agreement was made by the companies to screen slack coal through a smaller mesh than formerly. As a result much less slack was dumped at the Waikato mines during the year.

New mine development during the year consisted of the installation of three and three-quarter miles of aerial ropeway from the Egmont Tatu mine to a railway connection at Mangaparo, and to the extension of two stone dips at the Waro Colliery owned by the Hikurangi Coal Co., Ltd.

It is pleasing to report that the downward trend of employment has been arrested and that many experienced miners have been reinstated in the mines.

HUNTLY SCHOOL OF MINES.

Increasing interest was taken in the school, and twenty-four students attended the established classes. The School of Mines supplies a want felt by many individual miners and mine labourers, and the provided facilities for obtaining a technical knowledge of mining subjects are highly appreciated by the students and managers of the industry.

SUMMARY OF OPERATIONS OF EACH COLLIERY FOR THE YEAR 1936.

North Auckland District.

Waro Coal-mines (Hikurangi Coal Co., Ltd., Owners).—Coal-production ceased on the 30th June due to the exhaustion of the coal remaining in pillars in No. 6 Section.

The two stone dips set away during the month of October, 1935, have been advanced over the abandoned workings contained in Perrett's West Section.

No. 1 drive has been extended through massive limestone at a grade of 1 in 3.7 to 941 ft.

No. 2 drive (return airway) has been advanced 816 ft. through broken limestone; of that distance 604 ft. were driven at a grade of 1 in 3 and 212 ft. at 1 in 2½. The grade was steepened for purposes of effecting an earlier connection to the coal-seam proved ahead by No. 3 borehole.

Boreholes drilled at short intervals through the floor from the face proved that the seam was dipping at the same grade as the advancing dip, and preparations were then made to crosscut into the seam proved to the north at No. 3 borehole.

The flow of water in each drive is of a manageable quantity having regard to the porous condition of the limestone roof cover. The water is discharged to the surface by three-throw ram pumps, electrically driven.

The permanent Sirocco fan has been installed and an air drift has been connected to No. 2 drive.

Hikurangi No. 2A Coal-mine (Lease from Hikurangi Coal Co., Ltd.: Lawson and Party).—Operations in No. 2 drive have been continued, and five miners have been constantly employed in winning an output from a shallow seam 6 ft. thick lying near the railway boundary of Section 39.

Hicks and Party (Perrett's Area).—The party extracted the pillars remaining along the boundary of the railway reserve at Waro Station. The area was abandoned following a subsidence that occurred on railway land, due to the coal being removed too close to the boundary-line.

The Rocks Area.

Fearnley's Coal-mine.—The party continues to extract coal and fireclay from seams containing 3 ft. of coal and 2 ft. of fireclay.

Laurie's Coal-mine.—This mine was closed down.

Orr and Party.—Prospecting on Section 41, McLeod's Freehold, revealed a seam of coal, 5 ft. in thickness. A well-timbered drive was advanced to the old workings from where the pillars were removed outward.

The Rocks Coal-mine (Latham and Party).—Two drives, following outcrop coal, were driven in a seam, 2 ft. thick, and the mine was subsequently abandoned due to the thinness of the coal-seam.

Gilby's Coal-mine.—This mine was abandoned during the early part of the year as the prospect was not promising.

Coutt's Coal-mine.—As the area was exhausted this mine was abandoned.

Jones and Party (Tauranga Block).—The party has been operating in the bottom seam, 4 ft. thick, of an area formerly worked by the Northern Coal Co., Ltd. (in liquidation). The pillars to the south were extracted and provision for drainage was made for the working of the seam to the north.

Silverdale Colliery (Crown Lease: S. Foot).—The mine remained closed throughout the year.

McInnes's Coal-mine (Crown Lease: Tunstall and Party).—During the past eighteen months the party extracted 8,000 tons of coal from part Section 2, Block XVI, Hukerenui Survey District. Following the exhaustion of the coal the party prospected adjoining areas, but failed to locate another workable section of coal.

McInnes's Coal-mine (Crown Lease: Mackie and Party).—The party experienced some difficulty in disposing of the output as the coal was dirty and shaly. The Northern Coal Co.'s old workings were tapped, but, as the visible pillars contained inferior coal, the party's prospects were not promising.

Northern Co-operative Colliery (Crown Lease: Cunningham and Party).—As a result of heavy rainfall in the district two short drives collapsed due to the overburden being washed over the entrance. The party (father and three sons) subsequently prospected for another opening, without success, as the roof cover was too much disturbed by a former working over the area.

Rosedale Coal-mine. (Crown Lease: Nesbitt and Party).—Mining operations ceased during the year due to the extraction of the available coal.

Glen Nell Coal-mine (Crown Lease: Sublease from McIntyre and Party to S. Foot).—During the year this mine was taken over by Mr. H. Tipton and party. A small stone drive has been completed for the purpose of shortening the trucking and providing better means of access to the pillar coal, which varies in thickness from 2 ft. to 4 ft. Almost the whole of the output was sold to the Railway Department.

Phœnix Colliery (Crown Lease: McKinlay and Party).—Prospecting revealed an area of thin coal lowered by reverse faults, and three drives have been commenced from a lower level into a narrow area of coal. Narrow places, 5 ft. to 6 ft. wide, are being driven, as a first working, in a seam 4 ft. in thickness, and the coal appears to be of good quality. The party has also been engaged in boring for coal on part Section 9, Block XVI, Hukerenui Survey District, without any measure of success.

New Kamo Coal-mine (Kamo Collieries, Ltd., Owners).—The coal-seam being worked lies approximately 100 ft. below the surface near Kamo Railway-station. The average daily production is 170 tons, got from two separate mine sections. The seam was followed to the rise in No. 1 mine section, and the pillars are now being removed there, commencing from a faulted boundary. A borehole drilled to the east of the main fault on part Section 51, Felix Freehold, located two coal-seams, the first 7 ft. thick at a depth of 287 ft., and the second 10 ft. thick, at a depth of 298 ft. A stone dip, at 1 in 3, has been set away from the surface to connect the seams to the established mine-machinery.

No. 2 Mine Section: A section of the old Kamo rise mine-workings, situated under Kamo Township, has been recovered (by dewatering the workings) from a separate drive set away from the surface at a grade of 1 in 3 for a distance of 270 ft. Inspection of the old workings revealed that a first working of the seam had been carried out under Carruth, Wakelin, Grant, and Station Road streets, and also under the railway reserve, for a distance of 17 chains north of Kamo Railway-station. The recovered workings were in fair order. The remaining pillars are only 40 ft. square and are too small in size for a secondary working. A portion of the workings lying under the railway and station road was found sealed off, due to crushing and the collapse of the roof, as recorded in the Mines Statement of the year 1893. A shaft was sunk 110 ft. for effecting adequate ventilation in old workings. A Sirocco fan was also installed. The original workings were carried to a fault on the west side, and only isolated pillars of coal remain along the fault-boundary. The seam is 20 ft. to 30 ft. thick.

Nikau Coal-mine.—A small amount of pillar coal was won from the mine during the beginning of the year, and operations are now suspended.

Waiatanga Colliery.—A stone dip, at 1 in 3, was set away from the surface for the purpose of opening out an area of solid coal left under a farm property by a former working of the old Kamo mine field. The area is drained of water by the drainage operations conducted by the Kamo Coal Co. at Kamo. The seam, 5 ft. to 8 ft. in thickness, was proved at a depth of 70 ft. Faults have been encountered to the north, east, and south, and only a small area of unworked coal apparently remains within working distance of the new drive.

Whareora Coal-mine (Foot and Fox, Owners).—The coal in the old mine is almost worked out. A new drive, set away lower down the hill, has been equipped in maintenance of the output. The seam is thin, faulty, and stoney.

New Kiripaka Coal-mine.—Several small parties failed to make a success of the mine, and operations were suspended.

Avoca Coal-mine.—This small coal-mine, situated on freehold land, seven miles east of Tangowahine, has been worked during the past year by W. Tunstall. A new drive has been driven for the purpose of opening out a proved thin coal area lying ahead to the rise of the old workings. Output was also obtained from an opencast working.

Glenbervie Coal-mine (A. Pollock and Party).—The party has been engaged in cleaning up the roadways preparatory to the early resumption of output from a seam, 4 ft. thick.

Turnbull and Party.—Four men have been engaged on Belton's Freehold in extracting pillars left by the Hikurangi Coal Co., Ltd. A small dip has been commenced in a seam, 4 ft. in thickness, which is to be followed to the Marua Road towards a prospect proved by boring.

Whau Whau Valley Mine (R. Fox and Party).—Operations on this area have been assisted by a grant from the Employment Board, and consist of the driving of a stone-dip drive and the installation of a pump, winch, and steam-boiler. Prospecting-operations have proved a seam, 4 ft. to 5 ft. thick, on the west side of an area which was worked fifty years ago.

Waikato District.

Rotowaro Collieries (Taupiri Coal-mines Ltd., Owners).—No. 1 Colliery: The average daily output of this mine section is 500 tons, and operations are almost entirely confined to the extraction of the pillars formed in the first working. The seam is 14 ft. to 16 ft. thick, and the pillars are 30 ft. to 40 ft. square. They are removed by splitting and by the working-off of the side ribs. A fair percentage of the top coal is recovered, by leaving stumps and ribs of coal of sufficient strength to carry the weight of the roof cover until the top coal is shot down. Strong timber is used at the lip ends for breaking the roof into the excavated spaces, thus ensuring a quick settlement of the roof and the prevention of undue weight on to the adjoining pillars.

A stone drive, at a grade of 1 in 4, has been driven a distance of 7 chains to the bottom seam lying ahead of the farthest inbye cast workings approximately 90 chains from the entrance to the mine. Blowers of inflammable gas were encountered following the cutting of the new seam, and resultant accumulations caused a delay to the development.

In No. 3 mine section (bottom seam) the first working is being carried over a wider area than obtains in the top seam, and sections turned to the south from the main east heading are proceeding in thick, clean coal of excellent quality. The formed pillars are 60 ft. square, and barriers are provided within the panel system of mining.

The stone-drives, proceeding through troubled ground to the south-east of the main haulage road, have reached the seam proved ahead of adequate thickness for normal working, and preparations are being made to install modern haulage.

The thickness of the bottom seam ranges from 12 ft. to 18 ft. The seam appears to be faulty and disturbed along the western outcrop. The overlying strata to the top seam, 100 ft. above, are sandy fireclays with intervening bands of thin coal-seams and shales from which inflammable gas is given off following fractures in the roof cover.

This is an extensive coalfield, and the seams have been proved to exist for a distance of approximately four miles from the Rotowaro Mine entrance.

Pukemiro Colliery (Pukemiro Collieries, Ltd., Owners).—Mining operations during the year were confined solely to the extraction of pillars in the north mine section.

The straight-heading section was reopened for pillar-extraction, and, with a roof cover of 250 ft., the formed pillars are being crushed in places where the rate of retreat is irregular. In the north section the floors of the roadways are yielding to the roof-weight, and careful management is required to prevent fires and loss of coal.

Heavy supplies of props are required for the support of the roof during the process of pillar-extraction. The first break in the roof over the area being pillared usually occurs after the second pillar has been attacked, and after the first break the roof ordinarily breaks and falls within the excavated spaces following a succession of lifts.

Surface water runs down the breaks to the gob, from where it is drained into sumps, and, unless free drainage through an outlet to the surface can be effected, the water must necessarily be returned to the surface by costly means of pumping.

Operations are still suspended in the south mine section, where an extensive area of pillars, formed by a first working, remain for extraction.

No exploratory work for the opening-out of new ground has been carried out during the past five years, and the remaining reserves of coal within the company's boundaries are being depleted annually by approximately 120,000 tons.

Ventilation and haulage are satisfactorily maintained, and no serious accident to life or property occurred during the year.

Glen Afton No. 1 Colliery (Glen Afton Collieries, Ltd., Owners).—An output of 87,562 tons was won from pillars in K2 and K4 sections under ideal conditions as regards percentage of extraction and general safety.

The pillars are removed by a series of lifts taken from the gob ends of the 70 ft. square pillars. As the worked-out area increases, the roof gradually moves downward with the weight of the overlying roof cover of 400 ft. to 500 ft. of fireclay and limestone, and, if the stumps and ribs of coal left in support of the gob can be totally removed, the weight can then be directed into the gob in protection of the roadways remaining for the extraction of the succeeding lifts. If the adopted straight-line method of extraction can be maintained by regular work on the pillars, the gradual movement of roof-weight prevents sudden application of weight on the roof-supporting props, and the fractured props can be renewed in safety.

Heatings in the goaf have been reported, and the incipient fires have been suppressed by stoppings erected close up to the waste ground.

The workings are dry and dusty, and the roadways are treated with incombustible dust in accordance with the requirements of the regulations.

The average temperature of the mine atmosphere is 67° F., and satisfactory ventilation is produced in both working sections by a volume of fresh air taken from the entrance to the connected MacDonald Colliery.

The average thickness of the coal seam is 12 ft. The seam is moderately inclined, and mechanical haulage is applied close up to the faces. The main and the K section subsidiary haulage extend two miles and a half underground through the centre of the coalfield, which has yet only been attacked by a first working, with the exception of three depillared sections.

Glen Afton No. 2 Colliery (MacDonald State Coal-mine Reserve under lease to the Glen Afton Collieries Ltd.).—This mine has an average daily output of 750 tons. The output is transported, by means of an endless rope surface haulage, to the Glen Afton No. 1 screening-plant, a distance of approximately three miles.

The seam is in places 16 ft. thick. The coal is hard and relatively clean, with few impurities and stone partings. The roof cover is composed of jointy fireclay, which falls readily when the roof is exposed. The system of mining followed is bord and pillar, with approved barriers between the panels.

Two extensive districts have been opened out to the west and north of the mine-entrance, with numerous secondary sections, of approved panel size, left behind for pillar-extraction following a retreat from the outcrop boundary on the north side and MacKinnon's boundary on the west side. The standing pillars are 70 ft. square. Coal-cutting machines are employed to cut the coal-faces of the bords in the first working, which leaves 75 per cent. of the coal to be mined by pillar-extraction.

The pillars are being extracted in three separate sections by hand-mining, and as the rate of retreat is slow, due to single shifts, many renewals of roof-supports are required, especially in places lying in close proximity to the outcrop where water affects the overlying roof.

Indications of heating have been observed along the fringe of the goaf in No. 2 rise pillar section, and temporary stoppings held back the noxious gases until such time as the affected ground was surrounded by fresh falls induced by the adjoining pillars being totally removed. An average mine temperature of 63° F. is being provided and maintained by short air-inlets.

The water problem, arising from the extraction of pillars lying at shallow depths, has been solved by the driving of a drainage tunnel to the surface from the lowest point of the workings.

During the year the ambulance-room was completed, and a filtering-apparatus was established on the surface for purifying the miners' drinking-water.

Ventilation was maintained to the standard common to the Waikato District, and which was instituted many years ago by the installation of approved ventilation fans.

Graham Colliery.—Operations in this small mine have consisted of the extraction of the pillars in all sections. The coal was clean and easily mined and the roofs fairly strong. The seam varied in thickness from 4 ft. to 6 ft.

Waikato Extended Colliery (Roose Shipping Co., Owners).—A new drive has been commenced from the surface for purposes of winning an area of coal abandoned six years ago as a result of an underground fire.

Pillars were also extracted from a barrier lying between the old Waikato Mine workings and the extended old workings.

The output was used for bunkering the company's river steamers.

Huntly Brick Works.—An output of 30 tons to 40 tons of fireclay per day was won from the quarry for the manufacture of bricks and tiles on the property. The work was safely carried out, and the overburden was stripped back from the top of the face.

Taupiri East Coal-mine (Crown Lease).—The owner of the mine, Mr. J. Holland, recently obtained a lease to work 5 acres of Crown land contained in the Kimihia Lake area. Two headings have been extended through the boundary. The seam is 18 ft. to 20 ft. thick, and a strong coal roof remains in provision of overhead safety.

Campbell Coal-mine (Crown Lease, Whatawhata).—The field is being worked from a dip driven in the coal-seam to a fault, along which the south level has been extended 6 chains in a seam 7 ft. to 8 ft. thick, and overlain by a stratum of hard pumice sand. Ten men are employed, and the output is marketed in the surrounding district.

Renown Colliery (Renown Collieries, Ltd., Owners).—Operations during the year have been proceeding in No. 3 north section and No. 3 south section, including three subsidiary sections and the extension of the main haulage headings and No. 3 south headings.

In No. 3 north section the seam is thinning and preparations are being made to extract the pillars in the west panel where inflammable gas was detected in a roof cavity caused by a fall to the top seam.

Operations were suspended in the main headings, due to a thinning of the seam and to the fact that the south headings could be advanced under more favourable conditions.

The headings to the east, turned off No. 3 south section, were connected to No. 1 south section, where an area of thick coal remains for extraction and which will be connected to No. 1 haulage road following a reroading in the back heading occasioned by a collapse of roof in No. 1 main haulage road.

Coal-cutting machines are employed in bords of the first working, and the pillars are extracted by hand-mining.

The fireclay roof above the coal-seam is good, and no difficulties are experienced when drawing pillars.

The average yearly output of 100,000 tons was maintained during the year, and as heading development and formed large pillars remaining from a first working exceeded the tonnage taken from pillars, reserves of coal remaining for future working were therefore substantially increased.

The difficulties experienced in supporting a portion of the highly inclined return airway were overcome by the construction of a deviation around the affected part. The provided ventilation exceeds statutory requirements by fully 70 per cent., and the connection effected between No. 1 and No. 3 south sections should provide easy means for ventilating the sections developing to the south.

The haulage roads have been maintained in good order. Face haulage is rather difficult, due to undulating grades and to the capacity of the mine-skips, which are larger than those in use in other Waikato mines.

Wilton Colliery (Wilton Collieries, Ltd., Owners).—An output of 74,432 tons was won from pillars in No. 2 section, and from bords in Katovich's section. The field occurs at an altitude of 200 ft. above the railway and screens, and geologically it could be compared with the neighbouring abandoned Waipa Colliery, as the seams of coal outcrop on the hillsides along the contour of the hills. The average thickness of the seam is 7 ft. It has a bright appearance, and it contains balls of iron pyrites, which are difficult to separate from the coal. The working-seam has been followed 60 chains to south, where it lifted and narrowed to a width of 5 chains.

Prospecting-operations to the south-west proved another detached coalfield, and as this field could be more advantageously worked by another established mine-system of haulage and ventilation it was decided to withdraw the existing formed pillars, commencing from the farthest end.

The pillars are being extracted under ideal conditions as regards safety, with a high percentage of extraction. Particular attention is paid to the control of the roof-weight and to so arrange that the cantilever weight should be thrown to rest on the gob-ends.

It is pleasing to report that no serious accidents occurred in this mine, and that this comparatively thin seam can be worked as economically and safely as the thick seams in the same district.

Rangitoto Coal-mine (Native Lease, Tahia).—A small output was won by Morgan and party in a seam, 7 ft. thick, followed from an outcrop on the stock road. Local requirements were satisfied by an output of 269 tons for the year.

Relief Coal-mine (Auckland University Council Endowment Lease).—This coal-mine has been operated by relief labour on Auckland University College endowment land. Mining operations consist of the extraction of the roadside pillars remaining on both sides of the rise jig.

Taranaki District.

Old Stockman Coal-mine, Mokau.—A small output was won from this mine, worked by Jones and party. The seam is 4 ft. thick and is overlain by hard sandstone, which affords a safe roof. The output is marketed in Mokau and Waitara.

Paparata Coal-mine (Crown Lease: Taranaki Coal-mining Co., Ltd., sublease to A. Pratt and Party).—A small output was won from a 3 ft. seam and carted to Heao Railway-station. Mining operations were discontinued at the end of the year, and the mine was abandoned in working-order by the party.

Egmont Tatu Colliery (Crown Lease: Egmont Collieries Ltd., Owners).—A daily output of 100 tons was maintained by forty miners to the end of June, when a creeping movement of the hillside immediately above the mine-entrance caused operations to be suspended until such time as a thorough examination could be made of the fractures occurring in the hill. Some of the breaks in the overburden were of ancient origin, others were probably caused by forming the pillars too small in the first working. However, as danger to the miners could be apprehended from the downward movement of approximately 10,000 cubic yards of fractured sandstone, the manager agreed to withdraw the miners and abandon the mine section, which was being developed in a clean seam of coal 7 ft. to 8 ft. thick under a strong sandstone roof.

Subsequently some of the miners were re-engaged to open up another section lying more conveniently to the terminus of the aerial ropeway of three miles and three-quarters under course of construction from Mangaparo Railway-station. With the assistance of the remaining workmen it was anticipated that the installation would be completed early in the New Year in provision of normal mining-conditions.

Gilbert's Colliery (Crown Lease, Tatu).—The lease was determined, due to the failure of the party to comply with its conditions.

Mangapechi Coal-mine (Crown Lease: Mangapechi Coal-mining Co., Ltd., Owners).—Three headings have been advanced approximately 20 chains, at a dip of 1 in 3, toward the company's freehold. A fault was encountered in the main dip heading, and its displacement has not yet been ascertained, but it would appear that some stone work will be required in the 18 chains from the face to the freehold boundary. The installed steam-plant is inadequate, and other means of power will be required for a continuance of the headings.

A daily output of 30 tons has been maintained from the three headings and the crosscuts set away at intervals between the headings.

The seam is 12 ft. to 15 ft. thick. The coal is of good quality, and it is transported to the main railway over a portion of Ellis and Burnand's private timber railway connecting to Mangapechi Railway-station.

SERIOUS NON-FATAL ACCIDENTS.

On 24th January S. Dunn, fireman-deputy of the MacDonald Mine, sustained a fracture of the left arm, due to being struck by falling stone whilst he was engaged in drawing rails from an abandoned working-face.

On 29th July E. Johnson, miner employed in the Pukemiro Mine, sustained injuries to his neck caused by falling coal from a face disturbed by the effects of a shot.

On 7th August J. Connew, employed in the Wilton Mine, was injured whilst engaged in unclipping skips from the auxiliary endless rope. He suffered a bruised kidney, and resumed work at the end of the year.

On 10th September John Bogie, miner of the Rotowaro Colliery, sustained a fracture of the spinal column as a result of a piece of coal falling from a high working-place.

On 13th October S. Hambleton, miner of the MacDonald Colliery, was struck by a falling prop and received severe injuries to his head.

DANGEROUS OCCURRENCES (Regulation 82 of the Coal-mines Act, 1925).

On 25th February, in the Rotowaro No. 1 Colliery, smoke was found issuing from the goaf in the "Machine Dip" section, east side. Brick stoppings were erected, and the area was sealed off.

On 17th March a slight heating, due to spontaneous combustion, was discovered on the edge of the goaf in B3 right pillar section, MacDonald Colliery. Stoppings were subsequently erected, and the heating suppressed.

On 21st October inflammable gas was ignited in McCallum's and Dingwall's place, Renown Mine. Safety-lamps were subsequently introduced into the affected section.

PROSECUTIONS.

A miner was charged with failing to systematically and adequately support the roof of his working-place as required by the timbering regulations posted and specified for that mine. He was convicted and fined £1 and Court costs.

A miner was charged with selling nine cartridges of Monobel explosive without being the holder of a license to sell such explosive as required by Regulation 130 of the Explosive and Dangerous Goods Act, 1908. He was also charged with failing to return to the place of storage on the surface the whole of the explosive remaining in his possession at the end of the shift as required by Regulation 224 (4) of the Coal-mines Act, 1925. He was convicted and fined £3 and Court costs on the first charge, and £2 with Court costs on the second.

WEST COAST INSPECTION DISTRICT (J. HADCROFT and W. PARSONAGE, Inspectors of Coal-mines).

In accordance with section 42 of the Coal-mines Act, 1925, we hereby report on the workings of the coal-mines in the West Coast Inspection District for the year ended 31st December, 1936.

The combined output from the Nelson, Buller, Reefton, and Grey sections of the district was 844,570 tons.

The following summary shows the changes in output from the previous year in the different sections of the district and in the number of men employed:—

Output.

				1935.	1936.	Increase.	Decrease.
				Tons.	Tons.	Tons.	Tons.
Nelson District	..	..	..	25,221	27,483	2,262	..
Buller District	..	..	..	313,129	349,268	36,139	..
Reefton District	..	..	..	49,916	45,999	..	3,917
Grey District	..	..	..	415,387	421,820	6,433	..
				803,653	844,570	44,779	3,917

Net increase, 40,917 tons.

Number of Men employed.

				1935.	1936.	Increase.	Decrease.
Nelson District	..	..	..	76	70	..	6
Buller District	..	..	..	710	723	13	..
Reefton District	..	..	..	111	96	..	15
Grey District	..	..	..	947	961	14	..
				1,844	1,850	27	21

Net increase, 6.

In the Reefton section the principal cause of the reduced output was the closing down of the Morrisvale mines. Apart from the Reefton section, all other sections show a marked increase. The total increase for the district of 40,917 tons with only an increase of six employees proves that the mines generally worked better time.

During the year very little development work was done and the bulk of the coal was won from pillar-extraction. About the most important development was the preparation for the opening-up of the new State mine area known as the Nine-mile area and situated to the east of the present James State Mine.

The interests in safety precautions are being well maintained. The most noticeable are the almost general installation of automatic stop-blocks and trippers on jigs and the increase in the use of hard hats for miners.

GREYMOUTH DISTRICT.

Liverpool State Colliery, Rewanui.—Coal-winning operations were carried out on similar lines to those of the previous year.

Morgan Seam: Coal-winning operations in this section were chiefly confined to pillar-extraction. Development-work was continued in No. 3 bank west, the incline being extended approximately 3 chains to the rise and the level 6 chains, the coal being of good quality. In Nos. 1 and 2 banks the work of splitting and robbing the pillars was continued. As the Seven-mile Creek passes over the workings in this section coal is being left behind to support the bed of the creek. In Nos. 1, 2, and 4 banks, Morgan east, the barrier pillars between panels are being split preparatory to extraction. To the right of these banks the pillars are being split and robbed, complete extraction being impossible owing to creeks crossing the area. In Nos. 5 and 6 banks, Morgan east, coal-winning operations ceased, and all plant was withdrawn.

Anderson and Kimbell Sections: The production of coal in these sections was chiefly confined to pillar-extraction. No. 8 bank, Kimbell east, was driven a total distance of 15 chains to the rise before the seam turned and the coal became intersected by dirt-bands to such an extent as to become unworkable. Pillar-extraction was then commenced. In Nos. 3 and 4 banks, Kimbell east, pillar-extraction was continued to a point 3 chains above the main level. Signs of heating were noticed, and the section was sealed off on the 18th December. In Nos. 2 and 3 banks, Kimbell west, pillar-extraction approached to a point 3 chains above the main level. The pillars in No. 0 bank, Kimbell east, are being won from No. 1 Kimbell west.

Development: The James and Anderson dips were extended in a westerly direction and a crosscut dip was started in a southerly direction from an intersection of the No. 2 dip at a point 13 chains below the Anderson main level. Preparations were made to drive a dip in the Kimbell west level in order to develop a block of coal lying to the dip of this level.

Rescue Brigade: During the year five sets of Proto rescue apparatus were provided, and volunteers were called to form a rescue brigade. Out of the nineteen names submitted a brigade of five was formed, and from that time weekly practices have been held. On the completion of the training of this brigade new members will be chosen and the work of training continued.

James State Colliery, Rapahoe.—New Dip Section: The development of this section to the east of the main rope-road was continued. Development to the north was stopped when a fault was encountered, and development-work in two small sections was restarted to the west of the main rope-road. The coal in these sections is of good quality, from 3 ft. to 6 ft. in thickness, but the area is very limited.

Cannel Creek Section: Towards the end of the year a downthrow fault running in a north-westerly direction with a displacement of 40 ft. cut the main development headings, and this work is now confined to two levels running north-west and parallel with the fault. In the south level and crosscut dip pillar-extraction was continued.

James Mine Extension (Nine-mile Area): The work of surveying the proposed route of the rope-road from the present mine to the Nine-mile area has been in hand, and the stone-drive from Cannel Creek to the Nine-mile was commenced. A traffic road, 83 chains in length, from the Westport-Greymouth main highway up the Nine-mile Creek, to provide access to the new section, is nearing completion and should be finished early in 1937. The workshops and storehouse to be used in the extension of the present mine were commenced.

Blackball Coal-mines Pty., Ltd., Blackball.—No development-work was done during the year. All the coal was won by the extraction of pillars in the districts between Nos. 13 and 16 banks on the old main level. On two occasions fires were encountered, but were not of a serious nature.

Prospecting: Drilling operations in the Soldier's Creek area were commenced in November, and one hole was completed at the junction of Paparoa and Soldier's Creeks. Fifteen feet of coal, No. 2 seam, was struck at 300 ft. depth, or practically at sea-level.

Blackball Creek Coal Co., Ltd., Blackball.—Operations were confined to pillar-extraction in Nos. 2, 3, and 4 sections in No. 1 seam. No new development-work was attempted during the year.

Briandale Collieries, Ltd., Ten-mile.—All the coal won was by pillar-extraction, from an area known as the Aerial section, between two faults. This mine was exhausted and closed down during November and the aerial jig was discarded. Commencing at a point 15 chains from the old Aerial bins and approximately 6 chains from the terminus of the tram-line, a jig was constructed. This is 22 chains in length and strikes the Aerial seam outcrop at a point 15 chains from the old Aerial mine-mouth. Coal-production from this new area has not yet commenced as there is still some outside construction work to be completed.

Wallsend Colliery (Brunner Collieries, Ltd.), Brunner.—On account of the thinning of the seam to 3 ft. 6 in. and 4 ft., development in the main west headings was discontinued. A pair of levels to the south of these headings was persevered with until May, when that area, and the No. 4 panel, were abandoned. From information gained in these west headings it was decided to drive a pair of headings in a south-westerly direction, approximately 35° to the south of the main headings, for future rope-road extension. These headings have been carried to a distance of approximately 20 chains and are developed sufficiently for a panel to be formed to the rise. A small auxiliary endless-rope system of haulage was installed.

Slant Dip: The dip was not advanced much during the year, development being mainly to the west from a level about half-way down the dip. The lower level was also advanced in a westerly direction, but a very heavy roof with troublesome gas-feeders retarded progress, and work in this area was stopped. It is intended to drive a pair of dips, off the lower level lay-bye, to prove the position of the Dobson fault, which lies to the south, and also to work the block of coal to the east of the slant dip.

No. 1 Panel: The completion of the solid work in the panel was continued and a little splitting was done.

No. 2 Panel: The work in this panel throughout the year consisted of the splitting of pillars. Roof-movement at times liberated heavy gas-feeders, which, however, soon eased off. An increased inflow of water was also experienced, but this also had eased off somewhat.

No. 3 Panel: Pillar-splitting, together with the working of half of the 3 chain barrier pillar between Nos. 2 and 3 panels, was carried on. This area is small, having been cut off to the north by the Kimberly fault.

Plant: With the exception of the installation of a 6 in. air-main and a 4 in. water-column for No. 3 section, little new work was done regarding the installation of plant.

Dobson Colliery (Grey Valley Collieries, Ltd.), Dobson.—With the exception of a small percentage, the output for the year was won from the dip workings—viz., Nos. 2, 3, and 4 west level sections and No. 4 east level section. In No. 2 west level the boundary of the company's property was reached, and the workings on both the rise and dip sides of the main level were rapidly being worked to the limits of the boundary, which, when reached (due to the fact that pillar-extraction cannot be performed), would terminate the work in this section.

Nos. 3 and 4 west levels are purely developing levels, No. 3 having been driven for a distance of 26 chains and is within 4 chains of the boundary.

On the dip side of No. 3 a pair of dips were driven for a distance of 5 chains, thereby opening up a sufficient area to develop a complete panel of workings.

Eleven chains on the inbye side of these a pair of dips were driven for 5 chains to open up a half-panel.

No. 4 west level was driven for 10 chains and was sufficiently advanced to permit of a pair of headings to be set off to the rise so as to connect with dips from No. 3, thus providing a return for the air from No. 4 section.

No. 4 east was driven for 10 chains. To provide for water lodgment a dip was driven for 2 chains from No. 4 east and from which a lodgment-level is in course of being driven. The coal opened up by these developing-places is of excellent quality.

At the end of the year arrangements were well in hand for the installing of an endless-rope haulage in No. 1 dip.

Paparoa Colliery (Paparoa Coal Co., Ltd.), Roa.—West Level Section: Most of the output for the year was won from this section. Pillar-extraction was carried out from the main levels, which were driven to a fault. The solid work to the outcrop, a distance of approximately 11 chains to the full rise, was nearing completion at the end of the year, so that all work to the rise side of the main west level will be on pillars. A stone-and-coal drive is being carried out from the bottom of the main west level jig in a westerly direction, the object being to pick up the coal-seam 6 chains to the dip of the main west level.

Aerial Section: Owing to slackness of trade there was no coal produced from this area until near the end of the year. The whole of the output was obtained by pillar-extraction.

United Brunner Mines, Ltd., Brunner.—This mine remained closed during the year.

Co-operative Mines in Grey District.

Spark and Party's Mine, Rewanui.—Coal-production from this mine was stopped during the year, having been brought back as near as advisable to the new dip stone-drive, which is being put in from the present seam to a lower seam which was proved by boring. The dip was driven 120 ft. from the original stone-drive at a gradient of approximately 1 in 3.

Duggan and Party's Mine, Rewanui.—All the coal was won by pillar-extraction from a small section to the dip of the original mine. At the end of the year only a few pillars of thin coal were left, and the probable life of this colliery would be a few months only.

Prospecting: A little prospecting by boring was done in a new lease, situate about a mile from Dunollie, in a seam which was proved by boring to be 3 ft. 6 in. in thickness.

Old Runanga Mine (O'Brien and Party), Rewanui.—Two seams are being worked, the approximate distance between the seams being 60 ft.

No. 1 Mine (Top Seam): Development was continued in a northerly direction in 4 ft. of good-quality coal.

No. 2 Mine (Bottom Seam): Development-work was carried on in a northerly direction. During the year safety-lamps were installed in the No. 2 mine owing to the mine-manager having received burns after firing a shot.

Goldlight Colliery (Williams and Party), Rewanui.—Pillar-extraction in the old mine was continued. A stone tunnel 8 chains in length was driven in a south-westerly direction to strike the lower dip workings of the top mine. During the year an area below the Rewanui railway-line was worked, but operations ceased owing to the coal-seam having thinned to 2 ft. and becoming very dirty.

Moody Creek Mine (Simpson and Party), Dunollie.—An area of coal being developed in a south-westerly direction across the fault and to the rise of No. 5 mine is in good-quality coal 7 ft. thick.

New Point Elizabeth Mine (Guy and Party), Dunollie.—The section on the rise side of the 130 ft. fault is being developed in a north-easterly direction. The area is only $3\frac{1}{2}$ chains in width, being faulted on one side and outcropping on the other side.

Fiery Cross Mine (Currie and Party), Dunollie.—Top Mine: All coal having been won from this area, the mine was closed.

Bottom Mine: This mine is in the same seam as the top mine, but it has a new entrance at a distance of about 6 chains to the dip of the top mine.

Baddeley and Party's Mine, Dunollie.—Development-work in this mine was completed owing to the soft nature of the coal, faulting, and the steep inclination of the seam.

Castlepoint Mine, Dunollie.—No development-work was done in this mine, and the bulk of the coal was won from pillar-extraction on the northerly portion of the lease. The main level going north was stopped owing to the coal thinning to an unworkable thickness.

Hilltop Mine (Armstrong and Party), Ten-mile.—Development-work having been completed, all coal was won by pillar-extraction. In this particular case the straight-line method of taking out pillars has proved very successful.

Brady and Party's Mine, Ten-mile.—Two levels are being developed to the west of the main dip in good-quality coal 10 ft. thick.

Kaye and Party's Mine, Ten-mile.—The work at this mine is in the nature of prospecting. Two levels are being driven in a westerly direction in good-quality coal 10 ft. thick.

Hunter and Party's Mine, Dunollie.—The pillars in the rise section have been worked back to approximately 7 chains from the mine-entrance. An area to the dip is being developed in a northerly direction in coal 3 ft. 6 in. thick.

Schultz Creek Mine (Marshall and Party), Twelve-mile.—As all development-work to the rise of the main level has been completed, the output is now solely won from pillar-extraction.

Dennehy's Mine, Twelve-mile.—No work was done during the year.

Cain's Mine, Rapahoe.—The bulk of the coal was mined from the pillars. At the end of the year two miners were engaged developing a small area recently added to the lease on the south side of the old workings.

Bellbird Mine (Fauth and Party), Ten-mile.—Development-work in the dip was stopped owing to the coal-seam becoming thin and dirty. The output towards the end of the year was won from the pillars on the rise-side and to the east of the main dip.

Belleue Mine (Hadcroft and Party), Rapahoe.—The output during the year was won from the pillars, no development-work being done.

Jubilee Mine (Pinn and Party), Rapahoe.—All the coal was won from the old mine and the plant was withdrawn. Arrangements have been made to open up a new area about 5 chains to the south-west of the top mine-workings.

Cliffside Mine (Moore and Party), Nine-mile.—The coal-seam in the original mine was cut off by a fault lying at an acute angle to the two levels which were being developed in a south-easterly direction. Prospecting was done over this 30 ft. upthrow fault, and towards the end of the year levels were being driven in good-quality coal 9 ft. in thickness.

Smith and Party's Mine, Dunollie.—The bottom levels were carried to a distance of 17 chains in a northerly direction. Owing to there being no improvement in the thickness of the coal this work was abandoned and the solid places were developed to the full rise, where the thickness of the seam was from 5 ft. to 5 ft. 6 in.

Braehead Mine (Boote and Party), Dunollie.—The output from this mine was won partly from pillar-extraction in the rise section and development in the dip section. The main dip was advanced 2 chains and showed 6 ft. good-quality coal. During the year a 20 h.p. electric winch and 5 h.p. electric pump were installed to replace the compressed air plant.

Remarks on Co-operative Mines in Grey District.

No extensive development-work was undertaken during the year. The bulk of the coal was won from pillar-extraction. The output from this source shows an increase of 8,974 tons over the output for 1935.

REEFTON DISTRICT.

Archer's Mines, Capleston.—Development-work on the north side of the stone-drive was continued during the year. The seam is at an angle of 60° and the coal is only of fair quality.

All coal in the south side (Oliphant's section) was extracted to a safe distance from the stone-drive. Preparations have been made to drive to the dip on No. 2 seam in what is termed the Top Mine.

Coghlan's Freehold Mine, Capleston.—All coal mined during the year was won from pillar-extraction from the top section. In the bottom section the main level was cleaned up and retimbered to the face a distance of 700 ft.

Waitahu Mine (A. D. Williams), Reefton.—Very little work was done during the year in No. 2 seam. The coal is of poor quality. In No. 3 seam development-work was continued. The seam is split with a stone band of 3 ft. in thickness. There is good quality coal 3 ft. thick above the band and 5 ft. below it.

Venture Mine (Old Birchwood Mine), J. and I. Patterson's Lease, Reefton.—This mine remained closed throughout the year.

Morrisvale Collieries, Reefton.—Perfection Mine: No work was done during the year.

Surprise Mine: The main dip was extended a further 10 chains. Levels were driven east and west off the dip for the purpose of opening up panels. The pair of levels going east were driven 4 chains, when inferior and stony coal was met with. The levels going west were also driven 4 chains, and the coal in these levels was of fair quality. This mine is owned by Mr. W. J. Morris, but has been operated by the Perfection Collieries Syndicate. At the end of the year the pumps were withdrawn and the mine closed, the Syndicate having decided to discontinue operations.

Burke's Creek Collieries, Ltd., Reefton.—The year's output was mined from the main level on the south-west side of the main dip. Approximately two-thirds of the pillars have been extracted from No. 2 panel and a commencement was made to open up No. 3 panel. The main development levels were driven 34 chains from the dip, and encountered soft coal. For the purpose of prospecting the coal-seam farther to the dip of the present workings a dip was driven from the main level a distance of $3\frac{1}{2}$ chains in good-quality coal. The roof of the seam is very heavy, consequently it is necessary to use substantial roof-supports.

Peerless Mine (Williams and Party, Burke's Creek Lease).—Five men were employed developing a block of coal on the rise side of the Burke's Creek coal lease. Two parallel levels, together with cut-throughs, were driven a distance of 10 chains. The seam is 12 ft. in thickness, and the coal is of fair quality.

Times Street Mine (H. A. Honey's Lease), Reefton.—The No. 4 seam is worked in this mine, and as there was very little demand, other than local, for this coal, very little work was done during the year.

Times Street Mine (Old Terrace Mine owned by W. Blackadder and worked by Bennett and Party), Reefton.—Three men were employed working the No. 4 seam on Bennett's lease, the coal won being hauled through Honey's Times Street Mine. The seam is approximately 30 ft. in thickness, but is very friable consequently, there is not much demand other than local for this coal.

Phoenix and Venus Mines (N. Collins), Murray Creek.—The output derived from these mines was won from the extraction of a few blocks of coal left in the old workings. At the end of the year fire from the old workings gave trouble and the mine was sealed off. Preparations were made to drive another dip from the outcrop.

Defiance Mine (worked by O'Brien and Party), Murray Creek.—Six men were employed opening up and developing a block of coal near the prospecting-drive put in by the old Calliope Coal Co. some years ago. The seam was 8 ft. in thickness, but has pinched to 2 ft. in an easterly direction. Development-work is almost completed.

Lankey's Creek Coal-mining Syndicate, Crashington.—A drive was put in by the syndicate for the purpose of reaching a block of pillars left in the old workings. This drive proved successful, and the output for the year was won by pillar-extraction. The mine was fully exhausted towards the end of the year and was closed down.

Clele Mine (Alborn and Party), Merrijigs.—Almost the whole of the year's output was won from development-work and pillar-extraction in No. 1 mine. All development-work was completed, and the future output will be won from pillar-extraction. Towards the end of the year a new section (No. 2 mine), situated 20 chains to the north-east of No. 1 mine, was opened up. Two levels, together with cut-throughs, are being driven in a 5 ft. seam of good-quality coal.

White Rose Mine (W. Osborn's Lease), Merrijigs.—A very small quantity of coal was won from pillar-extraction during the year.

BULLER DISTRICT.

Mitchell's Mine, Charleston.—Coal-winning from the opencast workings was continued during the year.

Price's Freehold, Brighton.—No work was done during the year.

Brighton Coal-mines, Ltd., Brighton.—Work at this mine during the year was intermittent, a small amount of coal being mined from solid places for roadside trade. The erection of the flume was completed and the suspension bridge to carry the flume from the mainland to Seal Island was erected. This mine will be ready for output on completion of loading facilities on the island.

Rocklands Mine (J. P. Burley), Buller Gorge.—This mine worked intermittently, and 230 tons of coal were produced from the pillars to the rise and adjacent to the outcrop.

Glencrag Mine (Forsyth and Party), Buller Gorge.—The main level was developed to a distance of 10 chains from the mine-entrance. A little prospecting was done and the coal located across the fault to the west of the main level.

Coal Creek Mine (McGuire and Party), Seddonville.—Most of the year's output from this mine was from the cleaning-up and retimbering of the old roads.

Glasgow Mine (Steele and Party), Seddonville.—The output from this mine for the year was only 28 tons, the mine being closed during the major portion of the year. Operations again ceased near the end of the year.

Cardiff Coal Co., Ltd., Mokihinui.—The main heading, driven from the foot of the dip stone-drive, has been carried to a distance of 8 chains in a south-westerly direction. A downthrow fault cut off all development-work to the north-west after driving about 3 chains from the main heading.

Chester's Mine, Seddonville.—All the coal having been won from this mine, it was closed down during September. This party is now prospecting an area in the Buller Gorge.

Hydro Coal-mines, Ltd., Seddonville.—The area being worked by this company is part of the old Seddonville State Mine. A flume was constructed to carry the coal from the working-places to the main bins. For a distance of 60 chains from the main bins the flume grade is 1 in 37. From that point to the mine-entrance, a distance of 25 chains, there are varying grades from 1 in 4 to 1 in 12. On the very steep grades rubber lining is used on the flume to prevent breakage of the coal. The water-supply to be used for the fluming of the coal is obtained from Chasm Creek and supplied by a 9-in.-diameter pipe. The coal was produced during the year from an area on the west side of the main drive. At the bins a small D.C. plant 100 v. 100 amps., driven by a Pelton wheel, was installed. Power is to be used to drive a circular screen.

Charming Creek - Westport Coal Co., Ltd., Ngakawau.—During the earlier part of the year the workings in the dip section to the north of the main drive encountered a fault, and a stone-drive was started in an easterly direction for the purpose of locating the coal in the region of No. 8 borehole. On account of the inability of the pumping-plant to cope with the increasing quantity of water it was found necessary to suspend operations in this area and concentrate in the main headings and panels to the south. The main headings were advanced a further 6 chains, penetrating a downthrow fault with a throw of 18 ft. Three places crossed the fault and are now in an area of fairly hard but short-grained coal, which shows every indication of improvement. Two panel-headings were started for the purpose of developing the area to the south of the main headings on the outbye side of the fault. A new Ruston and Hornsby 42 h.p. Diesel locomotive was installed on the section of the tramway between the bins and Watson's sawmill. Three of the bridges on this section of the tramway were strengthened and all metal parts of the suspension bridge treated with anti-corrosive solution.

Westportmain Mine (Westport-Granity Coal Mines, Ltd.), Granity.—No coal was produced from this mine during the year.

Westport-Cascade Mine, Cascade Creek.—In Durkin's section all the coal was won by pillar-extraction. In Moynihan's section three parallel levels are being driven in a north-easterly direction. The levels and cut-throughs are driven 9 ft. wide and 8 ft. high. All previous work in this direction was cut off by a fault which, having now run out, has allowed the development-work referred to. Some prospecting has been done during the year and outcrops located. One area lies to the south-west of Moynihan's Section and the other to the south-east.

Westport Coal Co., Ltd., Denniston Mines.—Ironbridge Mine: The major portion of the output was won from pillar-extraction in the old mine. Two to three pairs of men were employed in No. 2 section extracting pillars, and three to four pairs were engaged in No. 4 section cleaning up roads and extracting pillars. No work was done in Garing's Dip or Deep Creek section. A small isolated area of about 2½ acres was started near Deep Creek Bridge and adjacent to the fan, and three pairs of men were engaged opening it out.

Coalbrookdale Mine: A pair of headings are being driven in Old Waterloo section towards the new lease. Progress was slow for some time, but better results are now being obtained. In Wiseman's Dip section a dip heading was driven for a distance of 3 chains in coal about 7 ft. thick, and three pairs of miners were engaged developing. Most of the solid work was completed and a start was made with the extraction of the pillars. In Waterloo and Step sections nine pairs of men were engaged in solid workings of hard coal, and both sections were nearing completion at the end of the year. In Old Waterloo section, two pairs of men were driving roads preparatory to taking out the pillars in one of the panels. A coal-cutting machine was installed and is working satisfactorily.

Pillar Work in Openshaw's Section: Three pairs of men were engaged extracting pillars.

Whareatea Extended Section: Nine pairs of men were engaged on pillar work.

Cascade Section: Six to seven pairs of men were employed on pillar-extraction. An attempt is being made to win some of the pillars in the old Glasgow section, and so far over 3,000 tons have been recovered. During the year a number of hard hats were distributed among the miners, and their use appears to be on the increase.

Westport Coal Co., Ltd., Millerton Mine.—During the year the output was won from partial pillar-extraction in the third, fifth, and sixth west sections of Mine Creek Mine. Spontaneous combustion took place in panel B, third west, and panel H, fifth west, and evidence of heating in panels G, fifth west, and K, sixth west. The heatings in panels G and K were effectively dealt with by water. Panels B and H had both reached the final stages in their working-life and were sealed off. Panel B stoppings were strengthened to form a water-seal around the area. The water-seal stoppings are proving very effective in the areas where they can be used.

The 11,000 volt electric line from Denniston to Granity was put into operation on the 1st October, 1936, but was used only for lighting purposes. The steam-engine driving the ventilating-fan is being replaced by a 50 h.p. electric motor, which will be used early in 1937.

Westport-Stockton Coal Co., Ltd., Ngakawau.—Development was confined to the new east and west dip areas. The east dip, towards Mount William Range, has opened up a large area of excellent coal. No. 2 east panel continues to open up satisfactorily, although some difficulty may be experienced through the increasing grade. A new dip was put down in the west area, penetrating beyond the Webb fault. This should open up a large area of thick coal. In the old east, south, and old west areas operations were confined solely to pillar-extraction. Considerable expense was involved in reconditioning substations, transmission lines, tunnels, and locomotive track.

Watson's Mine, Karamea.—No coal was produced from this mine during the year.

NELSON DISTRICT.

Puponga Mine, Puponga.—Slant Dip Section: The dip which was stopped in good coal 12 chains from the surface was again continued, and after being driven a distance of approximately 2 chains the fault was struck which completely cut out the coal-seam. The working-places were all being driven in an easterly direction. The second-last level struck the same fault at a distance of 6 chains from the slant dip. In this particular place the fault was proved and the displacement was found to be a downthrow of 4 ft. 6 in. Development work in this area was completed by the end of the year and pillar-extraction was commenced.

Mount Burnett Mine, Collingwood.—All the coal from this mine was won by pillar-extraction. The coal-supply being exhausted, the mine ceased production on the 6th October. A prospecting-drive was commenced with the object of locating the coal on the south side of the fault.

Motupipi Mine (Winter's), Takaka.—Stripping operations were continued on the beach, and 101 tons of coal were produced.

Abbotsford Mine (Irvine's), Takaka.—There was no output from this mine during the year, but a little prospecting was done on the outcrops about half a mile from the Takaka Main Highway.

Owen Colliery, Owen River, Murchison.—The No. 2 dip was extended to 90 yards below the main level, and three stalls, 16 yards wide, were opened up on the west side of the dip, and one stall, 10 yards wide, on the east side. The places which were being worked from No. 1 dip, were cut off by No. 2 dip, consequently no work is now being done in No. 1 dip section. A section of the coal-seam is as follows: Roof-coal, 6 in.; fireclay, 2 ft. 4 in.; bottom-coal, 2 ft. 10 in.

O'Rourke's Mine, Murchison.—The main level is now in a distance of 9 chains and is being continued in coal 2 ft. in thickness.

Wynndale Mine, Murchison.—North Side Section: All coal was won by pillar-extraction. The area was brought back to 8 chains from the mine-entrance.

South Side Section: Two places are being developed to the south in coal 7 ft. thick, the quality of which is not very good.

Clarke Mine (S. Hartshorne's), Baton.—A new dip was started in September and picked up the coal in No. 4 level. It was continued for another 2 chains. No. 5 level was driven 4 chains, the coal-seam being 8 ft. in thickness.

SCHOOLS OF MINES.

During the year the interest in the Schools of Mines, the headquarters of which are in Westport, Runanga, and Reefton, was well maintained. The following is a brief summary of the work done:—

Westport School of Mines.—Mining classes were held at Denniston, Granity, Stockton, and Westport with a total number of twenty-six students. The results of the examinations were as follows:—

Gas-testing .. .. .	..	..	..	..	..	..	Six certificates were issued.
First-class colliery-managers .. .. .	..	..	..	..	..	..	One partial pass.
Second-class colliery-managers .. .. .	..	..	..	..	..	..	One partial pass.
Second-class engine-drivers .. .. .	..	..	..	..	..	..	One pass and one partial pass.

Nine candidates received passes at the annual Schools of Mines examinations.

Assay Laboratory: Two hundred and forty samples were assayed for gold, whilst the nature of forty-four mineral samples was determined. Seven samples of coal-dust and two of coal were analysed.

Runanga School of Mines.—There were twenty-one students on the school roll, the following number sitting for the examinations under the Coal Mines Act:—

First-class mine-managers .. .. .	..	..	..	..	..	..	Three candidates.
Second-class mine-managers .. .. .	..	..	..	..	..	..	Three candidates.
Underviewers .. .. .	..	..	..	..	..	..	Two candidates.
Firemen-deputies .. .. .	..	..	..	..	..	..	One candidate.

School Building: The additional lecture-room is now completed, and when equipped the classes can be regraded and teaching facilitated.

Reefton School of Mines.—During the year fifty students were enrolled as follows: Blackball, 7; Waiuta, 13; Reefton, 30; total, 50.

Included in this total were nine pupils from the Reefton District High School.

The results of the examinations were as follows:—

First-class Gold-mine Managers .. .. .	..	..	..	..	..	..	One pass and one partial pass.
First-class Coal-mine Managers .. .. .	..	..	..	..	..	..	One partial pass.
Second-class Coal-mine Managers .. .. .	..	..	..	..	..	..	Two passes.
Firemen-deputies Certificates .. .. .	..	..	..	..	..	..	Two passes.

In addition to the above examinations, fifteen students sat thirty-five papers in fourteen different subjects at the annual Schools of Mines examinations.

Laboratory Work: The following samples were treated:—

Gold and silver assays .. .. .	..	..	..	..	..	..	..	1,323
Coal-dust analyses .. .. .	..	..	..	..	..	..	..	39
Bullion assays .. .. .	..	..	..	..	..	..	..	5
Screen analysis and assay .. .. .	..	..	..	..	..	..	..	1
Stibnite analysis .. .. .	..	..	..	..	..	..	..	1

1,369

FATAL ACCIDENTS.

Two fatal accidents occurred during the year, as follows:—

On 19th October, 1936, James Wilson Douglas, screen-attendant, Blackball Coal Mines Pty., Ltd., was killed, his injuries consisting of a fractured skull and dislocated neck. Douglas was found dead in a trough under the electric circular revolving screen which is used for screening slack coal. There were no witnesses to the accident, and it is surmised that Douglas tripped over the shaft-housing and plunged into the screen, causing fatal injuries, and then rolled into the trough.

On 19th November, 1936, Reginald Blake, miner, Whareatea Extended section, Denniston Colliery, while in the act of trimming down his working-place after a shot had been fired, was killed by a fall of roof-coal, his injury being a fractured skull.

SERIOUS NON-FATAL ACCIDENTS.

Seventeen serious accidents occurred during 1936:—

On 28th January, 1936, Walter O'Keefe, miner, Wallace's section, Cascade Mine, Denniston Colliery, received a fractured left forearm when he was struck by a prop which had been knocked out by falling top-coal.

On 10th February, 1936, Wilfred Coates, miner, Wallsend Colliery, dislocated his left ankle when retreating from a fall of stone in his working-place and was struck by a loose bar, which imprisoned his foot.

On 3rd March, 1936, R. McTaggart, miner, Duggan and Party's Mine, received a fractured skull by a fall of coal off a concealed back.

On 3rd March, 1936, J. Brown, miner, Schultz Creek Mine (Marshall and party) was struck by a prop which had been knocked out by a fall of stone, the injuries received being a fractured rib and slight injury to the ankle.

On 6th March, 1936, Arthur Prosser, deputy, Stockton Colliery, slipped and fell, fracturing a rib, when attempting to avoid a fall of roof-coal.

On 23rd March, 1936, James Fairley, miner, Whareatea section, Denniston Colliery, received a fractured jaw by a fall of top-coal.

On 12th May, 1936, George Blyth, jun., trucker, Whareatea section, Denniston Colliery, while trucking struck a prop which caused a fall of coal, and he received back injuries and a fractured rib.

On 25th May, 1936, James Medlin, shiftman, Liverpool Colliery, while engaged timbering in the return airway from Anderson Section, was struck by a piece of falling side stone and received a fracture of vertebrae.

On 22nd June, 1936, James Doherty, Miner, Liverpool Colliery, received a fractured jaw and spine in the Morgan West Section by a fall of coal from a concealed back near the roof of his working-place.

On 26th June, 1936, Charles Harris, Miner, Liverpool Colliery, was struck by a piece of falling roof coal, causing a fractured left leg.

On 22nd July, 1936, A. Thompson, shot-firer, Cannel Creek Section, James Colliery, was struck by a jig rope, causing a fractured right arm.

On 11th September, 1936, J. Forsyth, Miner, Dobson Mine, whilst lifting a truck on the track was caught between the buffers of two trucks, causing a simple fracture of the right leg.

On 9th November, 1936, Thomas Jackson, miner, Millerton Mine, sustained a fracture of both bones of the right leg about 3 in. above the ankle and a dislocated left ankle, caused by a piece of falling roof coal while he was preparing to erect a prop.

On 9th December, 1936, R. Scott, miner, Wallsend Colliery, received back injuries when he was struck by a slab of falling roof stone.

On 10th December, 1936, E. Henderson, miner, Wallsend Colliery, when attempting to jump clear of a runaway truck, was struck by a prop knocked out by the truck, sustaining a fractured right leg 6 in. above the ankle.

On 15th December, 1936, J. Dunn, miner, Dobson Colliery, received a simple fracture of the right leg and back injuries when he was struck by a fall of coal from near the roof.

On 21st December, 1936, James Ruane, miner, Dobson Colliery, sustained a fractured right thigh when a piece of stone fell from the roof.

DANGEROUS OCCURRENCES IN COAL-MINES (Regulation 82, Coal-mines Act, 1925).

On 6th April, 1936, evidence of heating in panel G, fifth west section, Mine Creek Mine, Millerton Colliery, was reported. Water was sprayed on, and the position was normal in about two hours.

On 5th August, 1936, a notification was received from Mr. W. Lee, secretary, Brunner Miners' Union, that there was a large accumulation of gas in the Wallsend Mine and that the mine was idle on that account. The accumulation was in the bore by Creagh's place, near the north-west barrier of No. 2 panel. On inspection the place was quite clear, there being no trace of gas.

On 5th August, 1936, a message was received that an inrush of water had occurred at the Surprise Mine, Reefton. On inspection it was found that the lower part of the dip was flooded up to approximately 3 chains from the dip-face, the water having entered the mine from the roof of the bottom level. It is believed that the water came from the Perfection Dip. A larger pipe-line was recommended to be used, and the manager agreed to put in a 3 in. line to replace the 2 in. line which was being used. No danger was involved, but nine miners were temporarily stopped owing to shortage of places.

On 10th July, 1936, the miners working in panel H of the fifth west section, Millerton Colliery, reported to the management a wood-smoke smell in the panel. Investigation revealed a small smouldering heap of wood dust on the outbye side of the panel. Someone has carelessly thrown down a lighted cigarette end on to a small patch of decayed wood dust.

On 22nd August, 1936, due to the abnormal rainfall, an inrush of water through a fissure in Tomasi's place adjacent to Cannel Creek, James Colliery, overcame the pump and flooded the bottom of the new dip section. The rain eased off in the evening, and pumping was continued until 3 p.m. the next day, by which time the accumulation of water was removed.

On 5th September, 1936, it was reported by the mine-manager of the Wallsend Colliery that on the previous day at 11.30 a.m. an accumulation of gas (approximately 3,500 cubic feet) was found near the fault to the rise in No. 2 panel. The men were immediately withdrawn. By 2.30 p.m. the place was free and the ventilation restored.

On 10th September, 1936, panel B of the third west section, Mine Creek Mine, Millerton Colliery, showed slight symptoms of spontaneous combustion. A haze developed, with a faint smell. There was no rise in temperature and no moisture evident. On the 14th September the haze became thicker with a stronger smell, but actual fire could not be found. The return opening into the panel was closed, and the result was a thick haze of inert gases which would not support combustion. The other opening was closed and the area was sealed off. The mine-manager advised his intention of adding a further thickness of concrete to the stoppings, putting water in to a reasonable height, and thus forming a water-seal.

On 21st September, 1936, it was reported by the mine-manager of the Blackball Colliery that owing to heating in the goaf, inbye from No. 14 bank, it had been necessary to seal off those places to the dip and one place to the rise at this area. Inspection of these stoppings showed that none were leaking.

On 29th September, 1936, the Workmen's Inspectors of the Millerton Colliery reported that fire-stink was very noticeable in panel N, third west section. The mine-manager considered in his report that this smell was not really fire-stink, but a sulphur smell from smoke fumes or very faint traces of H₂S given off from falling water coming through or from a fire area or when coal is being filled away. The mine was inspected thoroughly by the mine officials, who were satisfied that no fire-stink was prevalent.

On 7th October, 1936, a report was received from the mine-manager of the Millerton Colliery that a serious fire had occurred in panel H, fifth west section, Mine Creek Mine. The area was sealed off and made safe.

On 7th October, 1936, indications of heating were detected on the return side of No. 3 bank, Kimbell East Section, Liverpool Colliery. There was no rise in temperature, but a distinct kerosene-smell was noticed in the return air from the section.

On 22nd October, 1936, owing to an accumulation of gas near the working-places and the unsatisfactory state of the ventilation in Spark and Party's Mine, the acting mine-manager was instructed to cease operations until adequate ventilation was provided. On inspection some days later it was found that a Booster fan had been installed at the top of the new stone dip-drive and the ventilation was in order. The mine was clear of gas.

On 28th October, 1936, the mine-manager of the Millerton Colliery reported evidence of spontaneous combustion in panel K, sixth west section, Mine Creek Mine. Water was played on, and conditions were soon normal.

On 13th November, 1936, the mine-manager of the Wallsend Colliery reported that an accumulation of gas, approximately 3,000 cubic feet, had been found in the rise-working in the second panel caused through a crush coming on the working. The workmen were withdrawn. The section was later cleared and the ventilation restored, two new stoppings being erected.

On 23rd November, 1936, it was reported by the mine-manager of the Burke's Creek Colliery that traces of H_2S had been found in the water pumped out of the main dip extension, which had been flooded for three months. The work of retimbering and cleaning up this dip had been commenced. A lead-acetate test showed a brown colour after fifteen minutes. This section is ventilated directly into the return, and no working-places are there. The only time the H_2S can be found is when the dip extension pump is on, which is about two hours daily.

On 25th November, 1936, Mr. T. H. Lee, Reefton, reported that the fire in the Hi-grade Mine (Morrisvale Lease) had increased. An inspection was made the next day, but it was impossible to go underground as the conditions were too dangerous. On the 15th December it was reported that the fire had been attended to and the tunnels sealed off by shooting in the sides.

On 12th December, 1936, Mr. N. Collins, Reefton, reported that the lower portion of his workings broke through on to the old fire area. The area was stopped off.

On 22nd December, 1936, the occurrence of fire in the goaf at No. 13 bank section, Blackball Colliery, was reported. This fire was sealed off and all material withdrawn.

PROSECUTIONS UNDER THE COAL-MINES ACT, 1925.

Four informations were laid during the year, convictions being recorded in all cases.

A company secretary was charged with failing to store in a magazine or store licensed under the Explosive and Dangerous Goods Act one case containing one thousand detonators as required by Regulation 222 (1) of the Coal-mines Act, 1925, and clause 9 (b) of the Explosive and Dangerous Goods Act, 1908. A conviction and fine of £2, Court costs 10s., were recorded.

A mine-manager was convicted and ordered to pay costs for failing to make a full and accurate report of the result of the examination provided for in section 129 (1) of the Coal-mines Act, 1925, in a book kept at the mine for that purpose.

In two separate cases underviewers were charged with failing to remain underground until the day's work was finished and failing to see that the doors and sheets were closed and all workmen out of the mines as provided for by Regulation 93 of the Coal-mines Act, 1925. In the first case, the underviewer was convicted and fined £2, with Court costs 10s., and in the second case a conviction and fine of £2, with Court costs 12s., were recorded.

SOUTHERN INSPECTION DISTRICT (JOB HUGHES, Inspector of Coal-mines).

I have the honour to submit my annual report covering the activities of mining operations in the Southern District for 1936 :—

At the outset it is pleasing to report increased activity in the chief mining centres. The output from the district shows a gratifying increase of 25,899 tons, and it should be noted that the total output for 1936 is the greatest that has been produced since 1920. In view of the fact that the class of coal produced in the Southern District is almost totally used for domestic purposes (*i.e.*, screened coal) it would seem that the increased output is simply a reflection of the increased ability to purchase by the householder. A further noticeable feature is the fact that the increases are most marked in the coalfields producing the better quality of coal only, the lignite-sales showing a tendency to decrease somewhat. The total number of persons employed at the mines has remained almost unaltered.

The use of hard hats, or helmets, has been continued and slightly extended, but their use has not increased to the extent that results from their use have warranted. There were three distinct cases during the year where the use of these helmets was the means of saving the lives of the three miners concerned :—

- (1) A miner employed at Linton Mine was struck on the head by a piece of coal from $\frac{1}{2}$ cwt. to 1 cwt. He sustained cuts on the forehead only, his helmet being severed from the inner webbing by the force of the blow.
- (2) A miner at Black Lion Mine was pinned by a fall of coal and sustained a compound fracture of the leg. While imprisoned by the fall he relates he was struck on the head several times by falling coal and without head injury.
- (3) A shot-firer at the Kaitangata Mine was struck on the head by a flying piece of coal from a shot, his electric cap lamp was smashed to fragments, and his helmet broken by the force of the blow. He sustained concussion and a slight fracture of the skull.

Having seen the above results I am of the opinion that the helmet is an indispensable item of protection from head injury and should be worn by all miners.

A disquieting and almost alarming feature of the coal position in Southland is the lack of a necessary amount of development and prospecting work. These remarks do not apply to the Linton Colliery. The total output of coal from the Nightcaps-Ohai mines forms almost half of the total production in the Southern District and, when it is considered that at least three of the mines in Ohai (which this year produced a total of 90,000 tons of coal) are within a few years from the end of their life, and at present with no further coal reserves proven, the outlook for the supply of this coal cannot be anything but disturbing.

Several of the larger mines have procured new gas-masks of the rubber type which cover the frontal portion of the face only and to which a hose of from 50 ft. to 100 ft. in length is connected and fresh air propelled along the hose and to the mask-wearer by means of a small hand-operated fan. These masks will be used when sealing off underground fires in a fouled atmosphere. Dust respirators have also been introduced in some cases for the use of persons engaged in underground stone-dusting operations.

I am of the opinion that a more thorough system of preparatory partial sealing-off of areas which are liable to spontaneous combustion could be applied at some mines, and thereby lessen the need of using the above-mentioned appliances save under exceptional circumstances.

CANTERBURY DISTRICT.

Springfield Mine.—Intermittent and more or less haphazard operations were continued on a small scale and without any material results accruing.

Bonanza Mine.—The development of the seam has been continued to the dip for a distance of approximately 4 chains, and several levels have been driven south-west a similar distance. The coal-seam is thinning slightly in the lower workings. During the year a ventilation fan was installed.

Clearview Mine.—A further small area of coal was located and won to the north-east of the old mine, and a commencement was made with a stone-dip drive to intercept the seam at a lower level. This dip was driven a distance of 250 ft. and appeared to be close to the seam; however, more water was being encountered than anticipated, and it is doubtful if the plant installed for this work will be sufficient to complete the project.

Lucknow Clay Pit.—The new level drive has been continued south-west, and the development of this area was continued satisfactorily during the year.

Klondyke Mine.—Development-work has been carried out chiefly to the dip and to the north-east. The main dip-heading has been driven a distance of 450 ft. at a gradient of 1 in 2 $\frac{1}{2}$. The seam at the face of the dip-heading is approximately 17 ft. thick and of good quality. Levels have been driven north-east and the thickness of the seam maintained. Development-work to the south-west indicates that the seam will probably thin and split in this direction. An efficient ventilation fan was installed. Electric current is generated at the mine per medium of a Diesel engine. Operations have been carried out in a workmanlike-manner and the enterprise shown is worthy of success.

Bush Gully Mine.—No further workable coal has been located at this mine. Pillar-extraction has been continued, and practically all the coal in sight had been won.

Homebush Fireclay and Ganister.—Fireclay has been mined, chiefly opencast, and towards the end of the year a start was made to open up a further mine for ganister.

Homebush Coal-mine.—The actual production of coal at this mine has been very limited during the year, the small quantity produced having been obtained from the remnants of old workings of a 2 ft. seam. However, a prospecting-dip stone-drive was driven a distance of 200 ft. and, after intercepting an unworkable seam of coal, reached what was thought to be the engine seam, but at the time of writing it is not possible to forecast the possibilities of these operations.

Solitude Mine.—Mining operations having proved impracticable at this mine, a small amount of coal was won opencast early in the year and further operations abandoned.

Sheffield Clay-mine.—The production of fireclay has been continued at this mine, the output having been used for pipe-making in Christchurch.

Burnbright Mine (Sheffield).—This is a new mine commenced about half a mile east of the last-mentioned clay-mine. The thickness of the coal-measure is 6 ft. 3 in., and it contains a band of stone 3 ft. 4 in. in the centre. Work is being carried out on a small scale.

Sandown Mine.—This is a new mine situated about half a mile north-east of the Bonanza Mine. Towards the end of the year a seam of coal 8 ft. thick was intercepted by a cross-measure drive. The seam is very steeply inclined and was friable at the point of interception.

Yukon Mine.—This is a new mine commenced in Bush Gully. The coal-seam is being developed in a south-west direction, a level having been driven for a short distance. The thickness of the seam is approximately 4 ft. 6 in.

Steventon Mine.—Development-work has been continued to the dip and chiefly to the north-east. The thickness and quality of the coal has been maintained. Two lower levels proceeding north-east have been driven a distance of 8 chains, at which point a gravel intrusion occurs and cuts off the coal-seam. Dewatering of the old mine has been continued, and towards the end of the year preparations were being made to install an electrically driven pump to complete the dewatering. A new double-inlet Sirocco fan has been installed. As the gravel intrusion mentioned now appears to be veering away from the main dip-heading it would seem that a reasonable area of coal will be made available for working here. Operations are being conducted in a workmanlike manner and the mine is reasonably equipped with plant.

Sunnydale Mine.—All attempts to prove a workable seam of coal on this property have so far failed. A small quantity of silica sand and clay has been won for pottery-manufacture in Timaru, work having been carried out very intermittently.

Blackburn Coal Co.—No development-work of any consequence has been attempted during the year, the output having again been procured from pillar-extraction.

Mount Somers Coal Co.—A small amount of development has been carried out to the north. However, the bulk of the output has been obtained from pillar-extraction. A further lower cross-measures level was driven a distance of 240 ft. and development-work will again be continued from this point. Any further development of this mine, other than from the drive mentioned, would appear to require plant-installation to cope with dip-workings, and it is very doubtful if coal-mining operations in this field will warrant such expenditure, as a fairly considerable quantity of water could be anticipated in any dip-workings.

Meadowbank Mine.—A further attempt is being made to work this mine in the hope that the demand for this class of coal will improve. However, work was only resumed in the latter part of the year and very little more work was done.

Woodbank Mine.—The demand for this coal is so limited that very little development-work was carried out. An additional air-shaft was constructed and the output was obtained from robbing pillars adjacent to the outcrop.

NORTH OTAGO DISTRICT.

Airedale Mine.—Development-work has been continued to the dip, and levels have been continued to the north and south respectively. During the latter portion of the year there were definite signs that the coal-seam was deteriorating in quality, and stratified bands of stone, in some places 2 ft. thick, made their appearance. At present it would appear that the seam will soon become unworkable in this area. A new prospecting dip-heading has been commenced to prove the area to the south of the present mine, but it is yet too early to state the possible position in this direction. Definite signs that this coal is very liable to spontaneous combustion were noted during the year.

St. Andrews Mine.—No work of importance was carried out during the year, the total output being obtained from pillar-extraction. A commencement was made to extract the pillars along the main level and to the rise of same. So far, this work has continued in a satisfactory manner.

Ngapara Mine.—No development-work was undertaken during the year. The output was obtained from pillar-extraction in the area to the north-west.

Shag Point Mine (McLean's).—The old company having ceased operations, work has been continued with a few private miners. A start was made to extract the line of pillars which had been left to support the return airway. Conditions were favourable for this work, and the available coal will probably keep a few miners engaged for a short time.

Shag Point Mine (McLaren's).—The development of this area is proceeding slowly. The dip was extended a short distance, and several pillars were extracted to the north and to the south of the main dip. The area is now confined by faults on the north and south sides and the ocean high-water mark to the dip.

Willett's Mine (Papakaio).—All development at this mine has resulted in the seam becoming stratified with stone bands, and a commencement has been made to extract the pillars, this work continuing in a satisfactory manner.

Rockvale Mine.—Development-work has been continued intermittently. The coal is only of moderate quality and is, so far, variable in thickness and quality.

OTAGO CENTRAL MINES.

Shepherd's Creek Mine (Bannockburn).—Development along the levels to the north-west and south-east was carried out for a distance of 300 ft. The seam was inclined to become stony to the south, and development in this direction was stopped. Development to the north was also temporarily stopped, as old workings exist in this direction. The main dip-heading was deviated 32° west and extended a further 3 chains, the seam maintaining its thickness and quality here. All places are driven not more than 8 ft. wide, and mining conditions have been satisfactory.

New Cromwell Syndicate.—Prospecting-work has been continued, two dip-headings having been driven a distance of 200 ft. and both places lost as a result of falls of roof. The thickness of the coal-seam is not known. It is overlain by water-logged, very fine, sand, and if ultimately reached will probably be found to be incapable of profitable mining.

Nevis Crossing (Ritchie's) Mine.—A small amount of coal was won from the opencast pit during the latter portion of the year.

Nevis Pit (Fache's).—This pit was worked actively during the year. Water was laid on for sluicing purposes and the seam exposed. The measure is probably 40 ft. thick, not more than 20 per cent. of which is clean coal. The measures are almost vertical and freely stratified with bands of impurities of varying thickness. The pit supplied the requirements of the dredge and also local needs.

Oturehua Pit.—Opencast operations only have been carried out intermittently and on a small scale.

Blackstone Hill Pit.—This pit was worked very intermittently and on a small scale, opencast.

Idaburn Pit.—Operations were continued on the opencast method, but the demand for this class of coal is still very limited.

Parfitt's Pit.—Work was carried out intermittently during the first half of the year, and the lease was later allowed to lapse.

Cambrian Pit.—Opencast mining was continued, but only very intermittently. A start was made to open up a block of coal to the south of the old pit, but the demand for this coal is also very limited.

Coal Creek Flat.—Work has been continued at this pit in an efficient manner, a large area of coal now being exposed for winning when required.

SOUTH OTAGO DISTRICT.

Freeman's Mine.—The output at this mine was again obtained from the extraction of old standing pillars. The main level pillars have now been extracted to within 3 chains of the mine-entrance, and very few pillars now remain to be won in this area.

Jubilee Mine.—The dip heading, which was commenced to work the coal lying to the south and east of the old No. 4 workings, has been driven a distance of 9½ chains. The seam at the face of the dip is 9 ft. thick and of good-quality lignite. So far all higher places worked appear to be in more or less broken country and the results disappointing. Levels have been broken away from the bottom of the dip to prove the seam to the north-east. So far no large quantity of water has been met with, and all development places are being driven narrow.

Hodson's Mine.—Development of this mine to the dip showed the seam to thin and to become immediately overlain by water-logged fine sand, and further efforts to prove the extension of the seam were abandoned. All work is now confined to pillar-splitting, and probably 50 per cent. of the pillars will be won along these lines, the object being to prevent surface subsidence.

Brightglow Mine.—A commencement has been made to open up a new mine half a mile to the south of the Jubilee Mine. A dip cross-measure drive has been driven 60 ft. and an electric haulage plant installed. No coal had been intercepted up to the end of the year.

McCull's Mine.—A small amount only of development-work was carried out to the north-west, and a few pillars were stripped back adjacent to the fault or thinning which occurs here. Places are driven narrow and no shots are fired in the coal.

Saddle Hill Mine.—A small quantity of clay was won opencast.

Fairfield Collieries.—Development has continued in the middle seam in a south and south-west direction. Up to date the work has been carried out in an unsystematic manner, insufficient regard having been paid to the ultimate handling of the coal. The floor of the seam is very soft in places, and trouble will be experienced with same heaving. The quantity of water to be handled is also increasing and will probably continue to do so. The economical working of this class of seam at this depth will be difficult.

Willowbank Mine.—The main dip-headings have been driven a distance of approximately 16 chains and several levels driven to the north-east and south-west. So far the results have been disappointing as the seam is very irregular in quality and contour. The ground is heavy and the floor heaves and these factors, coupled with friable and flaky coal, make the economical working of the mine difficult. A crosscut dip-heading has been commenced to prove the area to the east of the main dip.

East Taieri Mine.—Work has continued to be confined to driving through the old workings to an assumed field of coal beyond them. The results obtained have been slightly improved, but the ultimate objective is still "in the air." All roadways have stood better than expected.

Burnweil Mine (Saddle Hill).—Attempts to locate an area of workable coal having failed, a start has been made to recover what few stumps of coal are available.

New Fernhill Mine.—The extraction of pillars from the old mine was completed and the mine abandoned in May. The development of the new mine (being worked from the entrance to Freeman's old mine) has been carried out to the north, levels having been driven 7 chains in this direction. The seam was faulted to the rise. Very little coal will be available to the rise for some time. A ventilation fan was installed during the year.

Essbank (Now Eskvale) Mine.—Development-work at this mine appears to have proven that the area being worked is a small isolated block. The main levels were continued on to inferior coal and a start will probably be made to extract the developed area.

Elliotvale Mine.—The development of this mine has proceeded steadily. The main dip-headings have been driven south for a distance of approximately 500 ft. Main levels have also been driven east and west for 300 ft. The quality and thickness of the coal has been maintained and a steady market found for the output. All coal is transported to Milton by road, and this factor will limit the scope of operations. A ventilation fan has been installed, and the operations generally have been conducted along reasonable lines.

Kai Point Mine.—Pillar-extraction was completed in the old mine and was followed by spontaneous combustion. In the new mine several levels have been driven to the north-east. However, the general conformation of the measure is irregular and the quality of coal variable.

Moneymore Mine.—A small mine was commenced at the end of the Moneymore Road and about two miles from Elliotvale Mine. The deposit is a poor-quality lignite, and the project was soon abandoned.

Karaki Mine (Kaitangata).—An attempt was made to mine coal from the outcrop adjacent to the beach. An old drive was opened for a distance of 80 ft., a few tons of coal were extracted, and operations were then suspended.

Benhar Mine.—Development-work has extended to the dip and along the strike to the north and south respectively. Numerous stone intrusions have been met. During the year a system of forming panels has been adopted.

Kaitangata No. 1 Mine.—No further work was carried out in this mine during the year other than the general keeping in repair of the mine and the completion of the new airway from the No. 2 section. Towards the end of the year it was decided to completely abandon the mine. All plant was withdrawn and the openings into the mine were permanently sealed off in December last. The reason given for the abandonment is that trouble was anticipated from the old heated areas, and it is also contended that the seam can, if desired, be reached and won from a more advantageous site. There may be room to doubt the economical fulfilment of that contention.

Kaitangata No. 2 Mine.—The most important of the development work at this mine has been directed in a south and south-west direction. The main south dip-headings were extended to a total distance of 25 chains. Soft, inferior coal was met, and work in this direction was suspended. A pair of dip-headings has been driven south-west from the No. 1 west level for 18 chains, the quality of coal here being much better. Development to the west from the latter headings was carried out on to the fault-line, and pillaring work was continued in the higher or No. 1 west section; when circumstances permit it is proposed to put in a stone-drive from the surface to intercept and work any coal lying to the west of this fault. This proposal is sound and will result in a more direct haulage route to this area. Pillaring was commenced in No. 2 east, when an upper seam of coal was exposed by a fall in the goaf. This seam was later located and is being developed. In No. 1 east, and from the inbye end of the level, two dip stone-drives intercepted the old No. 2 mine-workings. Development work carried out to the south here proved the coal too thin. Ventilation was restored in the old workings, and all recoverable coal will be won from that area. Pillar-extraction was continued in the main rise headings, and all goaf areas were promptly sealed off before actual fire took place. In the main north headings pillar-extraction was also continued. A fall of goaf in that section also exposed a higher seam and measurements taken showed this seam to thicken to the dip. This occurrence prompted the management to put in hand prospecting-work and, after driving through the west fault, a seam of good-quality coal was intercepted and is now being developed. The above-mentioned seam corresponds with the seam worked seventy years ago from the original Kaitangata workings, and it promises to be a valuable area of coal. The ventilation arrangements have proven adequate, development-work has been kept in hand, and operations generally have proceeded smoothly.

Taratu Mine.—The extraction of available pillars to the rise of the main level has been completed and the area permanently sealed off. The main dip extension was not continued beyond the fault-line. In lieu of this work two headings were driven south-west from the bottom of the dip on to the fault-line and the fault was proven at this point.

Development places have been driven approximately 6 chains south and west in the coal and on the south side of the fault. The quality and thickness of the seam was maintained and everything made ready to develop the area. However, an industrial dispute occurred in September and the mine ceased operations on 3rd October.

Lakeside Mine.—During the year the ownership of this mine changed hands. A limited-liability company was formed and took over the control of the mine. No improvement has yet taken place as the result of the change-over, the output not having increased. The small amount of coal won has been obtained chiefly from pillar-extraction.

Wangaloa Mine.—Development-work has been carried out to the dip and the north-west level has been extended to a total distance of 500 ft., this being below and beyond Barclay's pillared area. All places to the south-west have been driven on to the fault-line.

Kaituna Mine.—Further development of this mine was stopped in the latter part of the year and a commencement made to extract whatever available coal remains to be won. Unless further coal is located, the completion of this mine will soon take place.

SOUTHLAND MINES.

Hakitere Mine.—The development has been continued north for a distance of approximately 6 chains and also east towards the outcrop. Work has been carried out on a small scale.

Hamilton's Pit.—Opencast mining has been continued along similar lines to previous years.

Whiterig Pit.—Operations have been suspended at this pit owing to the excessive quantity of surface stripping.

Otikerama Mine.—Development-work has been continued slowly to the dip, and also to the south-east and north-west. Pillars are being made slightly larger and the standard of work slightly improved.

Croydon Pit.—Opencast mining has been continued under conditions similar to previous years.

Beattie Coster Mine.—Opencast mining has been continued in a northerly direction. The standard of work at this pit has been good.

Green's Mine.—No further development has been done at this mine, the output having been obtained from the splitting of pillars in the higher sections. Unless this pillar-splitting operation is soon abandoned at this old mine its end is drawing much nearer.

Boghead Mine.—Operations at this mine have decreased considerably as the result of price-cutting competition from some of the opencast pits in the district. A small amount only of development-work was carried out to the dip and along the levels north and south.

Glenlee Mine.—Development-work has been extended to the north. A ventilation fan was installed during the year and an additional aircourse constructed.

Springfield Pit (Gore).—Opencast operations were carried out intermittently and on a small scale.

Ota Creek Pit.—Opencast mining has been carried out intermittently and under normal circumstances.

Terrace Pit.—Opencast mining was continued under difficulties until the latter part of the year, when operations were suspended.

Fireglow Pit.—Opencast mining operations were resumed at this pit and a small quantity of lignite won.

Raby Pit.—Mining operations were continued along lines similar to those prevailing previously.

North Chalton Mine.—An attempt was made to mine coal here, a level being driven 80 ft., but the work was condemned as being dangerous, and operations were suspended.

Mount Wendon Mine (Waikaka).—A new mine was opened up here, but proved unsuccessful and was abandoned.

Coster's Pit, Edendale.—This is a new opencast pit commenced in the latter part of the year.

Kea Pit, Mataura.—This is also a new opencast pit commenced towards the end of the year.

Te Tipua Pit, Mataura.—This opencast pit was worked vigorously during the year, the output being taken by the Mataura Paper Mills. Some of the boiler-furnaces in this district have been specially constructed to burn lignite.

Landship Pit.—Opencast mining has been continued under difficulties, a small amount of lignite only having been won.

Argyle Pit.—Work was continued intermittently and on a small scale.

Diamond Pit.—Work has continued regularly at this pit, there being a reasonable ratio of thickness of lignite and surface cover at this point.

Orepuki Mine.—Work was continued under difficulties adjacent to the river-bed, but only on a small scale.

Princhester Creek.—No regular seam of coal has so far been located, and a small quantity only of coal was being won.

Lynwood Pit (Te Anau).—Opencast operations were continued to supply the local requirements.

Terrace Mine (Kingston Crossing).—A small amount of pillar-extraction was carried out in the south portion of the old workings. An additional mine-entrance was constructed and a start was made to develop the seam to the north and towards new ground. A reasonable demand continues to exist for this lignite.

Morleyvale Mine.—All efforts to locate a workable coal-seam having failed, all available coal was won and operations suspended early in the year.

Star Mine.—The bulk of the output from this mine has again been procured from pillar-extraction. Any idea of further development to the dip was abandoned, and the present position is that the pillars adjacent to the main dip-heading have been won from the lower portion of the workings. A limited amount of development was directed to the north-west in the higher portion of the workings. However, as this work is proceeding towards the river-flat the outlook cannot be considered bright. The present position of the mine is such that, unless further workable coal is located, the mine will probably cease to exist in the near future.

Birchwood Mine.—Pillar-extraction has been continued during the year from the area lying to the north-east of the original dip-heading. This work is now nearing the present main dip and will soon be completed. Development of the main area lying to the north-west—i.e., to the dip—has been continued. The main dip extension has been extended to a total distance of approximately 600 ft. in good-quality coal. Main levels have been driven south-west and north-east preparatory to forming panels. At a distance of 7 chains the north-east levels were in slightly inferior coal with a decided change in contour. The levels going south-west have continued in particularly good coal. However, for the thorough development of this mine the main dip extension requires more concentration and should be pushed ahead vigorously as the prospects ahead are unknown.

Black Diamond Mine.—The bulk of the output from this mine was obtained from pillar-extraction. This work was continued in the east section and, without any untoward circumstance all areas were promptly sealed off when completed. A crosscut dip-heading was set off from the bottom of the main dip preparatory to the extraction of the pillars formed in the lowest portion of the main dip workings and to the east adjacent to the fault-line.

Wairaki Mine.—The extraction of pillars has again provided the bulk of the output at this mine. In No. 2 west almost all the available coal has been won, and this section will soon be completed. No. 2 east has also retreated to within close proximity to the coal barrier underlying the surface road and railway reserve. A dip heading was driven from the No. 3 west level for a distance of 200 ft. and then allowed to stand. This development has again been put in hand with a view to developing the area to the dip of No. 3 west section. Development of No. 3 east section is also being pushed ahead. This area has been presumed to be faulted, but so far no definite effort has been made to prove the extent of the faulting. This property changed hands in November, and the increased markets secured by the new company are being reflected in the amount of development-work being put in hand.

Black Lion Mine.—Pillar-extraction has been continued throughout the year, and no underground development-work of any consequence has taken place. The pillar-extraction in the east level section was completed, and nearly all the pillars lying to the east of the main jig have been extracted. A few places were driven on to the outcrop coal adjacent to the top of the main jig. The area which has provided the output for the last two years is the thickest portion of the seam and the remaining coal will retreat much more rapidly. A surface borehole was commenced and at the end of the year was down 160 ft., but so far no further workable coal has been found, and the operations at this mine will rapidly draw to a close.

Mossbank No. 1 Mine.—The total output from this mine was obtained from pillar-extraction and without any possibility of further underground development. All pillars lying to the east and north of the main level have been

won with the exception of a narrow strip on the north side of the level and adjacent to the main stone-drive and the goaf in this area. There are a few pillars remaining to be won to the south of the main level, and it can be anticipated that the end of the current year will see the amount of coal remaining to be won from this mine very small indeed. The end of operations may be earlier than is expected, owing to heavy rainfalls, as a considerable portion of surface water now finds its way into this mine.

Mossbank No. 3 Mine.—The position at this mine is similar to that of the No. 1 Mine. All pillars have been extracted to the east of the main drive, and the process of extraction in the area to the west has now extended to within 7 chains of the main drive. The pillars to the south have also been extracted to within 3 chains of the main west level. It should also be mentioned that no further avenue of underground development is apparent. The company is carrying out boring operations in the area to the south of the present mines and on the opposite side of the Nightcaps-Ohai Road. So far one borehole is in course of drilling, but no workable seam has been intercepted up to a depth of 380 ft. In any case, it would appear that the prospecting referred to has been delayed to such an extent that even if coal is now found it will probably be found to be incapable of being developed in time to absorb the miners who must be displaced as a result of the completion of the present mines.

Linton No. 2 Mine.—The operation of pillar-extraction has been continued throughout the year. The percentage of coal extracted has been reasonable under the prevailing circumstances. During the initial stages of development of this mine the working-places were driven at various relationships to the floor of the seam, and this condition has made the work of pillar-extraction much more difficult. (I should mention that the coal-seam is at least 40 ft. thick in this mine.) The mine was fortunately not troubled with spontaneous combustion during the year and, as mentioned previously, this will probably be the deciding factor in regard to the probable life of the mine.

Linton No. 1 Mine.—In the No. 6 section pillar-extraction has been continued in the No. 3 panel, the roof coal being more than usually stony in this area. No. 1 panel, Manderson's Dip: This section again heated and was again sealed off. In the No. 3 section pillar-extraction was continued and, under reasonably good conditions, a portion of what was the No. 5 section will be won from here. The main development headings in No. 7 section were continued and ultimately connected to the No. 5 level. It is proposed to further develop the No. 5 area from the No. 7 headings. A further area was developed in the No. 8 section, and a panel is now formed ready for pillar-extraction. A portion of the Birchwood Coal Co.'s lease to the west of the Linton boundary and adjacent to the No. 8 section was transferred to the Linton Co., and the No. 8 main development headings will be continued into this area for development. The main dip development has also been continued, and so far the thickness and quality of the coal has been maintained. All development places continue to give off methane. However, the ventilation arrangements have proved reasonably adequate. Development of the mine generally has been kept ahead in a reasonable manner. The thickness of the coal seam being worked at this mine—*i.e.*, up to 40 ft. thick—makes the operation of pillar-extraction one constantly fraught with an unusual element of danger and it would appear that the time has arrived when some more definite system of pillar-extraction work should be laid down and followed. Boring operations have also been carried out continuously throughout the year. Several extensions of the fire in the old mine, known as the horse level area, have taken place during the year. All previous methods of dealing with this serious position have proved to be mere palliatives. However, steps were taken during the latter portion of the year to carry out a system of extracting a continuous strip of coal and hydraulically stowing the void with surface clay.

FATAL ACCIDENTS.

Linton No. 1 Mine.—On 9th January, 1936, John McLeod, miner, was fatally injured by a runaway box on a jig incline. The full truck which struck McLeod was set in motion following the firing of a shot adjacent to the jig-head. Evidence submitted at the inquiry indicated that the stop block was not in position and had not been used for some time previous to the accident. A prosecution was instigated later, and this fatality can be stated to be one which would not have occurred had Regulation 94 of the Coal-mines Act, 1925, been complied with.

Linton No. 1 Mine.—On 10th September James Rogers, miner, sustained fatal injuries as a result of being struck by a fall of coal. The deceased was engaged in pillar-extraction and was working just inbye of the lip of the place. A fall of side and top coal occurred, caused probably by a bump in the section, and struck the deceased.

SERIOUS ACCIDENTS.

Birchwood Mine.—On 9th January William Bell, miner, sustained serious injuries to his eyes, resulting in the almost destruction of the sight of both eyes. The alleged circumstances were as follows: A sumping shot had been fired in the main dip-heading. The charge consisted of two 4 oz. cartridges of Samsonite No. 3, and the shot was fired at 8.15 a.m. Four boxes of coal were filled after the shot was fired, and Bell then commenced to pick away the residue of the shaken coal. An explosion occurred, following the impact of Bell's pick, and thereby caused his injuries. Assuming all the evidence obtained was correct, then this accident could only have occurred as the result of portion of the charge exploding, and the remaining unexploded portion being later struck by the pick.

Birchwood Mine.—On 4th May Robert Rutherford, miner, whilst engaged in pillar-extraction, sustained a fracture of the right femur as a result of being struck by a fall of roof.

Black Lion Mine.—On 28th August John Donaldson, miner, sustained a compound fracture of the right leg, just above the ankle. Whilst engaged in pillar-extraction Donaldson was struck by a fall of top coal.

Kaitangata Mine.—On 23rd December A. Hunter, shiftman-miner and shot-firer, sustained a slight fracture of the skull as a result of being struck by a piece of coal flying along the roadway from a shot which he had fired.

LIST OF DANGEROUS OCCURRENCES.

Wairaki Mine.—On 20th January heating occurred in the goaf in the No. 2 west section. The area was effectively sealed off.

Linton No. 1 Mine.—On 4th February, 15th May, 25th November, and 5th December, respectively, the fire area adjacent to the horse level in the old No. 1 mine showed signs of extending to the outbye side of various stoppings. Additional stoppings were erected and water laid on, and the progress of the fire checked, meantime.

Linton No. 1 Mine.—On 26th May heating occurred in the No. 1 panel, No. 6 section. The area was effectively sealed off.

Linton No. 1 Mine.—On 28th August heating occurred in the No. 3 section. The area was effectively sealed off.

Linton No. 1 Mine.—On 5th September heating occurred in the north-east corner of No. 6 section. The area was effectively sealed off.

PROSECUTIONS.

During the year the following prosecutions took place:—

On 6th March a mine-manager was convicted and fined £10 and costs for a breach of section 140 (1) of the Coal-mines Act, 1925.

On 11th March a mine-owner was convicted and fined £1 and costs for a breach of section 72 (1) of the Coal-mines Act, 1925.

On 20th March a miner was convicted and fined £2 and costs for a breach of Regulation 224 (1) of the Coal-mines Act, 1925.

On 7th April a fireman-deputy was convicted and fined 10s. and costs for a breach of Regulation 94 of the Coal-mines Act, 1925.

On 7th July a shot-firer was convicted and fined £5 and costs for a breach of Regulation 228 (5) of the Coal-mines Act, 1925.

On 14th September a case brought against a mine-owner for a breach of section 133 of the Coal-mines Act, 1925, was dismissed.

ANNEXURE B.

STATISTICS OF WORKINGS IN COAL-MINES, 1936.

Name of Mine and Locality.	Title held (Crown Lease or otherwise).	Name of Mine-manager and Class of Certificate.	Name and Address of Owner.	Number of Years worked.	Classification of Coal (Bituminous, Sub-bituminous, or Lignite).	Number of Sems worked.	Thickness of Coal-seams worked.	Thickness worked.	System of Under-ground Working.	Number of Shaft Length of Drive (ft and in) to reach Coal-seam.	Total Output for 31st Decem-ber, 1936.	Total Output to 31st Decem-ber, 1935.	Total Output to 31st Decem-ber, 1936.	Number of Persons ordinarily employed.		Means of Ventilation.	
														Above.	Below.		Total.
NORTHERN INSPECTION DISTRICT.																	
North Auckland District.																	
Waro, Hikorangi	Freehold	H. Brady (1st C.)	Waro Coal-mines, Ltd., Auckland	2	Sub-bituminous	1	4' to 8'	All	Bord and pillar	..	3,812	22,559	26,671	10	20	30	Fan.
Northern Co-op., Hikorangi	Crown lease	E. A. Cunningham (P.)	Cunningham and party, Hikorangi	18	Ditto	1	3'	..	Ditto	..	256	36,972	37,228	1	2	3	Natural.
Ruatangata, Kamo	Freehold	G. Cross (2nd C.)	Kamo Potteries, Ltd., Whangarei	16	"	2	6'	5' 6"	"	..	3,508	42,688	46,106	1	9	10	Fan.
Phoenix Hill, Hikorangi	Crown lease	W. J. McKinlay (D.)	McKinlay and party, Hikorangi	7 1/2	"	1	3' to 7'	All	"	..	2,349	4,804	4,804	..	5	5	Natural.
Courtis S., Hikorangi	Freehold	G. Courtis (P.)	G. Courtis, Hikorangi	8	"	1	1' to 4'	"	"	..	81	10,745	10,826	..	5	5	"
Peartley S., Waro	"	J. Speirs (D.)	Speirs and party, Hikorangi	12	"	1	1' to 3'	"	"	..	1,548	13,840	15,388	..	3	3	"
Glen Neill, Hikorangi	Crown lease	H. Tinton (2nd C.)	Tinton and party, Hikorangi	6	"	1	1' to 5'	"	"	..	4,441	16,243	20,686	1	9	10	"
Whareora, Hikorangi	Crown lease	R. Fox (1st C.)	Fox and Fox, Hikorangi	14	"	1	1' to 4' 6"	"	"	..	690	5,227	5,857	..	2	2	"
McLure's No. 2, Hikorangi	Freehold	C. Carstairs (P.)	W. A. McInnes and party, Hikorangi	4	"	1	3' 6"	"	"	..	515	367	367	..	3	3	"
Ackers S., Hikorangi	"	R. Tait (P.)	Tait and party, Hikorangi	7 1/2	"	1	3' 6"	"	"	..	2,142	15,057	17,199	2	16	18	Fan.
New Khipaka, Khipaka	"	J. Makinson (1st C.)	W. A. Makinson and party, Hikorangi	2 1/2	"	1	18'	7'	"	..	380	1,958	2,338	..	4	4	Natural.
Perrett's (old workings), Hikorangi	Crown lease	T. Hicks (P.)	Hicks Collieries, Ltd., Whangarei	23	"	1	3' to 6'	All	D. 450'	..	31,900	17,075	48,975	17	45	62	Fan.
Turnbull's, Hikorangi	Freehold	H. Thomas (D.)	Thomas and party, Hikorangi	23	"	1	2' to 6'	"	"	..	199	946	1,145	..	2	2	"
Kauranga Block, Hikorangi	"	J. B. Orr (D.)	Orr and party, Hikorangi	23	"	1	2' to 6'	"	"	..	2,952	5,385	8,337	..	4	4	"
Rosedale, Hikorangi	Crown lease	J. Jones (D.)	Jones and party, Hikorangi	23	"	1	2' to 6'	"	"	..	673	1,075	1,748	..	5	5	"
Rocks, Waro	Freehold	R. Nesbitt (P.)	Nesbitt and party, Hikorangi	12	"	1	1' 6' to 7'	"	"	..	2,652	2,277	2,309	..	5	5	"
Hikorangi No. 2A, Hikorangi	"	W. Robinson (P.)	W. Robinson and party, Hikorangi	12	"	1	1' 6' to 7'	"	"	..	1,954	4,052	6,036	..	4	4	"
Gibby's, Hikorangi	"	J. T. Lawson (P.)	Lawson and party, Hikorangi	12	"	1	2' 6"	"	"	..	447	258	705	..	2	2	"
Genoerwe, Whangarei	"	A. Rarity (D.)	W. Ackers, Hikorangi	12	"	1	2' to 4'	"	"	..	1,694	480	1,574	..	3	3	"
Turnbull's, Hikorangi	"	A. Pollock (D.)	A. Pollock, Whangarei	12	"	1	3'	"	"	..	197	439	242	..	2	2	"
Avoa, Rangawhane	"	M. C. Turnbull (D.)	Turnbull and party, Hikorangi	7 1/2	"	1	2' 6" to 4'	"	"	..	100	160	160	..	2	2	"
Wahia District.	"	Wm. Tunstall (D.)	S. G. Fox, Hikorangi	7 1/2	"	1	8'	"	"	..	594	7,450	8,644	..	3	3	"
Eotoware, Rotowaro	Crown lease	J. Smith (1st C.)	Taupiri Coal-mines, Ltd., Auckland	19	Brown	2	7' to 15'	All	Bord and pillar	..	155,785	2,147,137	2,832,942	54	201	255	Fan.
Tukemiro, Pukemiro	Freehold	A. Burt (1st C.)	Pukemiro Collieries, Ltd., Auckland	21	"	1	4' to 18'	4' to 14'	Ditto	..	117,940	2,372,039	2,489,979	51	153	204	"
Waikoi, Extended, Huntly West	"	T. Geddes (1st C.)	Waikoi Collieries, Ltd., Auckland	6	"	1	7' to 12'	5' to 9'	"	..	74,532	397,738	472,150	34	125	159	"
Glen Afon No. 1, Glen Afon	Crown lease	J. Honev (U.)	Roose Shipping Co., Ltd., Mercer Island	20	"	1	16'	14'	"	..	4,555	102,923	107,467	2	3	5	Natural.
Glen Afon under Roads, Glen Afon	Crown lease and freehold	P. Hunter (1st C.)	Glen Afon Collieries, Ltd., Auckland	16	"	1	4' to 16'	9'	"	..	87,932	1,610,620	1,697,582	29	120	149	Fan.
MacDonald, Waikowai	"	"	Ditto	..	"	1	..	..	"	..	..	..	..	..	..	..	"
Taupiri East, Kimihia	Crown lease and freehold	J. W. Glendinning (1st C.)	Holland and party, Huntly	6	"	1	6' to 20'	9' to 14'	"	..	148,220	566,873	714,593	48	201	249	Fan.
Whatawhata Campbell, Whatawhata	Crown lease	P. L. Peattie (D.)	Whatawhata Campbell Coal Co., Hamilton	15	"	1	10' to 15'	12'	"	..	3,205	28,887	28,592	1	4	5	"
Graham, Glen Afon	Freehold	A. Pennan (1st C.)	Renown Collieries, Ltd., Auckland	15	"	1	12'	8'	"	..	6,000	56,481	62,481	4	5	9	Natural.
Rangitoto, Te Kuiti	Native lease	S. Pendleton (1st C.)	Graham Coal Co., Glen Afon	9	"	2	15'	7' to 9'	"	..	106,468	651,958	758,424	38	121	159	Fan.
Relief, Huntly South	Auckland Uni-versity lease	A. Morgan (P.)	A. Morgan, Te Kuiti	10	"	1	3' to 6'	6'	"	..	7,508	119,554	128,560	2	12	14	"
Glen "A" Potteries Coal Face, Glen Afon	Freehold	J. O'Brien (P.)	Relief Coal Committee, Huntly	32	"	1	4' 6"	All	"	..	269	3,542	3,542	..	2	2	Natural.
		J. Howie (P.)	Taranaki Brick and Land Co., Ltd., New Plymouth	3	"	1	5' to 12'	"	Opencast	..	160	353	715	1	2	3	"
				3	"	1	5' to 12'	"		..	398	..	398	1	..	1	Open.

STATISTICS OF WORKINGS IN COAL-MINES, 1936—continued.

Name of Mine and Locality.	Title held (Crown Lease or otherwise).	Name of Mine-manager and Class of Certificate.	Name and Address of Owner.	Number of Years worked.	Classification of Coal (Bituminous, Sub-bituminous, or Lignite).	Number of Seams worked.	Thickness of Coal-seams.	Thickness worked.	System of Under-ground Working.	Depth of Shaft or Length of Stone Drive (if any) to reach Coal-seam.	Total Output for 1936.	Total Output for 31st December, 1935.	Total Output to 31st December, 1936.	Number of Persons ordinarily employed.			Means of Ventilation.
														Above.	Below.	Total.	
NORTHERN INSPECTION DISTRICT—continued.																	
Taranaki District.																	
Egmont, Tatu	Crown lease	A. W. Whittleston (1st C.)	Egmont Collieries, Ltd., Stratford	2	Brown	1	6' to 10'	All	Bord and pillar	..	10,932	27,460	38,392	14	30	44	Fan.
Old Stockman, Mokau	Freehold	H. Jones (D.)	Chambers Bros., Havelock	16	"	1	4' 6"	7'	Ditto	..	589	7,095	7,684	1	2	3	Natural.
Mangapechi, Mangapechi	Crown lease	W. Dyet (D.)	Mangapechi Coal-mining Co., Ltd., Mangapechi	23	"	1	14'	..	..	..	7,945	2,727	10,672	2	7	9	Fan.
Fernbrook, Ohura	Freehold	R. Godden (D.)	Godden and Hempstalk, Ohura	24	"	1	4' 6" to 6'	All	..	..	300	1,314	1,614	..	2	2	Natural.
Paparatu, Tatu	Crown lease	A. Pratt (D.)	Taranaki Coal-mining Co., Ltd., Stratford	5	"	1	3'	..	..	..	1,556	4,160	5,716	1	4	5	"
Okoko, Te Rau-a-moa	..	B. Bernsten	R. A. Fox, Whangarei	34	"	1	4'	..	Opencast	..	..	54	12,202,695	84	1	1	Open.
Output of collieries, included in previous statements, at which operations have been abandoned or suspended.																	
Nelson District.																	
Motupipi, Motupipi	Crown lease	D. Winter (P.)	J. and D. Winter, Motupipi	9	Lignite	2	2' and 3'	10'	Opencast	..	101	1,193	1,294	2	2	2	Open.
Clarke, Baton	"	S. Hartshorne (P.)	S. Hartshorne, Tapawera	53	Bituminous	2	2' and 4 1/2'	8'	Bord and pillar	..	479	1,213	1,692	..	..	2	Natural.
O'Rourke's, Murchison	Freehold	A. O'Rourke (P.)	A. O'Rourke, Murchison	17	Lignite	1	2'	..	Ditto	..	575	2,978	2,553	..	1	1	"
Wynedale, Murchison	Crown lease	W. Burchfield (U.)	G. and A. H. Wynn, Murchison	..	Sub-bituminous	1	7'	..	..	..	3,584	7,418	11,002	2	6	8	"
Mount Burnett, Collingwood	"	W. A. Hansen (D.)	Chambers Bros., Hastings	7	Ditto	1	18'	..	..	..	4,637	23,799	28,436	3	5	8	"
Puponga, Puponga	"	A. Thomson (1st C.)	Puponga Coal-mines, Ltd., Puponga	33	"	1	4' to 5' 9"	..	..	..	14,315	367,413	381,728	13	25	38	Fan.
Owen, Owen River	"	C. Blackburn (1st C.)	Owen Collieries, Ltd., Nelson	7	"	1	3'	..	Double-stall	..	3,792	17,903	21,695	3	8	11	"
Buller District.																	
Bowater and Bryan's, Charleston	Crown lease	F. M. Mitchell (P.)	Bowater and Bryan, Westport	61	Lignite	1	30'	16'	Opencast	..	322	1,326	1,648	1	1	2	Open.
Brighton, Fox River	"	Andrew Hunter (P.)	Brighton Coal-mines, Ltd., Westport	4	"	1	8'	..	Bord and pillar	..	289	991	1,280	..	..	2	Natural.
Cardiff, Mokihinui	"	J. Dymond (2nd C.)	Cardiff Coal Co., Ltd., Westport	13	Bituminous	1	5' to 12'	8'	Ditto	..	4,757	3,056	7,813	3	5	8	Fan.
Cascade, Cascade Creek	"	H. McAvoy (1st C.)	Cascade-Westport Coal Co., Ltd., Westport	10	"	1	9' to 20'	9'	..	..	21,894	129,677	151,571	9	13	22	Natural.
Charming Creek, Ngakawau	"	J. McArthur (1st C.)	Charming Creek - Westport Coal Co., Ltd., Westport	9	"	1	15'	8'	..	..	25,133	77,563	102,696	16	28	44	Fan.
Chester's, Seddonville	"	J. Penberth (P.)	Chester and Penberth, Seddonville	16	"	1	30' to 40'	All	..	..	779	25,940	26,719	1	2	3	Natural.
Coal Creek, Seddonville	"	T. Quinn (D.)	Coal Creek Mining party, Seddonville	12	"	1	30' to 40'	7'	..	..	1,808	98,058	99,366	1	3	4	Fan.
Glasgow, Seddonville	"	A. Steele	Glasgow Co-op. party, Seddonville	19	"	1	6' to 12'	All	..	..	28	36,184	36,212	..	1	1	Natural.
Hydro, Seddonville	"	M. Forsyth (1st C.)	H. H. Powell, Charleston	1	Lignite	1	6' to 17'	8'	Opencast	..	1,137	..	1,137	2	6	8	"
Powell's, Charleston	"	J. H. Powell	J. H. Powell, Charleston	8	"	1	8' to 20'	8'	..	..	22	115	137	..	1	1	Open.
Warne's, Charleston	"	G. N. Warne (P.)	G. N. Warne, Charleston	31	"	1	6'	All	Bord and pillar	..	8	109	117	1	1	2	"
Rocklands, Buller Gorge	"	J. F. Burley (P.)	J. F. Burley, Berlins	44	Brown	1	27'	..	..	..	230	11,146	11,376	..	2	2	Natural.
Glencrag, Buller Gorge	"	N. Forsyth (2nd C.)	Forsyth and party, Berlins	13	"	1	20' to 40'	9'	Ditto	..	271	3,805	3,876	..	2	2	"
Denniston, Denniston	"	R. J. Weam (1st C.)	Westport Coal Co., Ltd., Dunedin	56	Bituminous	7	3' to 30'	All	..	..	128,329	10,557,245	10,685,574	92	210	302	Fans.
Millerton, Grauity	"	A. Openshaw (1st C.)	Westport Coal Co., Ltd., Dunedin	45	"	1	4' to 40'	12'	..	..	56,187	8,337,823	8,394,010	28	58	86	"
Westport-Stockton, Ngakawau	"	T. McGhie (1st C.)	Westport-Stockton Coal Co., Ltd., Christchurch	28	"	3	4' to 20'	10'	..	..	108,574	3,309,691	3,418,265	84	152	236	"
Archer's Caplestone	Crown lease and freehold	F. W. Archer (2nd C.)	F. W. Archer, Reefton	41	Brown	2	9' to 12'	9'	Bord and pillar	..	6,252	67,682	73,934	2	10	12	Natural.
Burke's Creek, Burke's Creek	Crown lease	C. D. Baist (1st C.)	Burke's Creek Collieries, Ltd., Wellington	35	"	1	8' to 12'	9'	Ditto	..	18,342	252,276	270,618	10	24	34	Fan.
Clele, Merrifrigs	Freehold	R. Alborn (U.)	V. W. Alborn and party, Reefton	50	"	3	5' to 6'	All	..	..	5,633	63,517	69,150	2	7	9	Natural.
Coghlan's, Caplestone	"	E. Coghlan (U.)	J. Coghlan, Reefton	39	"	..	12'	8'	..	..	1,754	31,120	32,874	1	4	5	"
Collins, Murray Creek	Crown lease	N. Collins (P.)	N. Collins, Reefton	44	"	1	20'	10'	..	..	595	61,888	62,483	1	1	2	"

WEST COAST INSPECTION DISTRICT.

STATISTICS OF WORKINGS IN COAL-MINES, 1936—continued.

Name of Mine and Locality.	Title held (Crown lease or otherwise).	Name of Mine-manager and Class of Certificate.	Name and Address of Owner.	Number of Years worked.	Classification of Coal (Bituminous, Sub-bituminous, or Lignite).	Number of Seams worked.	Thickness of Coal-seams.	Thickness worked.	System of Under-ground Working.	Number of Winding shafts.	Depth of Shaft or Length of Stone Drive (if any) to reach Coal-seam.	Total Output for 1936.	Total Output to 31st Decem-ber, 1935.	Total Output to 31st Decem-ber, 1936.	Number of Persons ordinarily employed.		Means of Ventilation.	
															Above.	Below.		Total.
SOUTHERN INSPECTION DISTRICT—continued.																		
<i>Canterbury District</i> —continued.																		
Woodbank, Albany	Crown lease under Lands Act	S. Benson (P.) ..	J. H. Smillie, Timaru ..	12	Lignite ..	1	27'	8'	Bord and pillar	..	..	Tons, 870	Tons, 8,140	Tons, 9,010	1	2	3	Natural.
Meadowbank, Waihao Forks	Crown lease ..	J. C. Campbell (D.) ..	B. J. Moyle, Waihao Forks ..	10	Brown ..	1	20'	8'	Ditto ..	..	..	89	3,939	3,939	2	2	4	"
Solltude, Glentunnel	Freehold ..	E. W. Broad (P.) ..	Burbright Coal Co., Glentunnel ..	23	Brown ..	1	3'	All	" ..	..	..	44	1,303	1,344	2	2	4	"
Steventon, Whitecliffs	Coal-prospect-ing license	H. J. Robb (D.) ..	H. J. Robb, Whitecliffs ..	7	Lignite ..	1	7'	6'	" ..	..	..	3,182	13,974	17,156	1	5	6	Open.
Quantock's, Geraldine	Freehold ..	A. F. Quantock ..	A. F. Quantock, Geraldine ..	1	Lignite ..	1	..	..	" ..	..	..	8	..	8	1	1	2	Open.
Samdown	Freehold ..	D. McQueen (D.) ..	D. McQueen, Sheffield ..	1	Brown ..	1	8'	All	Bord and pillar	..	..	21	..	21	1	3	4	Natural.
Yukon, Coalgate	" ..	T. Newman (D.) ..	S. Smith, Coalgate ..	4	" ..	1	4'	6'	Ditto ..	..	..	240	..	240	3	3	6	"
Eurobright, Sheffield	" ..	A. Taylor ..	A. Taylor, Sheffield ..	4	" ..	2	2'	to 3'	" ..	..	..	30	..	30	2	2	4	"
<i>North Otago District.</i>																		
Airedale, Papakaio	Crown lease ..	E. Roberts (D.) ..	Airedale Coal Co., Oamaru ..	10	Lignite ..	1	10'	6'	Bord and pillar	..	..	7,723	24,062	31,785	1	9	10	Fan.
St. Andrews, Papakaio	Freehold ..	J. H. Nimmo (D.) ..	J. H. Nimmo, Peebles ..	57	" ..	1	6'	to 8'	Ditto ..	..	..	2,163	79,297	81,560	1	3	4	"
Willett's, Airedale	Freehold and Crown lease	E. McVie (D.) ..	G. H. Willett's, Airedale ..	4	" ..	2	10'	6'	" ..	..	..	1,047	8,707	4,754	1	2	3	Natural.
Ngapara, Ngapara	Freehold ..	W. Nimmo (U.) ..	W. Nimmo, Ngapara ..	53	" ..	1	25'	8'	to 10'	..	..	666	49,725	50,391	1	2	3	Fan.
Shag Point (old mine), Shag Point	Crown lease ..	W. McLaren (P.) ..	W. McLaren, Shag Point ..	22	Brown ..	1	3'	6'	" ..	..	..	3,143	430,297	433,440	1	4	5	Natural.
Shag Point, Shag Point	Freehold ..	A. K. McLean (D.) ..	A. K. McLean, Shag Point ..	28	" ..	1	3'	"	" ..	..	..	1,866	335,753	337,919	1	4	5	Fan.
Rockvale, Herbert	" ..	W. Marshall (P.) ..	W. Marshall, Herbert ..	2	Lignite ..	1	8'	"	" ..	..	..	120	305	425	..	2	2	Natural.
<i>Central Otago District.</i>																		
Idaburn, Otarehua	Freehold ..	R. Barber (D.) ..	R. Barber, Otarehua ..	66	Lignite ..	1	40'	25'	Opencast	..	..	904	60,050	60,984	2	..	2	Open.
Otarehua, Otarehua	Crown lease ..	A. Brown (P.) ..	J. R. and A. Becker, Otarehua ..	42	" ..	1	12'	All	" ..	..	..	59	8,498	8,557	2	..	2	"
Cambrian, Cambrian	" ..	D. Jones (P.) ..	C. G. Davies, Cambrian ..	75	" ..	1	12'	"	" ..	..	..	287	54,419	54,706	1	..	1	"
McPherson's, Coal Creek Flat	" ..	N. Haritwich (P.) ..	N. Haritwich, Coal Creek Flat ..	66	" ..	1	50'	12'	" ..	..	..	1,870	109,898	111,774	2	..	2	"
Shepherd's Creek, Bannockburn	" ..	J. Hodson (2nd C.) ..	J. Hodson, Bannockburn ..	59	" ..	1	20'	10'	Bord and pillar	..	..	2,188	135,315	137,503	1	3	4	Fan.
Fache's, Nevis	" ..	T. Wells (P.) ..	S. C. Fache, Nevis ..	3	" ..	1	50'	30'	Opencast	..	..	537	604	1,141	2	..	2	Open.
Carmanui, Cromwell	" ..	J. Griffin (2nd C.) ..	Mrs. E. F. Hodson, Bannockburn ..	1	" ..	1	15'	All	Bord and pillar	..	..	27	228	255	2	3	5	Natural.
Nevis Crossing, Nevis	" ..	R. Ritchie (P.) ..	R. Ritchie, Nevis ..	32	" ..	1	60'	"	Opencast	..	..	44	18,370	18,420	2	..	2	Open.
<i>South Otago District.</i>																		
Freeman's, Abbotstford	Freehold ..	R. Anderson (D.) ..	Freeman's Coal Co., Abbotstford ..	56	Lignite ..	1	8'	to 12'	All	..	..	2,871	633,472	636,343	2	2	4	Fan.
Jubilee, Saddle Hill	" ..	E. Barclay (2nd C.) ..	Jubilee Coal Co., Dunedin ..	39	" ..	1	6'	to 9'	Ditto ..	..	..	4,484	614,615	619,090	5	8	13	"
New Ferrhill, Abbotstford	" ..	D. Kerr (U.) ..	New Ferrhill Coal Co., Dunedin ..	4	" ..	1	14'	6'	" ..	..	..	3,953	12,505	16,458	2	7	9	"
Saddle Hill, Saddle Hill	" ..	G. McMaster (P.) ..	G. McMaster, Fairfield ..	6	" ..	1	8'	All	Opencast	..	..	90	3,351	3,441	1	..	1	Open.
Fairfield, Fairfield	" ..	M. Welsh (U.) ..	Fairfield Coal-mining Co., Ltd., Dunedin ..	4	" ..	1	9'	6'	Bord and pillar	..	..	6,123	3,056	9,179	1	5	6	Fan.
Burnwell, Saddle Hill	" ..	A. Edmond (D.) ..	Burnwell Colliery Co., Dunedin ..	41	" ..	1	6'	All	Ditto ..	..	..	878	82,636	88,514	1	2	3	Natural.
Brighton, Brighton	" ..	N. McCall (P.) ..	N. McCall, Brighton ..	21	" ..	1	5'	6'	" ..	..	..	297	11,944	12,241	2	2	4	Fan.
East Taieri, East Taieri	" ..	J. Dunlop (D.) ..	J. Dunlop and A. Burley, East Taieri ..	17	" ..	1	10'	6'	" ..	..	..	968	44,156	45,124	1	3	4	"
Willowbank, Riccarton	" ..	G. Barclay (U.) ..	G. Scurr and Co., Ltd., Mosgiel ..	16	" ..	1	9'	6'	" ..	..	..	5,828	64,435	70,263	2	7	9	"
Taratu, Lovell's Flat	" ..	R. Hall (1st C.) ..	Sargood and Cheeseman, Dunedin ..	35	" ..	1	14'	7'	6'	..	..	11,834	780,715	792,549	9	23	32	"
Elliotvale, Milton	" ..	P. Campbell (1st C.) ..	Elliotvale Collieries, Ltd., Dunedin ..	7	" ..	1	12'	6'	" ..	..	..	7,153	10,539	12,692	2	4	6	"
Eslovak (late Essbank), Milton	" ..	H. Hargood (D.) ..	J. Dunlop and A. Burley, East Taieri ..	6	" ..	1	12'	All	" ..	..	..	785	11,273	12,058	1	3	4	Natural.
Benhar, Stirling	" ..	J. Walls (2nd C.) ..	McSkimming and Son, Ltd., Benhar ..	73	" ..	3	14'	10'	" ..	..	..	8,177	318,382	326,559	1	6	7	Fan.

Locality	Ownership	Area (Acres)	Production (Tons)	Value (£)	Notes	Area (Acres)	Production (Tons)	Value (£)	Notes
Tuakitoto, Kaitangata...	T. Heyes (1st C.)	26	..	1,359	..	20'	7'	16,874	2
Wangaloa, Kaitangata...	J. Prescott (D.)	14	..	1,798	D. 200'	12'	8'	15,515	1
Kaitangata Nos. 1 and 2, Kaitangata	F. Carson (1st C.)	14	Brown	1,798	D. 363'	8'	All	12,090	1
Kai Fenu, Kaitangata	S. Newburn (2nd C.)	24	..	111,080	D. 558'	30'	..	5,323,748	182
Kaitangata	J. Gillick (1st C.)	27	Lignite	482	D. 180'	7'	All	7,865	52
Hodson S., Fairfield	J. Snaill, Kaitangata	5	..	482	D. 30'	5'	..	28,603	2
Karakai, Kaitangata	A. L. Morgan (D.)	5	..	7,012	D. 99'	5'	..	20,076	11
Moneymore, Milton	G. Ramsay (D.)	..	..	92	..	11'	7'	92	1
Green's, Gore..	W. C. Johnson (U.)	48	Lignite	5,580	D. 210'	11'	..	398,955	7
Whitioru, Gore	J. S. Wilks (P.)	6	..	465	..	4' to 18'	All	7,776	2
Crydron, Gore	W. W. McKean (P.)	21	..	1,416	..	20'	12'	30,041	2
Outkeraa, Outkeraa	J. Hoffman (P.)	47	..	2,520	..	20'	12'	59,078	1
Wainumu, Wainumu	A. Deans (P.)	8	..	3,796	..	30'	25'	16,021	2
Glenite, Waikaka	F. W. Edge	43	..	1,254	..	14' 6"	9'	39,915	2
Boghead, Mataura	T. Woodward (P.)	45	..	220	..	8'	All	13,072	1
Mataura Lignite, Mataura	J. Pearson (D.)	60	..	6,192	..	16'	12' to 15'	119,025	2
Terra, Mataura	R. Haywood (P.)	6	..	4,564	..	15'	All	402,933	5
Ota Creek, Wyncham	E. Genge (P.)	56	..	552	..	8'	..	4,252	2
Dia Creek Lignite, Asher's	A. McMillan (P.)	34	..	1,126	..	30'	..	33,379	1
Princescreek Creek, The Key	J. A. Denton (P.)	34	Brown	48	..	4'	..	42,432	2
Lynchcreek, Te Anau	E. C. Govan (P.)	21	Lignite	90	..	8'	..	4,260	1
Black Diamond, Nightcaps	A. Colligan (2nd C.)	32	Brown	8,352	..	25'	8'	4,002	2
Birchwood, Ohai	J. Lewis (1st C.)	13	..	19,808	D. 1100'	9' to 25'	6' to 8'	261,381	5
Black Lion, Ohai	E. Mason (2nd C.)	15	..	24,524	D. 264'	20'	All	185,921	12
Wairaki No. 1, Ohai	J. McLellan (1st C.)	22	..	54,381	D. 400'	6' to 24'	7'	164,749	16
Wairaki No. 2, Ohai	T. Young (1st C.)	23	..	12,978	..	7' to 25'	All	563,355	22
Linton, Ohai	G. Gilbert (1st C.)	18	..	103,910	..	7' to 18'	..	467,861	10
Linton, Ohai	J. Ford (2nd C.)	61	..	10,215	..	30' to 40'	..	1,214,364	36
Star, Ohai	J. L. Hennessy (P.)	5	Lignite	225	D. 528'	30' to 40'	6' to 8'	42,435	5
Waincanea, Orepuki	D. McAskill (P.)	33	..	343	..	14'	14'	37,918	2
Springfield, Waikaka	J. S. Wilks (P.)	3	..	2,426	..	20'	All	61,270	1
Reby, Gore	J. Harvey	3	..	5	..	25'	10'	5,550	1
Thornbury, Riverton	P. L. Magee (D.)	14	..	1,138	D. 66'	..	..	14,542	1
Terrace, Kingston	J. Coekburn (P.)	31	..	180	..	8'	All	110,731	1
North Chatton, Gore	J. Dee (P.)	2	..	35	..	16'	10'	35	1
Mount Wendon, Gore	E. Burdon (P.)	2	..	10,124	..	8' to 12'	10'	10,210	8
Titapu, Mataura	D. A. Coster (P.)	4	..	93	..	8'	All	93	2
Coster's, Eildendale	T. Gaudon (D.)	4	..	568	..	6' to 16'	8'	568	4
Kea, Mataura	J. Buchols (D.)	21	..	944	..	18'	12'	2,768	4
Hakateru, Wainumu	B. Lawrence (P.)	18	..	106	..	5'	All	2,049	2
Lawrence's, Freshford	L. Denston (P.)	18	..	220	..	20'	..	2,155	2
Fireglow, Tihupa	A. McKenzie (D.)	28	..	1,038	..	30'	7'	18,494	3
Montevale, Ohai	..	..	..	..	..	..	..	..	..
Grand totals	..	..	..	2,140,217	..	..	..	85,540,652	1,103
Totals, Southern District, South Island	..	..	..	499,810	..	..	..	21,510,447	669
Totals, West Coast District, South Island	..	..	..	844,570	..	..	..	42,873,580	516
Totals, Northern District, North Island	..	..	..	795,837	..	..	..	21,296,833	318
Outputs of collieries prior to 1890 not included in the above statement	..	..	..	..	..	..	..	1,103	3,154
Shale exported, 1914	..	..	..	..	..	..	..	296,653	4,257
Outputs of collieries, included in previous statements, at which operations are abandoned or suspended	..	..	..	..	..	..	..	85,977,543	..

APPENDIX C.

REPORT OF BOARDS OF EXAMINERS.

Geological Survey Office,
Wellington, 30th July, 1937.

SIR,—

On behalf of the Boards of Examiners under the Mining and Coal-mines Acts, I have the honour to submit the following brief report on the work of the Boards during 1936 :—

Coal-mines Act.—The annual examinations of candidates for mine-managers' certificates under the Coal-mines Act, 1925, were held at Huntly, Reefton, Westport, Greymouth, and Nightcaps, on the 20th October and two following days. In addition, one candidate was examined at Westport for a mine-surveyor's certificate under the Coal-mines Act.

Examinations were held for candidates who desired to obtain underviewers' and firemen-deputies' certificates—at Dunedin on the 5th, 6th, and 7th October; at Huntly on the 10th November; at Greymouth on the 19th and 20th November; and at Westport on the 27th November.

Thirty-six gas-testing certificates were issued to candidates under the Coal-mines Act.

The Board's decision regarding the non-acceptance of gas-testing certificates more than five years old is now in full force, and it is necessary for candidates for examination, whose gas-testing certificates do not comply with the Board's requirements, to undergo a further gas test. During 1936 seventeen candidates were re-examined in gas-testing and their gas-testing certificates endorsed to that effect.

The total number of candidates sitting the various examinations under the Coal-mines Act showed an increase of twenty over the previous year.

Mining Act.—Examinations for mine-managers' and battery superintendents' certificates under the Mining Act, 1926, were held at Waihi and Reefton on the 20th, 21st, and 22nd October, the total number of candidates presenting themselves for examination being nine, as against eight for the previous year, while an examination of candidates for dredgemasters' certificates was conducted at Greymouth on the 18th November. Under the Mining Act, 1926, one service permit as oil-well manager was granted.

The Mines Department, at the request of the Board, has revised the list of deep or swift-flowing streams in respect of which it is mandatory that the masters of dredges working thereon shall be the holders of Class A Dredgemasters' Certificates, and I understand the revised list will appear in the annual report of the Department.

General.—The Boards decided that each examiner under the Mining and Coal-mines Acts should be asked to supply a short comment on the lines followed by the examiners under the Coal-mines Act in Great Britain as to the manner in which the candidates as a whole answered each question set, and that the Board should furnish the information obtained to Schools of Mines, and, if desired, to the press.

The Boards also dealt with a considerable number of other matters arising out of applications for and the issue of certificates, none of which, however, calls for special mention.

The following is a summary of the various examinations and the results obtained :—

Act and Examination.	Number of Candidates.			Number of Certificates issued.	
	Examined.	Passed.	Partial Pass.	By Examination.	By Recognized Credentials.
1. Coal-mines Act, 1925—					
Mine-manager's certificate—					
(a) First class—					
Written examination ..	14	1	3	1	..
Oral examination ..	*4				
(b) Second class—					
Written examination ..	10	3	2	3	..
Oral examination ..	8				
Underviewer's certificate ..	16	10†	2	10	..
Fireman-deputy's certificate ..	35	29‡	8	29	..
Mine-surveyor's certificate—					
Written examination ..	1	..	..	..	..
Oral examination ..	..			
2. Mining Act, 1926—					
Mine-manager's certificate—					
(a) First class—					
Written examination ..	6	..	1	..	..
Oral examination ..	1				
(b) Second class—					
Written examination ..	..	..	..	..	..
Oral examination ..	..	..	..	..	..
Battery Superintendent's certificate—					
Written examination ..	3	1	..	1	..
Oral examination ..	1				
Dredgemaster's certificate—					
Class A	2	2	..	2	..
Class B	6	5§	..	4	..
Class B (by exchange) ..	1	1	..	..	1

* Includes one candidate who had previously passed the written examination. † Includes one candidate who last year was credited with a partial pass pending production of a certain certificate. ‡ Includes nine candidates who last year were credited with partial passes pending production of certain certificates. § Includes one candidate whose certificate was not issued, pending production of further evidence of service.

A list of the certificates issued since my last report is appended :—

COAL-MINES ACT, 1925.

FIRST-CLASS MINE-MANAGER'S CERTIFICATE.

Issued after Examination.—Langford, James Newton, Ohai.

SECOND-CLASS MINE-MANAGERS' CERTIFICATES.

Issued after Examination.—Alborn, Roderick Victor, Reefton ; Outhwaite, Percy Moston, Grey mouth ; Williams, James Mitchell, Reefton.

UNDERTVIEWERS' CERTIFICATES.

Issued after Examination.—Airms, Abraham, Dunollie ; Crawford, William, Glen Massey ; Dayne, Robert Desmond Runanga ; Griffiths, Norman George, Runanga ; Hadcroft, Harold, Runanga ; Longmuir, Richard John, Glen Massey ; McLelland, James Thomson, Ohai ; Roberts, Eric Methven, Oamaru ; Watson, George, Huntly ; Welsh, Mervyn Ernest Arnold, Dunedin.

FIREMEN-DEPUTIES' CERTIFICATES.

Issued after Examination.—Barclay, Ralph Carse, Fairfield ; Beckley, Ronald Richard, Mount Somers ; Broad, Ernest Wairau, Whitecliffs ; Burnett, William, jun., Reefton ; Charteris, James Thomas, Kaitangata ; Clark, Alfred James, Blackball ; Coghlan, John Joseph, Cronadun ; Crawford, William, Glen Massey ; Cunningham, Richard William, Whangarei ; Dixon, Alexander Shearer, Ohai ; Dockerty, Samuel Valentine, Glen Massey ; Edmond, Adam, Green Island ; Edwards, Arthur, Waro, Hikurangi ; Gallagher, Percival James, Cronadun ; Glendenning, Thomas, Glen Afton ; Hadcroft, Harold, Runanga ; Hall, Alfred, Kaitangata ; Hall, Thomas, Huntly ; Lawrence, Luther, Pukemiro ; Leeming, Percy Thomas, Glenroy ; Longmuir, Richard John, Glen Massey ; Pasfield, Kelvin Harold, Blackball ; Pratt, Alfred, Ngaruawahia ; Rhodes, Israel, Glentunnel ; Savage, Thomas, Nightcaps ; Smith, William George, Glentunnel ; Taylor, Arnold, Christchurch ; Terry, William Edwin, Ohai ; Timlin, George William, Runanga.

MINING ACT, 1926.

BATTERY SUPERINTENDENT'S CERTIFICATE.

Issued after Examination.—Jones, John William, Waikino.

OIL-WELL MANAGER'S SERVICE PERMIT.

Rutherford, Alan Ernest, New Plymouth.

MINING AMENDMENT ACT, 1927.

DREDGEMASTERS' CLASS A CERTIFICATES.

Issued after Examination.—Holden, Albert, Murchison ; Lyon, Sidney George, Murchison.

DREDGEMASTERS' CLASS B CERTIFICATES.

Issued after Examination.—Archer, Rupert John, Mossy Creek, Ikamatua ; Browne, Edwin, Hokitika ; Fanning, Frank Edward, Kororo, Greymouth ; Gillooly, Thomas Bernard, jun., Murchison.

Issued on Production of Certificate from Recognized Authority outside of the Dominion.—Lyon, Sidney George, Murchison.

Lists of certificate-holders up to the end of 1936 are attached.

I have, &c.,

The Under-Secretary, Mines Department, Wellington.

J. HENDERSON,
Chairman of Boards.

LIST OF MINE-MANAGERS, BATTERY SUPERINTENDENTS, AND DREDGEMASTERS
WHO HOLD CERTIFICATES UNDER THE MINING ACTS.

FIRST-CLASS MINE-MANAGERS' CERTIFICATES.

Certificates of Service issued under the Mining Act, 1886, without Examination.

Bennett, J., Alexandra.	Jenkins, M., Wakatipu.	Porter, J., Waipori.
Cameron, A., Macetown.	Johnstone, H., Bluespur.	Sturm, A., Waipori.
Chapman, J. A., Dunedin	McIntoch, D., Bluespur.	Wearne, T., Endeavour Inlet.
Frewen, J. B., Queenstown.	*Morrisby, A. A., Glenorchy.	Young, G., Skipper's.
Glass, W. M., Naseby.	Newman, W., Naseby.	

Issued after Examination under the Mining Act, 1886, and Amendment Acts.

*Donaldson, W., Otago.	Hornick, M., Thames.	Mouat, W. G., Dunedin.
*Fleming, M., Thames.	Hosking, G. F., Auckland.	Watkins, W. E., Reefton.
Harris, W., Thames.	Logan, H. F., Wellington.	

Issued on Production of Certificate from a Recognized Authority outside the Dominion under the Mining Acts, 1886, 1891, 1898, 1905, 1908, 1913, and 1926.

Beckwith, L. H., Wellington.	*Godden, Frederick William Ross, Reefton.	*Lake, J. V., Reefton.
*†Cock, J., jun., Ross.	Griffiths, A. P., Auckland.	McKenna, Thomas, Dunedin.
Cock, W., Waiomio.	Hailey, R. C., Dunedin.	Rich, F. A., Auckland.
Datson, J., Manaiia.	Hall, E. K., Reefton.	*Spencer, Ernest William, Reefton.
Dodd, William, Milton.		Williams, W. H., Auckland.

Issued after Examination under the Mining Act, 1891.

*Agnew, J. A., Thames.	*McDermott, J., Thames.	*Russell, Murray, Dunedin.
Bennett, E. P., Thames.	McDermott, W., Thames.	Shepherd, H. F., Thames.
Bradley, R. J. H., Te Puke.	McGregor, W. T., Thames.	*Stanford, W. J., Macetown.
Gilmour, J. L., Thames.	McKenzie, H. J., Coromandel.	Vialoux, F., Coromandel.
Keam, P. E., Thames.	McPeake, J., Thames.	White, G. H., Thames.
*McDermott, C., Thames.	Robertson, D. B., Stafford.	

Issued after Examination under the Mining Acts, 1898, 1905, 1908, and 1926.

Allen, Henry, Waihi.	George, M. T., Waihi.	Robinson, A. E., Waihi.
Autridge, L. E., Thames.	Goldsworthy, W., Coromandel.	Ruffin, R. C., Reefton.
Baker, S. G., Thames.	Gordon, H. T., Sawyer's Bay, Dunedin.	*Rutherford, R. A., Waita.
Barker, B., Thames.	*Gudgeon, C. W., Macrae's.	Scoble, E. J., Waihi.
Bell, O., Waihi.	Hall, W. J., Waita.	Smith, Walter, Karangahake.
Bishop, Thomas Otto, Skipper's.	Hitchcock, W. E., Barewood.	Stewart, F., Waihi.
Blenkhorn, C., Coromandel.	Hogg, Tasman Rangit, Waita.	*Stewart, R. A., Reefton.
Bolitho, Joseph, Reefton.	Kingsford, C., Waihi.	Sullivan, T., Reefton.
Bower, J. W., Coromandel.	Langdon, H., Waihi.	Thomson, G. W., Dunedin.
*Broad, R., Waihi.	*Latour, H. A. de, Waihi.	*Thomson, J. R., Waihi.
Buddle, Frank, Coromandel.	Lewis, Ralph Reginald, Waihi.	Thomson, Thomas, Waihi.
*Bull, C. W., Waihi.	Lowes, G. W., Reefton.	Thorne, G. M., Waihi.
Caisley, John, Karangahake.	Lowrie, A. F., Waihi.	*Tucker, E. S., Coromandel.
Calvert, F. C., Waihi.	Mackie, Portland George A., Waihi.	Turner, A. W., Lawrence.
Clouston, R. E., Kaitangata.	McConachie, W. J., Waihi.	*Turner, G. W. E., Reefton.
Collier, E., Reefton.	MacLaren, J. A. J., Coromandel.	*Ulrich, G. A. C., Waihi.
Cooper, J. H., Thames.	McMahon, T., Reefton.	Walker, A. J., Waihi.
Cooper, Thornhill, Waihi.	McMillan, T., Waihi.	Watson, J. L., Thames.
Cornes, J. G. Waihi.	Morrison, William, Waihi.	*Weir, Thomas, Waihi.
Downey, J. F., Reefton.	Moye, Michael, Reefton.	*Williams, Evan, Waihi.
Dutton, W. F., Waihi.	O'Shea, J., Reefton.	*Williams, John, Waihi.
*Evered, N. J., Waihi.		Wotherspoon, James, Waihi.
Fry, S., Waimangaroa.		

Issued under Section 313 of the Mining Act, 1891.

Rickard, John, Thames.	Thomas, James, Thames.	White, John S., Karangahake.
Snow, Thomas, Huntly.		

Certificates of Competency granted to Holders of Provisional Warrants under Section 32 of the Mining Act Amendment Act, 1896.

Cornes, C. A., jun., Karangahake.	Draffin, Samuel, Waitekauri.
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Issued to Inspectors of Mines by virtue of Office under the Mining Acts, 1886, 1891, and 1898.

Green, E. R., Dunedin.

* Out of New Zealand.

† Alluvial.

SECOND-CLASS MINE-MANAGERS' CERTIFICATES.

Certificates of Service issued under the Mining Act, 1891.

*Agnew, J. A., Coromandel.	Edwards, George, Westport.	Mackay, William, Nenthorn.
Blair, Thomas, Kuaotunu.	Guthrie, John, Wellington.	Rickard, John, Thames.
Brown, John, Macrae's.	Hardman, James Edward, Thames.	Shaw, James, Karangahake.
Byrne, John, Karangahake.	Johnstone, William, Collingwood.	Thomas, James, Thames.
Dobson, John Allen, Kuaotunu.		

Issued after Examination under the Mining Acts, 1891, 1898, and 1908.

Benney, J., jun., Paeroa.	Patterson, William James, Driving	White, F. H., Kuaotunu.
Cahill, T. M., Upper Kuaotunu.	Creek, Coromandel.	
Dunkin, T., Coromandel.		

Certificates of Competency granted to Holders of Provisional Warrants under Section 32 of the Mining Act Amendment Act, 1896.

Allen, W. J., Coromandel.	Howe, Albion S., Waitekauri.	Prescott, Arthur J., Coromandel.
*Barney, Montagne T., Waitekauri.	Johnson, Frank H., Collingwood.	Ruffin, Richard, Manaia, Coromandel.
Collins, Charles, Waitekauri.	Murphy, Joseph, Coromandel.	
Gardner, James, Waimangaroa.	O'Brien, John, Westport.	

Certificates of Service issued under the Mining Amendment Act, 1910.

Adams, Albert Augustine, Thames.	Grace, Pierce, Waitekauri.	Lynch, James, Glenorchy.
*Adams, R. W., Thames.	Hansen, Charles Hans, Puketui.	McKenzie, D., Georgetown.
Brabyn, John, Clarendon.	Hayes, James, Thames.	Reid, George, Glenorchy.
Butcher, F. J., Waitekauri.	*Hes, E. J., Bannockburn.	Reynolds, Edmond Francis, Coromandel.
Gillan, Thomas, Thames.	Inglis, Robert, Kuaotunu.	

ALLUVIAL MINE-MANAGER'S CERTIFICATE.

Certificate of Service issued under the Mining Act, 1908.

Toole, William Hopwood, St. Bathans.

BATTERY SUPERINTENDENTS' CERTIFICATES.

Issued under the Mining Act Amendment Act, 1894, without undergoing Examination.

Aitken, R. M., Reefton.	McLellan, William, Waitekauri.	Shepherd, Henry Franklin, Waihi.
*Banks, Edwin Gripper, Waihi.	Noble, James R., Karangahake.	Sims, C. F., Tararu.
McKenna, T. N., Tararu.	Park, James, Thames.	

Issued after Examination under the Mining Act Amendment Act, 1894.

Adams, A. A., Thames.	Bowers, W., Thames.	Noakes, H. L., Waihi.
*Allen, F. B., Thames.	Brown, A. E., Thames.	*Stafford, B. H., Waihi.
Allom, H. O., Thames.	*Day, A. T., Thames.	Thorpe, A. H., Thames.
Ansley, Comyn, Paeroa.	Dixon, Clement, Waihi.	Vercoc, R. B., Thames.
Ansley, Walter, Thames.	*Gray, J. W., Waihi.	*Williams, A. G. R., Thames.
Banks, J. H., Waihi.	Lee, J. W., Reefton.	

Issued after Examination under the Mining Acts, 1898, 1905, 1908, and 1926.

Adams, J. H., Thames.	Ewen, H. F., Auckland.	*Orr, F. S., Waiuta.
Adams, Richard W., Tararu, Thames.	Fletcher, H. T., Katikati.	Paltridge, F., Thames.
Airey, Hubert, Karangahake.	Fry, Sidney, Westport.	*Pensler, W. H. A., Dunedin.
*Allen, D. V., Thames.	*Gibson, William, Waihi.	Pond, H. C., Auckland.
*Allen, H. E., Wellington.	*Gilpin, J., Waihi.	Quintrell, Sidney B., Waiuta.
Anderson, David, Waihi.	Gillooly, T., Roxburgh.	Reynolds, E. A., Auckland.
Andrews, T. T., Waihi.	*Gow, E. A., Crushington.	Roberts, H. C., Waihi.
Auld, J. B., Crushington.	Gwilliam, Benjamin, Karangahake.	Rollinson, H. G. V. B., Waikino.
Baker, W. H., Thames.	Halliwell, L. V., Karangahake.	Rosewarne, R. H., Thames.
*Banks, C. A., Waihi.	Hargreaves, E. P., Waihi.	Royse, W. G., Reefton.
*Banks, E. J., Thames.	Hay, Adam, Karangahake.	*Sanderson, F. L., Waiuta.
Banks, J. G., Waikino.	Hazard, T. R. C., Waitekauri.	Sanford, A. G., Waihi.
Bell, Oswald, Waihi.	*Hogg, B., Karangahake.	Saunders, A. J., Waiuta.
*Bidlake, A. E., Waiotomo.	Hogg, T. R., Karangahake.	Shaw, D. S., Waikino.
Bird, A. W., Thames.	Hoyle, H. E., Thames.	Shaw, L. J., Waikino.
Bishop, T. O., Reefton.	Hutchison, R. M., Karangahake.	*Stephens, H., Dunedin.
Blackadder, William, Crushington.	*Johnson, Edward, Waihi.	Sutherland, J. A., Reefton.
Bradley, R. J. H., Karangahake.	Jones, J. W., Waikino.	Thomson, G. W., Bendigo.
Brown, F. M., Karangahake.	Jones, R. D., Karangahake.	*Thurlow, J. R., Coromandel.
Bush, E. F., Parawai.	*Keogh, J. A., Waihi.	Tomlinson, A., Karangahake.
Bush, George Arthur, Karangahake.	Kidd, R. B., Waitekauri.	Tomlinson, W. F., Dunedin.
Bush, H. R., Thames.	Kingsford, A., Karangahake.	*Ulrich, G. A. C., Komata.
*Campbell, Colin, Thames.	Kingsford, C., Waihi.	Ulrich, Herstatt, Whangapoua.
Carless, Noel, Waihi.	Kitching, L. J., Thames.	Walker, Alfred James Dickson, Waihi.
Carter, Harry Francis, Waihi.	Lauder, G. H., Waitekauri.	Walsh, Arthur James, Waihi.
Chappell, G. A., Karangahake.	Lawless, L. J., Paeroa.	Watson, A. B., Waitekauri.
Clark, John L., Waihi.	Lawn, H., Reefton.	Watson, A. P., Crushington.
Clarke, Thomas, Waihi.	Littlejohn, W. D., Karangahake.	Watson, J. P., Reefton.
Clifton, Leslie, Waikino.	Mann, C., Westport.	Watson, J. R., Reefton.
Cowles, R. K., Crushington.	Maxwell, W. L., Waihi.	Watson, W. A., Crushington.
Crawford, H., Macrae's.	*McDonall, P. H., Waihi.	Wearne, W., Reefton.
Crompton, H., Maratoto.	McEwin, J. A., Reefton.	White, A. S. H., Karangahake.
Croucher, Herbert, Waihi.	McKinlay, John, Waihi.	*White, E. D., Karangahake.
Dawson, B., Ellerslie.	McNeil, A. R., Karangahake.	Williams, A. C., Waihi.
Donnelly, Thomas, Waihi.	McPadden, J., Coromandel.	Williams, James, Reefton.
Donovan, Willie, Waikino.	*Melrose, P., Waihi.	Williams, Joseph, Reefton.
*Eaton-Turner, Geoffrey William, Waihi.	Metcalfe, G. H., Karangahake.	*Williams, William Eustace, Waihi.
Ellery, W. V., Waiuta.	*Morgan, Robert James, Waihi.	Wilson, A. P., Crushington.
*Evans, J., Waihi.	Moyle, W. T., Upper Fairua.	
	*Orbell, G. S., Waikouaiti.	

* Out of New Zealand.

DREDGEMASTERS' CERTIFICATES.

Issued without Examination under the Mining Act, 1898, and Amendment Acts, 1901 and 1902.

Anderson, L. C., Alexandra.	Herbert, J., Beaumont.	Olsen, Charles, Roxburgh.
Andrews, Ralph, Canvastown.	Hewitt, James, Clyde.	Parsons, J. D., jun., Clyde.
Baker, J. R., Alexandra.	Hoskins, Thomas, Maori Point.	Percy, John, Clyde.
Ballantyne, D., Miller's Flat.	Hoy, Samuel, Alexandra.	Perkins, A. C., Dunedin.
Barnes, T. J., Beaumont.	Inwood, W. J., Rocklands Beach.	Pettigrew, George, Nelson Creek.
Bradley, Neil, Alexandra.	Johnston, E. A., Alexandra.	Poulter, G. W., Alexandra.
Bennett, George, Gore.	Johnstone, Alexander, Cromwell.	Pringle, John, Miller's Flat.
Bennett, James, Kumara.	Kitto, Edward T., Miller's Flat.	Ray, J. C., Totara Flat.
Brand, Peter, Waikaka.	Kitto, Francis, Lowburn.	Reeder, Philip, Bald Hill Flat.
Brennan, Phillip, Palmerston South.	Kitto, J., Lowburn Ferry.	Rennie, Andrew, Roxburgh.
Bremner, A. P., Lower Shotover.	*Ledingham, J., Bannockburn.	Ross, Alexander, Cromwell.
Brice, William H., Cromwell.	Lee, George, Collingwood.	Ross, Robert, Alexandra.
Bringans, D., Alexandra.	Lidicoat, R. H., Fern Flat.	Richmond, J., Gibbston.
Brown, T. G., Ahaura.	Luke, S. J., Alexandra.	Ritchie, J. S., Waitiri.
Bunting, James, Murchison.	Magnus, A., Roxburgh.	Sanders, H. P., Clyde.
Butler, Ewen, Roxburgh.	Magnus, Olaf, Christchurch.	*Sanders, John, Cromwell.
Butler, M. J., Kanieri.	Mailer, John, Stillwater.	Schaumann, H., Alexandra.
Cameron, Samuel, Alexandra.	Maitland, A. E., Miller's Flat.	Scott, M. G., Alexandra.
Clarke, Edward, Port Chalmers.	McClure, F. C., Rongahere.	Scott, Robert, Capleston.
Compton, Albert, Dobson.	McCormack, D., Kanieri.	Shore, William, Gore.
Cormack, W., Greymouth.	McDonald, E. A., Waitiri.	Simonsen, Charles, Alexandra.
Cornish, J. T., Miller's Flat.	McDonald, J., Sofala.	Sligo, N. K., Ahaura.
Coutts, Henry, Miller's Flat.	McDonald, John, Cromwell.	Steel, Archibald, Kawaran Gorge.
Cowan, Alexander, Stillwater.	McGeorge, Alexander, Dunedin.	Steel, Thomas, Dunedin.
Crookston, W. L., Three-channel Flat.	McGregor, D., Kanieri.	Templeton, Ivic, Rongahere.
Cumming, J. C., Beaumont.	McGregor, G. R., Alexandra.	Thompson, T., Miller's Flat.
Cutton, W. H., Dunedin.	McIntosh, D. J., Lowburn Ferry.	*Troy, G. C., Cromwell.
Deniston, R. A., Cromwell.	*McLean, D., Waitiri.	Turnbull, W. D., Canvastown.
Donaldson, J. G. A., Greenstone.	McMath, D. C., Ross.	Tyson, John, Rongahere.
Faithful, William, Greymouth.	*McMath, Thomas, Alexandra.	Von Haast, J. H., Clyde.
Foohy, J. M., Alexandra.	Mills, Edward, Murchison.	Wallace, John A., Miller's Flat.
Gibb, William, Croydon Siding.	Mitchell, D. A., Dunedin.	Weaver, Charles, Alexandra.
Gibson, A., Island Block.	Morel, C. G., Inangahua Junction.	Williamson, R., Miller's Flat.
Graham, J. M., Gore.	Morris, G. C., Cromwell.	Williamson, Walter, Miller's Flat.
Grogan, William A., Miller's Flat.	Murray, D., Clyde.	Wood, R. M., Cromwell.
*Hedley, A., Cromwell.	Murray, Madget, Cromwell.	Woodhouse, W. S., Roxburgh.
	Neilson, S., Miller's Flat.	Young, Andrew, jun., Roxburgh.
	O'Leary, D., Waiau.	

Issued after Examination under the Mining Acts, 1898, 1901, 1902, 1905, and 1908.

Anderson, Andrew, Alexandra South.	Harliwich, Matthew, Roxburgh.	Nelson, George L., Brunneron.
Anderson, G. B., Roxburgh.	Hepburn, D. O., Alexandra.	Newick, Albion Edgar Charles, Bannockburn.
Archer, D. J., Ngakawau.	Hewetson, Sydney, Nelson Creek.	Nicholson, Charles S. G., Mataura.
Baird, William G., Clyde.	Holden, Charles, jun., Cromwell.	Noble, William, Alexandra.
Bate, H. T. G., Greymouth.	Holden, John, Cromwell.	Omond, Thomas, Nevis.
Beaufort, William Vincent, Roxburgh.	Hughes, John L., Miller's Flat.	Orkney, H. E., Cromwell.
Bishop, Hugh Arthur, Collingwood.	Johnston, John, Maori Gully.	Orr, H. T., Cromwell.
Blair, G., Abbotsford.	Johnston, Louis, Beaumont.	Orr, William W., Cromwell.
Borthwick, Robert, Alexandra.	Jones, David Rowland, Island Block.	Parker, P. R., Roxburgh.
*Bourke, John, Clyde.	Jones, T. R., Miller's Flat.	Paterson, J. B., Miller's Flat.
*Brent, C. D., Cromwell.	Junker, Frank J., Berlin's.	Patterson, J., Clyde.
Briggs, Thomas, Alexandra.	Kean, F. F., Waikaka.	*Plumb, E. H., Maori Point.
Briggs, William, Alexandra.	Kellett, C. H., Dunedin.	Rait, Hume, Albert Town.
*Bruce, J. A., Kawarau Gorge.	Kennedy, A., Ophir.	Ray, J. F., Bannockburn.
Burley, J. P., Westport.	Kitto, Henry, Alexandra South.	Ray, Robert Marshall, Bannockburn.
Burnside, Walter, Alexandra.	Kitto, John, Clyde.	Reiderer, Edward, Cromwell.
Burton, A. P., Miller's Flat.	Linney, William, Island Block.*	Roberts, G., Three-channel Flat.
Callaghan, E., Three-channel Flat.	Livingstone, D., Alexandra.	Robertson, D. J., Alexandra.
Campbell, G. W. T., Alexandra.	Lloyd, Arthur, Inangahua Junction.	Robertson, W. R., Alexandra.
Carnegy, A., Three-channel Flat.	Lloyd, Hubert, Lyell.	Rooney, J. B., Roxburgh.
Carr, W., Alexandra.	MacDonald, C. J., Cromwell.	Rumble, Charles, Ngahere.
Carter, W. W., Sandy Point.	MacGinnis, J. A., Cromwell.	Rumble, Joseph, Miller's Flat.
Clark, D., Callaghan's Creek.	MacGinnis, M. P., Alexandra.	Sanders, W. J., Ahaura.
Clarke, R. S. B., Alexandra South.	MacLaren, John, Alexandra.	Saunders, C. E., Cromwell.
Coup, George, Albertown.	Marklund, C. O., Lowburn Ferry.	Sawle, J., Cromwell.
Cox, R. D., Alexandra.	Mathews, James Hulbert, Miller's Flat.	Sawyer, J. F., Alexandra.
Craig, D. A., Shag Point.	Matthews, A. A., Three-channel Flat.	Sherwood, T. W., Greymouth.
Curno, C. B., Alexandra.	Mayne, W. C., Nelson Creek.	Simpson, Edward Robert, Cromwell.
Dalton, J. R., Three-channel Flat.	McCallum, W. S., Alexandra.	Sparrow, J. A., Upper Nevis.
Dalzell, T. L., Cromwell.	McDonald, C. J., Waitiri.	Steele, Thomas, Alexandra.
Donaldson, John, Lawrence.	McDonald, G., Alexandra.	Steele, W. H., Miller's Flat.
Downie, Henry, Totara Flat.	McGregor, Dougald S., Alexandra.	Taylor, Alexander, Alexandra.
Eaton, Edgar W., Alexandra.	McKenzie, John, Roxburgh.	Taylor, J. T., Dunedin.
Elder, D. D., Roxburgh.	McKinnon, John, Alexandra.	Theyers, C., Alexandra.
Fache, S. C., Gore.	Melvin, J. R., Roxburgh.	Theyers, J. W., Alexandra.
Farmer, Nathan C., Miller's Flat.	Merchant, Isaiiah, Clyde.	Turner, T. F., Moonlight.
Farquharson, George, Alexandra.	Milne, John A., Roxburgh.	Vickerman, E. M., Cromwell.
Filippi, S. de, Westport.	Moffit, R. W., Miller's Flat.	Walker, J. J., Alexandra South.
Findley, David, Dunedin.	Mollison, William, Stillwater.	Wasserbrenner, M., Alexandra.
Fisher, Hurtle, Miller's Flat.	Moncrieff, Henry, Miller's Flat.	Wathen, James, Miller's Flat.
Foley, S., Lowburn Ferry.	Monson, C. H., Miller's Flat.	Watson, E. H., Collingwood.
Forno, D., Inangahua Junction.	Morel, A. E., Noble's.	Weir, R., Gore.
Fraser, W. J., Roxburgh.	Morel, L. H., Inangahua Junction.	*Weir, T. R., Cromwell.
French, T. E. K., Three-channel Flat.	*Morgan, Harold, Roxburgh.	Weir, W., Nevis.
Gibson, William H., Cromwell.	Morgan, John, Alexandra.	Wescombe, Alfred L., Island Block.
Graham, Thomas Arthur, Gore.	Morris, V., Cromwell.	Westcott, P. A., Miller's Flat.
Gunn, W. E., Beaumont.	Mouat, W. G., Greymouth.	Williams, Frederick, Alexandra.
Guy, Donald, Cobden.	Munro, C. T., Waitiri.	Wilson, George, Marsden.
*Guyton, James, Dunedin.	Munro, Hugh, Alexandra South.	Wilson, Stephen L., Inangahua Junction.
Hanning, C. J., Clyde.	Munro, R. F., Ross.	Woodhouse, F., Bannockburn.
Hansen, H. C., Three-channel Flat.	Murray, H. B., Cromwell.	Wylde, G. R., Inangahua Junction.
Harden, J., Stafford.	Murray, Robert John, Canvastown.	
	Nelson, Edgar, Brunneron.	

DREDGEMASTERS' CERTIFICATES UNDER THE MINING ACT.

Endorsed as Class A Certificates under Section 11 (6) of the Mining Amendment Act, 1927.

French, Thomas Edward Kerswell, Murchison.	Mouat, William Gilbert, Howard, via Nelson.	Turner, Thomas Francis, Atarau. Wood, William Wilson, Okarito.
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Mitchell, David Alexander, Okarito.

MINING AMENDMENT ACT, 1927.

Dredgemasters' Class A Certificates (issued after Examination).

Anderson, Edward Thomas, Dunedin.	Hawley, J. W. T., Murchison.	Orr, William James, Murchison.
Chapman, Samuel, Christchurch.	Holden, A., Murchison.	Speed, R. O., Murchison.
Foley, Edward, Westbrook, Kumara.	Lyon, S. G., Murchison.	Tohill, J., Christchurch.
Gillooly, T. B., jun., Murchison.	McFelin, F., Queenstown.	Werner, H. J., Alexandra.
Hamer, Frederick Robert, Cardrona.	Matheson, A. N., Cromwell.	Williamson, Andrew, Cromwell.

Dredgemasters' Class B Certificates (issued after Examination).

Anderson, J. A., Invercargill.	Fanning, F. E., Kororo.	McPherson, B. B., Reefton.
Archer, A. D., Hokitika.	Fischer, A., Ngahere.	McRae, D., Ngahere.
Archer, R. J., Ikamatua.	Gillooly, T. B., jun., Murchison.	Poole, R. S., Greymouth.
Browne, E., Hokitika.	Griffin, J. P., Hokitika.	Samson, A. J., Hokitika.
Buckland, H. J., Cronadun.	Hepburn, W. B., Okarito.	Smith, P. D., Christchurch.
Caithness, D., Upper Nevis.	Hurst, T. E., Barrytown.	Sutherland, D., Gillespie's Beach.
Cook, A. Y., Waimumu.	Keith, A., Ngahere.	Turner, E. T., Atarau.
Cummings, W., Fleming.	Marslin, W., Dunedin.	Williamson, J., Dunedin.
Curnow, N., Nelson Creek.	McKay, W. G., Greymouth.	

Dredgemasters' Class B Service Certificates.

Jones, F., Nevis.	O'Brien, W., Naseby.	*Speed, R. O., Wellington.
Lewis, F. B., Hokitika.	Pettigrew, D. M., Hokitika.	

Issued on Production of Certificate from a recognized Authority outside the Dominion.

Bridson, T., Haldane.	Pearson, G. A., Parawa.	Walker, A., Caversham, Dunedin.
Lyon, S. G., Murchison.	Smail, R. L., Freshford.	

OIL-WELL MANAGERS' SERVICE PERMITS.

Issued under the Regulations under the Mining Acts, 1908 and 1926.

Belcher, W. T., New Plymouth.	Huse, William C. E., New Plymouth.	Taylor, Charles Norman, Island Bay, Wellington.
Bender, Elmore William, New Ply- mouth.	*Lauder, R. H., New Plymouth.	*Thompson, J. R., Morere.
Bisset, G., Glen Massey.	McKay, J., Motukawa.	*Thompson, Perry Delorm, Tokomaru Bay, Gisborne.
Brown, N. I. W., Kauana.	O'Dowda, B. C., New Plymouth.	*Tynan, D. J., New Plymouth.
Christensen, N., New Plymouth.	Pedersen, Krysfeldt Emar, Murchison.	*Venneman, John Fred, New Plymouth.
*Davis, James Amos, Kotuku.	Rawlinson, J. W., New Plymouth.	*Wittekin, Ralph Oscar, New Plymouth.
*Hart, S. P., Gisborne.	Rutherford, A. E., New Plymouth.	
Henchman, J. E. W., New Plymouth.	*Shipley, Edward Lester, New Ply- mouth.	

* Out of New Zealand.

LIST OF PERSONS WHO HOLD CERTIFICATES UNDER THE COAL-MINES ACTS.

FIRST-CLASS MINE-MANAGERS' CERTIFICATES.

Issued under the Coal-mines Acts, 1886 and 1891.

Aitken, T., Wendon.	Ord, J., Huntly.	Sneddon, J., Mosgiel.
Love, A., Whangarei.	Reed, F., Westport.	Taylor, E. B., Huntly
May, J., Greymouth.	Smith, A. E., Nelson.	Thompson, A., White Cliffs.
Moore, W. J., Springfield.	Smith, T. F., Nelson.	

Issued under the Coal-mines Acts, 1886, 1891, 1905, 1908, and 1925, after Examination.

Armitage, F. W., Auckland.	Gilbert, George, Millerton.	Morgan, William, Waihi.
Armstrong, J., Brunnerton.	Glendenning, J. W., Dobson.	Mosley, J. T., Kaitangata.
Armstrong, Valentine, Runanga.	Green, E. R., Abbotsford.	Neilson, James, Blackball.
Barclay, T., Kaitangata.	Hadcroft, John, Puponga.	Newton, James, Brunnerton.
Barclay, W., Kaitangata.	Hall, R., Petone.	O'Donnell, Alphonsus, Roa.
Baxendale, James, Reefton.	Hamilton, J. S., Burnett's Face.	Openshaw, A., Burnett's Face.
Bishop, T. O., Reefton.	Hewitson, W. E. G., Burnett's	Parsonage, W., Runanga.
Brown, J. C., Denniston.	Face.	Pendleton, Samuel, Blackball.
Buist, Charles David, Roa	Heycock, C. R., Nightcaps.	Penman, A., Huntly.
Burt, A., Waihi.	Heyes, Thomas, Kaitangata.	*Penseler, W. H. A., Huntly.
Campbell, Peter, Fairfield.	Hill, Robert, Abbotsford.	Reid, William Taylor, New Lynn,
Carson, Frederick, Kaitangata.	Hosking, G. F., Auckland.	Auckland.
Carson, W., Kaitangata.	Hughes, Job, Puponga.	Schoen, R. H., Ohai.
Colligan, A., Nightcaps.	Jebson, D., Canterbury.	Scoble, E. J., Waihi.
Crockett, S., Millerton.	Jones, T., Kimihia.	Smith, Albert, Denniston.
Crowe, W., Ngakawau.	King, T., Granity.	Smith, George, Denniston.
Dale, R. T. H., Runanga.	Langford, J. N., Ohai.	Smith, George, Fairfield.
Davies, W. C., Huntly.	Leitch, W., Blackball.	Smith, Joseph, Denniston.
Davis, O. J., Runanga.	Lewis, James Edwin, Ohai.	Strongman, C., Ngakawau.
*Dixon, C. W., Granity.	Lowes, George Wall, Reefton.	Talbot, H., Brunnerton.
Dixon, W., Kaitangata.	Makinson, Job, Huntly.	Tattley, E. W., Huntly.
Dromgool, A. A. W., Pukemiro.	McCaffrey, Patrick, Ferntown.	Taylor, A. H., Waikato.
Duggan, George, Burnett's Face.	McGeachie, J., Mokau.	Thomson, Thomas, Denniston.
Dunn, Andrew, Denniston.	McLean, M., Ngakawau.	Turner, G. F., Shag Point.
Fleming, J., Kaitangata.	McLelland, James, Kaitangata.	*Watson, J. R., Huntly.
Fox, R. A., Denniston.	McMillan, Thomas, Black's Point,	Wearn, R. J., Collingwood.
Forsyth, Matthew, Denniston.	Reefton.	Westfield, C. H., Fairfield.
Fry, Sydney, Waimangaroa.	Milligan, N., Westport.	Whittlestone, A. W., Shag Point.
Gibson, John, Westport.	Molony, C. V. P., Pukemiro Junc-	Young, T., Dunedin.
Gillanders, A., Shag Point.	tion.	

Issued under the Coal-mines Act, 1886, on Production of English Certificate.

Black, T. H., Waipori.	Hodgson, J. W., Ross.	Reed, F., Wellington.
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Issued under the Coal-mines Acts of 1891, 1905, 1908, and 1925, on Production of Certificate from a recognized Authority outside the Dominion.

Andrews, T. L., Rotowaro.	Goold, A. L., Auckland.	Morris, A., Huntly.
Armstrong, John Eagleston, Stock-	Howard, T., Runanga.	*Murray, Robert, Nightcaps.
ton	Hunter, Peter, Ngakawau.	Quinn, John Graham, Seddonville.
Blackbourn, C., Greymouth.	Hunter, Charles, Pukemiro.	Robins, George Edmund, New Ply-
Brady, H., Dunedin.	Irvine, James, Dunedin.	mouth.
*Broadhead, A. K., Ngakawau.	James, Isaac Angelo, Westport.	Ross, John, Dunedin.
Brown, W., Blackball.	Kane, D., Denniston.	Rosser, Thomas, Pukemiro.
Clark, W., Blackball.	Kirkwood, D., Coromandel.	Spence, John, Huntly.
Davidson, Gavin, Blackball.	Lamont, J., Devonport.	*Thompson, Cyril, Brunnerton.
*Davies, D. J., Ngakawau.	Lewis, W., Blackball.	Watson, James, Greymouth.
Frame, Joseph, Kaitangata.	Mark, W. S., Kaitangata.	Watson, John, Blackball.
*Gascoigne, Errington, Huntly.	McArthur, J. Granity.	Williams, Alfred David, Reefton.
Geddes, Thomas, Ohai.	McAvoy, H., Christchurch.	Woods, William Mokihinui.
Gillick, J., Kaitangata.	McGhie, Thomas, Stockton.	

SECOND-CLASS MINE-MANAGERS' CERTIFICATES.

Issued under the Coal-mines Act, 1891.

Elliot, Joseph, Coal Creek.	Radcliffe, William, Reefton.	Willetts, John Morris, Papakaio.
Lobb, Joseph, Mokau.	Sara, James, Reefton.	Young, William, Waimangaroa.
McLaren, J. M., Thames.	Thomas, James, Springfield.	

* Left New Zealand.

SECOND-CLASS MINE-MANAGERS' CERTIFICATES—*continued.**Issued under the Coal-mines Acts, 1886, 1891, 1905, 1908, and 1925, after Examination.*

Adamson, J., Greymouth.	Fleming, R., Huntly.	Monaghan, Henry, Millerton.
Alborn, R. V., Reefton.	Forsyth, Neil, Westport.	Morganty, Louis, Ngakawau.
Allan, J., Brunner.	Fowler, Murray, Rapahoe.	Mosley, J. T., Stirling.
Archer, Frederick William, Stockton.	Fox, R. A., Blackball.	Neilson, J., Runanga.
Austin, W. B., Sheffield.	Fox, Sidney Arthur, Stockton.	Neilson, Moffat, Abbotsford.
Ball, A., Kimihia.	Gaskell, G., Westport.	Newburn, S., Kaitangata.
Banks, J. L., Reefton.	Godden, R. L., Pukemiro.	Nicholson, David, Huntly West.
Barclay, Fred, Fairfield.	Grierson, Joseph, Renown, Huntly.	Nimmo, A., Ngapara.
Barclay, T., Kaitangata.	Griffin, James C., Kaitangata.	Openshaw, Arnold, Westport.
Barclay, William, Kaitangata.	Harris, A., Saddle Hill.	Orr, Hugh, Fairfield.
Barlow, E. J., Hikurangi.	Hector, W., Runanga.	O'Rourke, William, Granity.
Barnes, A. E., Shag Point.	Hewison, S., Dunollie.	Outhwaite, P. M., Greymouth.
Blair, R., Glen Massey.	Hewitson, W. E. G., Burnett's Face.	Parcell, W., jun., Bannockburn.
Brazier, C. J., jun., Ohai.	Heycock, C. R., Nightcaps.	Parfitt, William, Millerton.
Brennan, John, Kaitangata.	Heyes, T., Kaitangata.	Patterson, J. W., Burke's Creek.
Broome, J., jun., Gore.	Hill, R., Abbotsford.	Penman, C. P., Kaitangata.
Brown, Robert, Kaitangata.	Hodson, John, Kaitangata.	Penman, J., Hikurangi.
Buchanan, William, Ohai.	Hodson, John, jun., Bannockburn.	Price, F. J., Burnett's Face.
Burleigh, James Barr, Taratu.	Hughes, Job, Roa.	Quinn, H., Blackball.
Cadman, J., Hikurangi.	Hunter, A., Southland.	Roberts, John Russell, Stockton.
Cain, Alexander, Kaitangata.	James, Isaac, Kaitangata.	Robertson, J., Nightcaps.
Campbell, Peter, Fairfield.	Johnson, E., Pukemiro.	Scoble, E. J., Blackball.
Charles, E., Glentunnel.	Johnston, W., Pukemiro.	Smith, Frederick, Rotowaro.
Chippendale, John Samuel, Stockton.	Jones, Ernest George, Millerton.	Smith, J. W., Piponga.
Christie, James, Saddle Hill.	Jones, H., Huntly.	Snow, T., Mercer.
Coan, Ralph Charles, Rotowaro.	Kells, F. H., Denniston.	Tansey, Michael Joseph, Hikurangi.
Colligan, Andrew, Nightcaps.	*Kelly, J., Runanga.	Taylor, Joseph, Collingwood.
Cook, Leonard Cyril, Runanga.	Lees, T. W., Glen Massey.	Thompson, Joseph, Blackball.
Coppersmith, A., Denniston.	Leonard, James William, Huntly.	Thomson, D. B., Huntly.
Craig, John, Coal Creek Flat.	Lewis, David, Puponga.	Thomson, James, Nightcaps.
Crockett, S., Millerton.	Lewis, J., Nightcaps.	Todd, T., Nightcaps.
Crump, R., Huntly.	Lindsay, J. B., Orepuki.	Turner, G. T., Reefton.
Cunningham, J., Hikurangi.	Lockington, F. E., Burnett's Face.	Turton, John, Huntly.
Curren, V., Pukemiro Junction.	Mackay, Donald, Ohai.	Tweedie, J., Huntly.
Currie, W. N., Pukemiro.	Marshall, R., Dobson.	Waldie, A. B., Mokau.
Curtis, C. D., Reefton.	Makinson, Job, Huntly.	Walls, James, Benhar.
Dale, E. G., Kaitangata.	Mason, Edward, Nightcaps.	Watson, A., Soldier's Creek.
Davies, W. C., Huntly.	Mason, James, jun., Nightcaps.	Westfield, C., Fairfield, Otago.
Dixon, W., jun., Kaitangata.	McAllister, Neil, Kaitangata.	Whittlestone, A. W., Shag Point.
Duffy, Frank, Burnett's Face.	McCormick, Thomas, Reefton.	Whittlestone, G. F., Abbotsford.
Duncan, James, Kaitangata.	McDonald, R., Milton.	Williams, J. M., Reefton.
Duncan, J. E., Kaitangata.	McIlwain, John, Denniston.	Williamson, G., Glen Massey.
Duncan, John, Lovell's Flat.	McLean, R., Reefton.	Wilson, R., Pukemiro.
Dymond, John, Millerton.	McLelland, A. C., Kaitangata.	Woods, A., Millerton.
Farnworth, W., Dunollie.	McLelland, J., Kaitangata.	Wright, Thomas, Huntly.
Ferguson, A., Kaitangata.	Mills, Walter, Huntly.	Wykes, Alfred, Huntly.
Ferguson, G., Roa.		

Issued under the Coal-mines Acts of 1891, 1905, 1908, and 1925, on Production of Certificate from a recognized Authority outside the Dominion.

Barlow, H. Greymouth.	Gray, James, Runanga.	Parsonage, W., Dunollie.
Baxendale, J., Mine Creek.	Grenall, S., Granity.	Penman, A., Huntly.
Black, J., Granity.	Hall, Richard, Dobson.	Provan, P., Runanga.
Boyd, J., Hikurangi.	Jones, T., Kimihia.	Reid, William Taylor, Star Town, Huntly.
Brown, John W., Hikurangi.	Kerr, D., Collingwood.	Robertson, R., Roa.
Brownlie, John, Huntly.	Lennox, W., Springfield.*	Ross, John, Hikurangi.
Burley, T., Hikurangi.	Little, W., Wellington.	Sneddon, J., Blackball.
Burt, A., Huntly.	Littlewood, G. G., Denniston.	Strachan, J., Dunedin.
Christopher, Richard William, Greymouth.	McCall, John, Wellington.	Talbot, H., Huntly.
Cross, G., Hikurangi.	McGeachie, J., jun., Mokau.	Tervit, Alexander, Frankton Junction.
Dickinson, W., Gore.	McGuire, P., Mount Somers.	Tipton, Harry, Hikurangi.
Dodd, W., Granity.	McGuire, William, Seddonville.	Watson, John, Roa.
Eyeington, G., Huntly.	McHardy, A. J., Ferntown.	Webster, Arnold, Huntly.
Ford, John Robert, Nightcaps.	Molony, C. V. P., Auckland.	Westhead, Frederick, Papakura.
Glendenning, J. W., Dobson.	Morgan, H. L., Ngakawau.	Wilson, R., Ohai.
Graham, D., Huntly.	Myers, T., Kiripaka.	Yates, Thomas, Huntly.
Graham, Robert, Huntly.	Newburn, F., Roa.	
	Paterson, W., Christchurch.	

MINE-SURVEYORS' CERTIFICATES.

Issued without Examination under the Coal-mines Act, 1925.

Andrews, T. L., Rotowaro.	Dromgool, A. A. W., Auckland.	Kennedy, Ernest William, Runanga.
*Bryce, R., Dunedin.	Flyger, Stanley Arthur, Glen Afton.	McIntyre, A. C., Thornton.
Dale, Roger Thomas Hilton, Kaitangata.	Geddes, Thomas, Ohai, Southland.	Schoen, R. H., Ohai.
Davies, Harold N., Mount Eden, Auckland.	Gibson, J. A., Rotowaro.	Shand, N. M., Denniston.
	Green, Eric Wallace, Wellington.	Turner, William Herbert, Petone.

* Left New Zealand.

MINE-SURVEYORS' CERTIFICATES—*continued.**Issued after Examination.*

Edginton, Bernot Ewart, Dunedin.	Inglis, William Carrick, Pukemiro.	Rennie, John, Millerton.
Glendenning, James William, Glen Afton.	Langford, James Newton, Ohai.	Samuel, John Thomas, Dunedin.
Hill, William Edward, Kaitangata.	Lennox, Gordon Murray, Renown.	*Watson, John Reginald, Huntly.
	Littlejohn, Herbert Clifford, Ngaruawahia.	

First-class Mine-managers' Certificates endorsed under Regulation 8 (3), under the Coal-mines Act, 1925.

Armstrong, James, Runanga.	Hewitson, W. E. G., Denniston.	O'Donnell, Alphonsus, Roa.
Armstrong, Valentine, Runanga.	Hill, Robert, Green Island.	Parsonage, William, Blackball.
Baxendale, James, Auckland.	Howard, Thomas, Runanga.	Pendleton, Samuel, Rotowaro.
Brown, John Connel, Westport.	Hughes, Job, Dobson.	Penman, Alexander, Rotowaro, Huntly.
Buist, Charles David, Roa.	Hunter, Charles, Rotowaro.	Ross, John, Ohai.
Burt, Andrew, Pukemiro.	Hunter, Peter, Glen Afton.	Smith, Albert, Millerton.
Carson, Frederick, Kaitangata.	James, Isaac Angelo, Greymouth.	Smith, George, Brunneron.
Carson, William, Kaitangata.	King, Thomas H., Runanga.	Strongman, Charles James, Granity.
Crowe, William, Nelson.	Leitch, Walter, Dobson.	Talbot, Henry, Avoca.
Davidson, Gavin, Hikorangi.	Lowes, George Wall, Mahakipawa.	Tattley, E. W., Auckland.
Davies, Wilfred Charles, Huntly.	McGhie, Thomas, Ngakawau.	Taylor, Alfred Henry, Hikorangi.
Davis, Oliver James, Reefton.	McMillan, Thomas, Ohai.	*Thompson, Cyril, Brunneron.
Duggan, George, Dunedin.	Makinson, Job, Hikorangi.	Thomson, Thomas, Ngaruawahia.
Forsyth, Matthew, Seddonville.	Molony, C. V. P., Pukemiro Junction.	Watson, John, Rotowaro.
Fry, Sidney, Brunneron.	Morris, Arthur, Ohai.	Whittlestone, Arthur William Denniston.
Gilbert, George, Millerton.	Mosley, John Thomas, Ohai.	Wood, William, Reefton.
Gillanders, Alex. S., Shag Point.	*Murray, Robert, Ohai.	
Haderoft, John, Lovell's Flat.	Neilson, James, Blackball.	

UNDERVIEWERS' CERTIFICATES.

Certificates of Service issued under the Coal-mines Amendment Act, 1909.

Allan, James, Puponga.	Green, Richard, Abbotsford.	Nimmo, William, Ngapara.
Barry, A. H., Huntly.	Hunter, Peter, Ngakawau.	Penman, John, Denniston.
Bond, John, Waikaia.	Johnston, William Crowan, Gore.	Proctor, William Kaitangata.
Boustrage, T. Hubert, Brunneron.	Johnstone, Thomas, Denniston.	Robertson, William, Mosgiel.
Broome, James, Gore.	Levick, Harry, White Cliffs.	Todd, Thomas, Nightcaps.
*Clough, Henry, Millerton.	Marsh, Charles George, Glentunnel.	Walker, John, Blackball.
Davidson, William, Mine Creek.	McAlister, Robert, Kaitangata.	Williams, William, Kaitangata.
Donaldson, James, Kaitangata.	McNeill, William, Fairfield.	Wilson, Daniel, Kaitangata.
Flynn, John, Bannockburn.		

Issued under the Coal-mines Amendment Act, 1909, and the Coal-mines Act, 1925, after Examination.

Ainscough, William, Huntly.	Coppersmith, Edward, Denniston.	Harris, Leslie, Reefton.
Airns, Abraham, Dunollie.	Corden, E., Burnett's Face.	Hector, William, Runanga.
Alborn, R. V., Reefton.	Cowan, Thomas, Huntly.	Heward, Nathan, Runanga.
Allison, John, Pukemiro.	Cowan, William, Millerton.	Hewison, Sydney, Dunollie.
Anderson, James, Denniston.	Crawford, William, Glen Massey.	Hewitson, W. E. G., Burnett's Face.
Archer, F. W., Capleston.	Crump, Robert, Huntly.	Hodge, William, Pukemiro.
Armstrong, V., Runanga.	Curran, Valentine, Pukemiro.	Honey, A. J., Burnett's Face.
Astbury, Harold, Huntly.	Curran, John William, Huntly.	Honey, J. R., Huntly.
Baird, John, Cobden.	Dayne, Robert Desmond, Runanga.	Hughes, T. G., Huntly.
Balderstone, William, Blackball.	Doel, Alfred James, Hikorangi.	Hunter, Peter, Stockton.
Banks, James Lewis, Reefton.	Dowgray, John, Granity.	Hutchinson, Ivanson, Huntly
Barclay, J. G., jun., Fairfield.	Duffy, E., Burnett's Face.	Jack, W., Millerton.
Barker, Richard, Dunollie.	Duggan, John, Runanga.	Jamieson, A. C., Blackball.
Barlow, Eli John, Hikorangi.	Dunn, Samuel, Pukemiro.	Jenkinson, Alfred, Runanga.
Bell, Thomas, Huntly.	Dyet, William, jun., Kaitangata.	Johnson, Edward, Pukemiro.
Berry, A. H., Huntly.	Dymond, John, Mine Creek.	Johnston, C. M., Seddonville.
Bird, Christopher, Rotowaro.	Eckersley, William Hampson, Roa.	Johnston, William, Pukemiro.
Bird, Robert William, Ohai.	Etheredge, J. E., Reefton.	Joines, Frank Edward, Pukemiro.
Black, David Livingstone, Pukemiro.	Ewen, R. J., Runanga.	Jones, Ernest George, Millerton.
Blair, Robert, Glen Massey.	Farnworth, William, Dunollie.	Jones, Harold Wright, Mangatoti.
Boddy, A. J., Rewanui.	Fenton, John William, Kaitangata.	Jones, Harry, Kimihia.
Bond, Edwin, Huntly.	Fleming, Gavin, Pukemiro.	*Kelly, John, Runanga.
Brady, George, Blackball.	Fleming, Robert, Glen Afton.	Kelly, Henry Michael, Granity.
Brennan, John, Kaitangata.	Foot, Sydney George, Hikorangi.	Kennedy, Ernest William, Runanga.
Brown, William, Glen Afton.	Forsyth, Matthew, Denniston.	Kerr, David, Palmerston South.
Brownlie, William Aitken, Denniston.	Fowler, Murray, Blackball.	Kerry, Edward, Huntly.
Buist, Charles David, Roa.	Fox, Sidney Arthur, Denniston.	King, T. H., Granity.
Burchfield, Walter, Granity.	Gardner, Matthew, Pukemiro Junction.	Lees, Thomas William, Glen Massey.
Burleigh, James Barr, Orepuki.	Gaskill, Gilbert, Westport.	Lennox, Andrew Lightbody, Renown.
Burnie, William, Glen Massey.	Gilbert, George, Millerton.	Leonard, James William, Huntly.
Bullough, Ernest, Rotowaro.	Goldthorpe, George, Pipiroa.	Lockington, F. E., Denniston.
Byers, William, Glen Massey.	Green, John Allen, Huntly.	Longmuir, Richard John, Glen Massey.
Cain, A., Kaitangata.	Grierson, Joseph, Waikokowai.	Longstaff, Robert, Ngaruawahia.
Cannings, George McFarlane, Millerton.	Griffin, J., Kaitangata.	Mackay, Donald, Ohai.
Carson, F., Kaitangata.	Griffiths, Norman George, Runanga.	Maguigan, Thomas, Roa.
Chippendale, John, Westport.	Haderoft, John, Dunollie.	Makinson, J., Huntly.
Clark, W. S., State Collieries.	Haderoft, Harold, Runanga.	Mann, John Henry, Dunollie.
Coan, Ralph Charles, Huntly.	Hall, David, Huntly.	Marshall, Robert, Dobson.
Cohen, Ernest, Capleston.	Hall, Thomas, Huntly.	Marshall, William James, Dunollie.
Cook, Leonard, Runanga.	Hall, Thomas, Kaitangata.	

UNDERTVIEWERS' CERTIFICATES—continued.

ued under the Coal-mines Amendment Act, 1909, and the Coal-mines Act, 1925, after Examination—continued.

Martin, C. R., Ngakawau.	Openshaw, Arnold, Blackball.	Smith, Joseph, Denniston.
McAuley, Robert Thomas, Kaitangata.	Orr, Charles Mann, Ohai.	Smith, Joseph William, Denniston.
McCaig, William, Glen Afton.	O'Brien, D. Q., Mangatini.	Snedden, William Hector, Kaitangata.
McCormick, Thomas, Blackball.	O'Callaghan, W. J., Huntly.	Stirling, James, Huntly.
McDonald, Thomas, Ngakawau.	O'Donnell, Alphonsus, Roa.	Strang, James, Blackball.
McDonald, Robert, Milton.	O'Loughlin, Leo Francis, Runanga.	Strongman, C. J., Cobden.
McEwen, Harold Wallace, Stockton.	O'Rourke, William, Granity.	Sweeney, J. L., State Collieries.
McIlwain, John, Denniston.	Padfield, Charles, Rotowaro.	Tennant, Alexander, Blackball.
McIvor, D., Runanga.	Parfitt, William, Millerton.	Tansey, Michael Joseph, Tartown, Hikurangi.
McKernan, John, Millerton.	Patterson, Ernest, Reefton.	Taylor, John Ralph, Roa.
McLean, Archibald Kennedy, Kaitangata.	Patterson, James William, Reefton.	Thomson, David B., Huntly.
McLean, Malcolm, Granity.	Peart, Frederick Smith, Millerton.	Thomson, James, Huntly.
McLean, Roderick, Reefton.	Peattie, P. T., Renown.	Tucker, J., Kaitangata.
McLelland, James Thompson, Ohai.	Pendleton, Samuel, Blackball.	Tunstall, Adam Gray, Hikurangi.
McLeod, J. G., Millerton.	Penman, John, Hikurangi.	Tunstall, William, Hikurangi.
McLiskey, Edward Kemp, Pukemiro.	Peterson, Nicholas, Blackball.	Turnbull, E. V., Thames.
McLuekie, John, Huntly.	Philp, Thomas, Denniston.	Turner, Alfred, Kiripaka.
McMillan, Albert Edward, Ohai.	Pollock, John Marshallvale, Denniston.	Turton, J., Huntly.
McMillan, John, Huntly.	Ramsden, John, Kaitangata.	Tyson, Isaac, Runanga.
McNeish, J. A., Brunnerton.	Rennie, John, Millerton.	Waters, Thomas Edwin, Shag Point.
Mercer, James, Burnett's Face.	Richardson, Ernest, Kaitangata.	Watson, George, Huntly.
Monaghan, Henry, Millerton.	Richardson, William, Taylorville.	Weatherspoon, Peter, Huntly.
Morganty, L., Stockton.	Roberts, Eric Methven, Oamaru.	Welsh, Mervyn, E. A., Dunedin.
Morris, Harry, Burnett's Face.	Rogers, James, Ngakawau.	White, Edward, Ngaruawahia.
Morrow, John, Denniston.	Schoen, Reginald Hugo, Ohai.	Whitelaw, James, Kaitangata.
Moseby, Edward, Nightcaps.	Sharpe, John Russell, Taratu.	Whittlestone, G. F., Abbotsford.
Mosley, J. T., Denniston.	Shearer, William, Glen Afton.	Wight, David, Millerton.
Mossop, Isaac, Runanga.	Shedden, Robert M., Nightcaps.	Wilcox, William, Pukemiro.
Nicholson, D., Huntly.	Shortt, Robert, Twelve Mile, Grey-mouth.	Wilkinson, Herbert, Pukemiro.
Nimmo, Allan, Ngapara.	Simpson, James Cochrane, Runanga.	Williamson, George, Glen Massey.
Nimmo, Thomas, jun., Papakaio.	Smith, Albert, Denniston.	Williamson, W. R., Rewanui.
Niven, James Quinn, Ngakawau.	Smith, Basil, Dunollie.	Wilson, Robert, Huntly.
Olsen, Charence Victor, Millerton.	Smith, Frederick, Rotowaro.	Woods, Albert, Granity.
	Smith, George, Hikurangi.	Wright, Thomas, Huntly.
		Wykes, Alfred, Huntly.

Certificates of Service issued under the Coal-mines Amendment Act, 1910.

Beardsmore, E., Denniston.	Jones, W., Waikaka Valley.	Mitchell, Alexander, Runanga.
Cuthbertson, Robert, Fairfield.	Kitto, Richard, Kaitangata.	Neill, S., Kawakawa.
Evans, William, Abbotsford.	Manderson, P., Runanga.	Newburn, S., Kaitangata.
Fisher, T., Westport.	Mann, D., Granity.	Statham, Robert, Kaitangata.
Gibson, M., Abbotsford.	Mason, Edward, Kingston Crossing.	Walker, J. R., Brighton.

Issued under the Coal-mines Amendment Act, 1914, on Production of Certificate of Corresponding Class granted in any British Possession or Foreign Country.

Beal, George Frederick, Runanga.	Martin, Elias, Ngakawau.	Middleton, Robert, Runanga.
Lees, Andrew, Huntly.		

FIREMEN AND DEPUTIES' CERTIFICATES.

Certificates of Service issued under the Coal-mines Amendment Act, 1909.

Aitken, George, Glentunnel.	Gibson, Robert, Millerton.	Murdoch, Colin McColl, Stirling.
Allan, A. George, Abbotsford.	Gilmour, William, Millerton.	McCaffrey, James, Seddonville.
Allan, Charles, Brunnerton.	Glover, Richard, Runanga.	McCaughern, John, Kaitangata.
Beardsmore, Edward, Denniston.	Gray, Thomas, Abbotsford.	McDonald, John T., Millerton.
Berry, Albert Henry, Huntly.	Gribben, John, Kaitangata.	McGhee, William, Kaitangata.
Blaney, James, sen., Kaitangata.	Hamilton, John, Hikurangi.	McGill, Douglas Thomas, Waikaka.
Boyd, Robert, Waronui.	Hargreaves, Charles, Millerton.	McGill, John, Huntly.
Bradley, Robert, Denniston.	Hartley, John, Denniston.	Newburn, Robert, Kaitangata.
Buchols, Joseph, Waikaka.	Hay, James, Denniston.	Newburn, Samuel, Kaitangata.
Burgess, William Charles E., Gore.	Heron, Ralph, Kimihia.	Nicholas, William, Kaitangata.
Callaghan, Frederick, Kiripaka.	Higgins, Thomas James, Denniston.	Oliver, William, Kaitangata.
Campbell, Samuel, Millerton.	Hislop, William, Denniston.	Parcell, Henry Clyde, Bannockburn.
Clausen, Emil P., Wellington.	Howe, George Charles, Shag Point.	Park, Francis, Stirling.
Connelly, Michael, Denniston.	Jarvie, William Marshall, Kaitangata.	Sanderson, John, Kurow.
Connew, John, Puponga.	Jaspers, George F., Denniston.	Scott, John, Runanga.
Coppersmith, John, Denniston.	Jenkins, James, Ngakawau.	Smith, William, Seddonville.
Cowan, Robert Black, Gibbston.	Johnston, C. Mountier, Seddonville.	Snedden, James, Blackball.
Cuthbertson, Robert, Fairfield.	Kaye, Charles, Runanga.	Statham, Robert, Kaitangata.
Davis, Evan, Denniston.	Kitto, Richard, Kaitangata.	Taylor, David, Roa.
Dellaway, Archibald, Denniston.	Lutton, William, Millerton.	Taylor, James, Springfield.
Dillon, Lawrence M., Nightcaps.	Mann, Duncan, Millerton.	Thin, William, White Cliffs.
Duncan, Frank, Huntly.	*Mcars, Andrew David, Runanga.	Tripp, Albert, Kaitangata.
Duncan, Hugh, Kaitangata.	Moncrieff, Thomas, Nightcaps.	Wallace, John, Matura.
Evans, William, Abbotsford.	Moore, Thomas, Mangatini.	Wardrope, Francis, Hikurangi.
Findlay, Charles, Denniston.	Morganty, Charles, Ngakawau.	Watson, Andrew, Roa.
Foot, Frederick Ernest, Denniston.		West, George Thomas, Waronui.
Gibson, Matthew, Abbotsford.		Young, Thomas Gardner, Waikaka.

* Left New Zealand.

FIREMEN AND DEPUTES' CERTIFICATES—*continued.**Issued under the Coal-mines Amendment Act, 1909, and the Coal-mines Act, 1925, after Examination.*

- Abbott, Edward Arthur, Millerton.
Abercrombie, William, Huntly.
Airns, Abraham, Dunollie.
Alborn, Bernard M., Reefton.
Alborn, Roderick V., Reefton.
Allen, Richard Thomas, Reefton.
Allison, David, Huntly.
Allison, John, Pukemiro.
Allan, James, Brunner-ton.
Anderson, David Alexander, Kaitangata.
Anderson, David Alexander, jun., Kaitangata.
Anderson, James, Denniston.
Anderson, Robert, Abbotsford.
Anderson, Robert, Ohai.
Armstrong, V., Runanga.
Astbury, Harold, Huntly.
Atkin, William, Waikokowai.
Baird, John, Green Island.
Baird, John, Greymouth.
Baker, Thomas, Huntly.
Balderstone, William, Blackball.
Ball, A., Kimihia.
Banks, James Lewis, Reefton.
Barber, Robert, Shag Point.
Barclay, F., Kaitangata.
Barclay, James, Kaitangata.
Barclay, James Greig, Fairfield.
Barclay, Ralph Carse, Fairfield.
Barclay, William, Kaitangata.
Barclay, William John, Kaitangata.
Barker, Richard, Runanga.
Barnfield, Henry, Wairoa.
Beardsmore, Abel, jun., Papakaoi.
Beattie, George V., Nightcaps.
Beckley, Ronald Richard, Mt. Somers.
Bell, Harry, Stillwater.
Bell, John Dobson.
Bell, Thomas, Huntly.
Bennett, Thomas, Burnett's Face.
Bennett, Thomas Low, Seddonville.
Berry, Willis, Dunollie.
Birchall, J., Burnett's Face.
Bird, Robert William, Ohai.
Bird, Christopher, Huntly.
Blair, Robert, Glen Massey.
Blair, Peter, Huntly.
Blyth, William, Millerton.
Boddy, Archibald John, Runanga.
Bolger, John, Mataura.
Bond, Edwin, Huntly.
Bond, W. T., Huntly.
Bougher, Lawrence Wilfred, Kamo.
Bowron, Christopher, Huntly.
Boyd, James Langwell, Huntly.
Brady, George Joseph, Blackball.
Brady, William Richard, Roa.
Braithwaite, Percy, Nightcaps.
Brazier, Charles James, Ohai.
Brennen, J., Kaitangata.
Briggs, William Henry, Renown.
Brittan, Christopher, Pukemiro.
Broad, Ernest Wairau, Whitecliffs.
Broadbent, Thomas, Huntly.
Bromilow, John, Runanga.
Brown, Archibald, Oturchua.
Brown, Clifford, Oamaru.
Brown, J., jun., Denniston.
Brown, John Robert, Runanga.
Brown, William, Glen Afton.
Brownlie, Robert Aitken, Granity.
Brownlie, William Aitken, Denniston.
Bryson, John, Millerton.
Buchanan, William, Millerton.
Buist, Charles David, Roa.
Bullough, Ernest, Rotowaro.
Burchfield, Walter, Granity.
Burnett, William, sen., Reefton.
Burnett, William, jun., Reefton.
Burnie, William, Glen Massey.
Burt, John, Millerton.
Burt, T., Huntly.
Butler, Samuel Arthur, Runanga.
Butler, Vincent, Roa.
Byers, William, Glen Massey.
Byrne, Edward Francis, Granity.
Cairns, Adam, Kaitangata.
Cairns, Donald, Hikurangi.
Cairns, James, Glen Afton.
Calder, Thomas, Ngakawau.
Caldwell, Thomas, Blackball.
Callaghan, M., Blackball.
Campbell, Archibald, Cobden.
Campbell, J. C., Glentunnel.
Campbell, John, Allanholme, Colliery, Waimate.
Carruthers, Alexander Denton, Waronui, Milton.
Carson, Frederick.
Chadwick, A., Millerton.
Chadwick, George, Blackball.
Chapman, A. E., Kaitangata.
Charles, Ernest, Coalgate.
Charteris, James Thomas, Kaitangata.
Chetwynd, William, Taylorville, Brunner-ton.
Chippendale, J., Millerton.
Clare, William, Pukemiro.
Clark, Alfred James, Blackball.
Clark, W. S., Dunollie.
Clarke, John, Millerton.
Clarke, S., Roa.
Cleveland, F. L., Kaitangata.
Cochrane, David Hamilton, Hikurangi.
Cockfield, John, Denniston.
Coghlan, John Joseph, Cronadun.
Cohen, Ernest, Capleston.
Cole, Walter G., Glen Afton.
Colquhoun, John C., Rotowaro.
Colledge, A., Huntly.
Colligan, Andrew, Nightcaps.
Connolly, John Joseph, Runanga.
Connolly, John, Runanga.
Coppersmith, Alexander, Denniston.
Coppersmith, Edward, Denniston.
Coppersmith, William John, Denniston.
Cooper, J. J., Milton.
Corden, Ernest, Burnett's Face.
Cosgriff, Edward, Nightcaps.
Cowan, Alexander, Dobson.
Cowan, J., Millerton.
Cowan, Thomas, Huntly.
Cowan, William, Millerton.
Craig, James, Waimate.
Crawford, William, Glen Massey.
Crook, Henry, Rotowaro.
Cruickshank, P. G., Runanga.
Crump, Robert, Huntly.
Cunningham, George, Denniston.
Cunningham, Joseph, Hikurangi.
Cunningham, Richard William, Whangarei.
Curragh, A., Burnett's Face.
Curran, Valentine, Pukemiro Junction.
Curran, John William, Huntly.
Curran, James, Ngakawau.
Currie, Thomas H., Runanga.
Currie, William Nichol, Pukemiro.
Curtis, Cecil Donald, Reefton.
Cuthbertson, John, Glentunnel.
Dalzell, Joseph, Runanga.
Dando, Walter, Brunner-ton.
Danks, Peter, Millerton.
Davidson, James, Blackball.
Davidson, Thomas, Mine Creek.
Davies, F., Puponga.
Davies, Henry Hubert, Huntly.
Davies, Llewellyn, Burnett's Face.
Davies, Sydney, Glen Massey.
Davis, Oliver James, Runanga.
Dayne, Robert Desmond, Runanga.
Delaney, J. E., Puponga.
Dellaway, Thomas, Denniston.
Dick, Alexander Clark, Kaitangata.
Dickson, John, Ngakawau.
Dillon, Joseph, Blackball.
Dinsdale, George, Rewanui.
Dixon, Alexander Shearer, Ohai.
Dixon, Andrew Cunningham, Wairoa.
Dixon, George Robert, Taylorville, Brunner-ton.
Dixon, Matthew, Nightcaps.
Docherty, Edward, Kewanui.
Docherty, John Edward, Nightcaps.
Docherty, Samuel Valentine, Glen Massey.
Dodds, John, Dunedin.
Doel, Alfred James, Hikurangi.
Donaldson, John Brown, Ohai.
Dove, John Thomas, Seddonville.
Dover, William Niven, Ohai.
Dowgray, John, Millerton.
Duffy, Owen, Burnett's Face.
Duggan, Francis, Runanga.
Duggan, John, Upper Rewanui.
Duggan, William, Runanga.
Dumelow, Frank, Greymouth.
Dunlop, James, Green Island.
Dunn, Samuel, Pukemiro.
Durkin, Thomas, Millerton.
Dyett, William, Balclutha.
Dymond, J., Millerton.
Eaton, Robert, Kaitangata.
Eckersley, W., Paparoa.
Edge, Albert Henry, Waikaka.
Edmond, Adam, Green Island.
Edwards, Alfred, Dobson.
Edwards, Arthur, Waro.
Edwards, F. J., Ohai.
Ehlers, F., Burnett's Face.
English, George, Runanga.
Erskine, G., Dobson.
Etheredge, J. E., Roa.
Ewart, John, Millerton.
Ewen, Richard James, Runanga.
Excell, Walter, Nightcaps.
Fairhurst, R. W., Huntly.
Fannigan, P., Ngakawau.
Farnworth, William, Dunollie.
Fauth, Frederick, Blaketown.
Fazakerley, John, Stirling.
Featherstone, Joseph Lovell, Pukemiro Junction.
Ferguson, A., Kaitangata.
Ferguson, Hugh, Nightcaps.
Ferguson, John Leishman, Ohai.
Ferguson, William, Wairaki.
Finlayson, Robert, Millerton.
Fleming, James, Denniston.
Fleming, Robert Barclay, Denniston.
Fleming, Robert, Glen Afton.
Fleming, Gavin, Pukemiro.
Fletcher, Daniel, Huntly.
Foot, Ernest Alfred, Hikurangi.
Foot, Sidney George, Hikurangi.
Ford, John, Dobson.
Forrest, John, Runanga.
Forsyth, Neil, Westport.
Fowler, Murray, Blackball.
Freeman, Samuel Lawrence, Nightcaps.
Frew, W., Huntly.
Gage, Thomas, Kaitangata.
Gair, Robert, Glen Massey.
Gallagher, Percival J., Cronadun.
Gaskell, Gilbert, Denniston.
Gaudion, David Robertson, Waikaka.
Gaudion, Thomas Shade, Mataura.
Gavin, Hugh, Huntly.
Gilligan, H., Runanga.
Gilmour, George, Millerton.
Gilmour, Peter, Millerton.
Glendenning, Thomas, Glen Afton.
Good, Andrew F., Kaitangata.
Gordon, George William, Huntly.
Gould, Edward, Denniston.
Gourlay, James Wallace, Blackball.
Gox, Henry John, Blackball.
Graham, John, Puponga.
Graham, William, Hikurangi.
Gray, John, Hikurangi.
Green, Albert, Pukemiro.
Green, George Edward, Huntly.
Green, John Allan, Huntly.
Green, T., Kaitangata.
Greenhorn, Alexander, Glen Afton.
Grierson, Joseph, Waikokowai.
Griffiths, Horace, Brunner-ton.
Griffiths, Norman George, Runanga.
Griffiths, William, Runanga.
Griffen, James, Kaitangata.
Grimshaw, Thomas, Star Town, Huntly.

FIREMEN AND DEPUTIES' CERTIFICATES—continued.

Issued under the Coal-mines Amendment Act, 1909, and the Coal-mines Act, 1925, after Examination—continued.

- Groom, George, Huntly.
 Hadercroft, Harold, Runanga.
 Haig, James Scott, Kaitangata.
 Hale, Edmund, Granity.
 Hale, J., Kaitangata.
 Hall, Alfred, Kaitangata.
 Hall, Edward, Huntly.
 Hall, R. H., Huntly.
 Hall, Thomas, Huntly.
 Hall, Thomas, Kaitangata.
 Halliday, Thomas, Dunollie.
 Hallinan, Ed., Taylorville, Brunner-
 ton.
 Hallinan, James Joseph, Brunner-
 ton.
 Hamilton, Douglas Donaldson, Hiku-
 rangi.
 Hamilton, James, Nightcaps.
 Hamill, David, Reefton.
 Hamill, Marshall, Glen Massey.
 Hanley, Francis, Huntly.
 Hannah, J., Glentunnel.
 Hansen, Walter Allan, Roa.
 Hardie, J., Millerton.
 Hargood, Horace J. S., Kaitangata.
 Harris, Adam, Mount Somers.
 Harris, George S., Mount Somers.
 Harris, Thomas, Mount Somers.
 Harris, William, Mount Somers.
 Harrison, William, Glen Afton.
 Hart, John, Brunner-
 ton.
 Harvey, D., Huntly.
 Harvey, Joseph Shaw, Riccarton,
 East Taieri.
 Hassan, Hugh, Brunner-
 ton.
 Hawker, Clarence, Kaitangata.
 Hawkins, Joseph, Burnett's Face.
 Hay, William, Dunedin.
 Heineger, Thomas, Greymouth.
 Hendry, John, Millerton.
 Henwood, John Richard, Ohai.
 Heward, Nathan, Runanga.
 Hewison, John, Reefton.
 Hewison, Sydney, Dunollie.
 Hewitson, Matthew, Denniston.
 Heyward, Wilfred, Roa.
 Hicks, J. R., Kiripaka.
 Hill, A., Lovell's Flat.
 Hill, Alfred, Runanga.
 Hill, E. E., Brunner-
 ton.
 Hill, Henry Adamson, Huntly.
 Hill, Joseph, Milton.
 Hillary, William, Reefton.
 Hillman, Charles, Huntly.
 Hodge, William C., Pukemiro.
 Hogg, C., Blackball.
 Holland, Isaac, Huntly.
 Hollows, W., Fairfield.
 Holt, Thomas, Huntly.
 Honey, Archibald John, Denniston.
 Honey, John Ralph, Huntly.
 Hopkinson, Joseph, Seddonville.
 Howie, Archibald, Nightcaps.
 Hudspeth, Wilfred Lister, Brunner-
 ton.
 Hughes, T. E., Huntly.
 Hunter, Albert Newman, Kai-
 tangata.
 Hunter, Archibald Joseph, Dennis-
 ton.
 Hunter, Robert, Ohai.
 Ireland, Richard, Glen Afton.
 Isherwood, T., Runanga.
 Jack, John, Kaitangata.
 James, Isaac, Kaitangata.
 Jenkins, William, St. Helens.
 Jenkinson, Alfred, Runanga.
 Johnson, Frederick William, Kai-
 tangata.
 Johnson, J. H., Hukurangi.
 Johnson, Edward, Pukemiro.
 Johnson, Frederick Richard, Hiku-
 rangi.
 Johnson, Thomas, Huntly.
 Johnston, William, Pukemiro.
 Johnstone, John Braidwood, Night-
 caps.
 Johnstone, Thomas U., Huntly.
 Joines, Frank Edward, Pukemiro.
 Jones, Ernest George, Millerton.
 Jones, Harold Wright, Mangatoi,
 Mokau River.
 Jones, Harry, Kimihia, Huntly.
 Jones, William Isaac, Blackball.
 Jones, B., Millerton.
 Jones, J., Hukurangi.
 Jones, J., Kimihia.
 Jordan, Harry Leslie, Kaitangata.
 Kay, Fred, Huntly.
 Keating, Edward, Dobson.
 Kelly, Henry Michael, Granity.
 *Kelly, John, Runanga.
 Kerr, David, Green Island.
 Kerry, E., Huntly.
 King, Michael Percival, Millerton.
 King, Thomas Henry, Granity.
 Kinson, Brinley, Huntly.
 Kinzett, Leonard Phipps, Roa.
 Kitto, Henry, Abbotsford.
 Kyle, James, Kaitangata.
 Kyle, William, Nightcaps.
 Kyle, William, Kaitangata.
 Lancaster, Herbert, Puponga.
 *Lauder, Matt Currie, Runanga.
 Lawrence, Luther, Pukemiro.
 Lawson, David, Pukemiro.
 Lawson, Robert, Pukemiro.
 Learmonth, Alexander, Glen Massey.
 Lee, William, Taylorville.
 Leeming, Percy Thomas, Glenroy.
 Lees, Gavin Russell, Glen Massey.
 Lees, Robert, Glen Massey.
 Leech, Richard, Runanga.
 Lewis, I., Puponga.
 Leitch, Robert, Blackball.
 Leishman, Robert, Kaitangata.
 Lennox, Andrew Lightbody, Renown.
 Leonard, John Patrick, Granity.
 Leyshon, David, Denniston.
 Lidbury, Charles Henry, Millerton.
 Lockington, Francis Edward, Reef-
 ton.
 Longmuir, Richard J., Glen Massey.
 Longstaff, Robert, Roa.
 Long, Arthur Feltham, Hukurangi.
 Mackenzie, Alexander, Ohai.
 Mackenzie, Alexander Boyd, Waro.
 Mackie, David Wardrop, Pukemiro.
 Mackie, J., Kaitangata.
 Mackinson, Job, Hukurangi.
 Maddison, W., Huntly.
 Magee, Peter Lawrence, Kaitangata.
 Magnigan, Thomas, Roa.
 *Makepeace, Henry, Runanga.
 Manderson, Archibald, Mosgiel Junc-
 ton.
 Mann, John Henry, Dunollie.
 Mann, John, Mangatina.
 Mann, William, Birchfield.
 Marsh, Thomas, Runanga.
 Marshall, James, Nightcaps.
 Marshall, John, Glen Afton.
 Marshall, Robert, Dobson.
 Marshall, William James, Dunollie.
 Martin, Charles Richard, Stockton.
 Martin, T. N., Huntly.
 McAuley, P., Ngakawau.
 McAuley, Robert Thomas, Kaitan-
 gata.
 McAvoy, William, Ngakawau.
 McCaig, William, Glen Afton.
 McCaw, John, Kaitangata.
 McCallum, Andrew, Huntly.
 McCallum, John, Blackball.
 McClure, Arthur, Ngahere.
 McCormick, Thomas, Blackball.
 McDonald, Alexander, Runanga.
 McDonald, J., Ngakawau.
 McDonald, Thomas, Burnett's Face.
 McEwan, David, Millerton.
 McEwen, Harold Wallace, Stockton.
 McGovern, R., Wairoa.
 McGuinness, E., Runanga.
 McGhie, George, Huntly.
 McGhee, David, Granity.
 McIlwain, John, Denniston.
 McIntyre, William H., Millerton.
 McIvor, David, Runanga.
 McKenty, H., Denniston.
 McKenzie, William David, Nightcaps.
 McKernan, John, Millerton.
 McKinlay, William John, Whangarei.
 McKinney, John, Kaitangata.
 McLaren, William, Shag Point.
 McLaughlin, J. W., Huntly.
 McLean, Archibald Kennedy, Kai-
 tangata.
 McLean, Roderick, Reefton.
 McLellan, William, Fairfield.
 McLiskey, Edward Kemp, Pukemiro.
 McMaster, Cecil Stanley, Reefton.
 McMillan, John, Huntly.
 McMillan, John, Kaitangata.
 McMillan, R., Kaitangata.
 McNeilage, Thomas, Ohai.
 McNeish, John Alexander, Brunner.
 McQueen, David, Sheffield.
 McVie, Robert, Kaitangata.
 Mee, Albert, Kaitangata.
 Meekums, George, Glen Afton.
 Melbom, Eric Peter, Reefton.
 Mercer, James, Burnett's Face.
 Messer, William, Dobson.
 Miles, B. C., Millerton.
 Milne, Charles, Kaitangata.
 Mitchell, A., Seddonville.
 Mitchell, James, Glen Afton.
 Mitchell, John, Seddonville.
 Mitchell, Thomas, Glen Massey.
 Monaghan, Henry, Millerton.
 Moreland, S., Hukurangi.
 Morganti, Louis, Millerton.
 Morrison, Alexander, Kaitangata.
 Morris, Harry, Burnett's Face.
 Morris, Herbert Thomas, Milton.
 Morrow, John, Kaitangata.
 Moseby, Edward, Nightcaps.
 Mosley, J. T., Denniston.
 Mossop, Isaac, Dunollie, Greymouth.
 Moyer, John Patrick, Denniston.
 Muir, Thomas, Dobson.
 Mulholland, Robert McN., Seddon-
 ville.
 Mulligan, Patrick, Waro, Hukurangi.
 Murray, Thomas, Millerton.
 Murphy, Francis William, Dunollie.
 Myers, Richard, Millerton.
 Neill, William, Kaitangata.
 Nelson, James, Pukemiro.
 Newman, Robert Thompson, Den-
 niston.
 Nicholson, David, Huntly.
 Nicholson, J., State Collieries.
 Nimmo, Allan, Ngapara.
 Nimmo, John Haddo, Peebles.
 Niven, James Quinn, Ngakawau.
 Niven, Peter, Ngakawau.
 Nuttall, John, Blackball.
 Oakley, Frank John, Runanga.
 O'Brien, Denis Quinsin, Millerton.
 O'Brien, Martin, Millerton.
 O'Callaghan, William John, Huntly.
 O'Connell, John, Runanga.
 O'Donnell, Alphonsus, Roa.
 O'Fee, J., Kaitangata.
 O'Flaherty, Morgan, Blackball.
 Oldham, Joshua, Burnett's Face.
 Oliver, Alfred, Rotowaro.
 Oliver, R., Kaitangata.
 Olsen, Clarence Victor, Millerton.
 Openshaw, Arnold, Blackball.
 Orman, James, Millerton.
 Orr, Charles M., Ohai.
 Orr, John B., Hukurangi.
 O'Loughlin, Leo F., Runanga.
 Padfield, Charles, Huntly.
 Page, John Skikelthorp, Runanga.
 Page, William, Dunollie.
 Parfitt, William, Millerton.
 Parker, Andrew, Greymouth.
 Parr, Joseph, Burnett's Face.
 Parrott, W., Waiata.
 Pasfield, Kelvin Harold, Blackball.
 Patterson, Ernest, Reefton.
 Patterson, James William, Reefton.
 Paul, James, Seddonville.

* Left New Zealand.

FIREMEN AND DEPUTIES' CERTIFICATES—continued.

Issued under the Coal-mines Amendment Act, 1909, and the Coal-mines Act, 1925, after Examination—continued.

Payne, Edwin, Kaitangata.	Scott, James, Blackball.	Thompson, Thomas Kerr, Kaitangata.
Pear, Frederick Smith, Millerton.	Scott, Robert, Runanga.	Thomson, Andrew, Benhar.
Pearson, James Thomas, Mataura.	Scurr, William, Rotowaro.	Thomson, J., Huntly.
Pearson, Samuel G., Burnett's Face.	Seddon, William, Huntly.	Thomson, Thomas Gordon, Whangarei.
Pendleton, S., Blackball.	Shanks, William, Tahora.	Thomson, Thomas, Mine Creek.
Penman, John, Hikurangi.	Sharp, J. R., Kaitangata.	Thomson, Thomas, Nightcaps.
Peterson, Nicholas, Blackball.	Sharp, William Russell, Kaitangata.	Throp, J., Kaitangata.
Phair, James, Nightcaps.	Shaw, John, Roa.	Timlin, George William, Runanga.
Phillips, James, Nightcaps.	Shearer, William, Stockton.	Timms, H., Huntly.
Philp, Thomas, Denniston.	Shcehan, Patrick R., Onetea.	Tinker, Harry, Mount Somers.
Pollock, Archibald, Whangarei.	Short, Samuel, Nelson.	Tinning, J., Brunner.
Pollock, John, Denniston.	Shortt, Robert, Twelve-mile, Grey-mouth.	Todd, John Thomas, Glentunnel.
Ponton, F., Millerton.	Simon, George, Greymouth.	Todd, Stephen, Granity.
Potter, George, Millerton.	Simpson, James Cochrane, Runanga.	Tomasi, John, Seddonville.
Powell, Richard Fynes, Runanga.	Simpson, James Stark, Seddonville.	Tunstall, A. G., Hikurangi.
Prendeville, Antonio Valli, Nightcaps.	Simpson, James, Seddonville.	Tunstall, W., Hikurangi.
Pratt, Alexander, Millerton.	Slack, Joseph, Darlington, Stockton.	Turnbull, Matthew Charles, Hikurangi.
Pratt, Alfred, Ngaruawahia.	Smillie, John H., Albury.	Turner, F., Kiripaka.
Prescott, Joseph, Kaitangata.	Smith, Basil, Dunollie.	Turner, George, Reefton.
Prosser, Arthur, Millerton.	Smith, Donald, Huntly.	Turner, William James, Denniston.
Prosser, Frederick Oliver, Millerton.	Smith, Edward Walker, Hikurangi.	Turton, John, Huntly.
Purdie, Thomas Henry, Rotowaro.	Smith, Frederick Joseph, Runanga.	Tweedie, John, Huntly.
Purvis, Thomas, Kaitangata.	Smith, Fred, Rotowaro.	Tyler, Ivor Llewellyn, Ngakawau.
Queen, John Joseph, Burnett's Face.	Smith, George, Hikurangi.	Tyson, Isaac, Runanga.
Quinlan, Thomas, Huntly.	Smith, Harold, Millerton.	Unwin, James, Runanga.
Quinn, Harry, Blackball.	Smith, J. A., Seddonville.	Vaughan, John, Blackball.
Quinn, Thomas, Seddonville.	Smith, Joseph, Denniston.	Vaux, John Robert, Westport.
Rafferty, William, Runanga.	Smith, Joseph William, Denniston.	Veitch, D., Blackball.
Ralph, J., Huntly.	Smith, Thomas W., Millerton.	Vigna, Adamo, Runanga.
Ramsay, J. McK., Kaitangata.	Smith, W. A., Denniston.	Vurlow, Frederick Alexander, Denniston.
Rarity, Alexander C., Hikurangi.	Smith, Wilfred, Millerton.	Walker, Joseph, Mangatina.
Rarity, John, Blackball.	Smith, William George, Glentunnel.	Walker, John, Pukemiro.
Ratcliffe, John Thomas, Kaitangata.	*Smitheram, Thomas Francis, Runanga.	Walker, W. J., Granity.
Rayner, Frank, Pukemiro.	Smithson, Albert C. L., Dunollie.	Walls, James, Benhar.
Reed, W. H., Hikurangi.	Smylie, Thomas, Roa.	Wall, Thomas, Mangatina.
Rees, David John, Stockton.	Snedden, Thomas, Blackball.	Wallwork, William Alfred, Greymouth.
Reid, Henry, Millerton.	Snedden, William Hector, Kaitangata.	Warne, John, Denniston.
Reid, Henry, Huntly.	Snedden, William Patterson, Kaitangata.	Waters, Thomas Edwin, Shag Point.
Reid, Samuel, Nightcaps.	Snell, J., Kaitangata.	Watson, William T., Burnett's Face.
Rhodes, Israel, Glentunnel.	Snowden, W., Kaitangata.	Waugh, Alexander, Shag Point.
Richardson, Ernest, Kaitangata.	Southward, William, Runanga.	Waugh, Robert, Huntly.
Richardson, W., Dunollie.	Spence, John Gibson Henderson, Huntly.	Wear, Daniel, Huntly.
Richardson, William, Mangatina.	Spiers, James, Hikurangi.	Webster, Oliver, Huntly.
Richardson, William, Runanga.	Steele, Andrew, Hikurangi.	Welsh, M. E. A., Shag Point.
Ridley, William, Pukemiro Junction.	Steele, John, Preston Road, Grey-mouth.	White, Edward, Granity.
Riggans, William M., Huntly.	Steele, Reginald, Huntly.	Whitelaw, James, Kaitangata.
Robb, Henry James, Whitecliffs.	Stewart, Robert, Whangarei.	Whittle, George Handford, Granity.
Robson, Thomas, Huntly.	Stirling, James, Huntly.	Wight, David, Millerton.
Robson, W., State Collieries.	Strang, James, Blackball.	Wilcox, William, Pukemiro.
Roberts, Eric M., Oamaru.	Strongman, Charles James, Cobden.	Wilkinson, Herbert, Pukemiro.
Robertson, John, Runanga.	Summers, William, Pukemiro.	Williams, Benjamin John, Blackball.
Robertson, William, Runanga.	Sutherland, J., Millerton.	Williams, Charles Henry, Millerton.
Rodgers, J., Huntly.	Sutton, George Walker Dudley, Millerton.	Williams, James Mitchell, Reefton.
Rodgers, J., Ngakawau.	Sutton, John, Kaitangata.	Williams, Joseph Henry, Blackball.
Rodgers, William, Granity.	Sweeney, John Lewis, Runanga.	Williamson, W. R., Rewanui.
Rogers, A. G., Kaitangata.	Tansey, Michael Joseph, Kaitangata.	Wilde, William, Dobson.
Rogers, Francis Edward, Kaitangata.	Tate, Anthony, Seddonville.	Wilson, Andrew, Blackball.
Rogers, Harry Walter, Glen Afton.	Tatley, Ernest, Reefton.	Wilson, John, Taylorville.
Rogers, Sidney, Kaitangata.	Taylor, Arnold, Christchurch.	Wilson, James Eric, Stockton.
Roe, James, Glen Afton.	Taylor, Christopher, Millerton.	Wilson, J. T., Kamo.
Rose, George, Pukemiro.	Taylor, Henry Burdon, Hikurangi.	Wilson, Matthew, Ohai.
Rose, Walter Albert, Rewanui.	Taylor, John Ralph, Roa.	Wilson, Robert, Pukemiro.
Ross, Alexander, Fairfield.	Teasdale, George William, Runanga.	Wilson, Robert, Ohai.
Ross, Robert, Ohai.	Tennant, Alexander, Blackball.	Wilson, Sidney Robert, Kaitangata.
Ross, Richard, Ohai.	Tennant, Henry Francis, Kaitangata.	Wilson, Thomas Laird, Stockton.
Rotch, Robert William, Orepuki.	Terry, William Edwin, Ohai.	Wilson, Vernon, Kaitangata.
Rothera, James William, Taylorville.	Thawley, William, Denniston.	Wolstenholme, Frederick, Blackball.
Rothwell, Thomas Green, Hikurangi.	Thomas, Ernest, Glen Massey.	Wood, W., Huntly.
Rowse, J., Runanga.	Thomas, William, Denniston.	Woods, A., Millerton.
Ruane, Francis Joseph, Dobson.	Thompson, Abel George, Kaitangata.	Worthington, T., Millerton.
Russell, William, Ohai.	Thompson, James, jun., Kaitangata.	Wright, Richard C. D., Brighton.
Ruston, Edwin Walter, Huntly.		Wyness, James, Glen Afton.
Rutherford, John Yarrow, Dunollie.		Wyse, A., Blackball.
Rutherford, W. R., Kaitangata.		Young, David, Denniston.
Saunders, William Henry, Hikurangi.		Young, John, Glen Massey.
Savage, Thomas, Nightcaps.		Young, Thomas, Granity.

* Left New Zealand.

FIREMEN AND DEPUTIES' CERTIFICATES—*continued.**Certificates of Service issued under the Coal-mines Amendment Act, 1910.*

Burgess, R. S., Waikaka.	Hodgetts, I., Burnett's Face.	McIvor, W., Waikaka.
Cain, Alexander, Waikaia.	Junker, F. A., Waikaia.	Nelson, J. H., Pukerau.
Cameron, D., North Chatton.	Kidd, G. C., Albury.	Ramsey, George, Waikaka.
Churchill, S. G., Alexandra South.	King, J., Granity.	Robinson, R., Ngakawau.
Clasen, Charles, Shag Point.	Lee, S., Nightcaps.	Russell, H. C., Bannockburn.
Crabbe, George, Alexandra South.	Mackie, N., Kaitangata.	Saunders, W., Denniston.
Cumming, J. S., Denniston.	McAuley, John, Kaitangata.	Stevenson, J., Shag Point.
Dixon, A., Nightcaps.	McClimont, John, Mount Somers.	Thomas, B., Denniston.
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